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of THE

MISSISSIPPI STATE UNIVERSITY

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BULLETIN 2006-2007

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SPRING 2006 - SPRING 2007

This Bulletin presents information which, at the time of preparation for printing, most accurately described the courses, curricula, degrees, policies, procedures, regulations and requirements of the University. No contractual relationships, however, can be established between students and the University upon the information contained herein. The University reserves the right to delete, substitute for, change, or supplement any statement in this Bulletin without prior notice.

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THE UNIVERSITY

I. INTRODUCTION

Mississippi State University is a comprehensive, doctoral degree granting, land-grant university. It forms part of a cohesive community with the growing town of Starkville, population 23,000. Located in the eastern part of north-central Mississippi, the university is 125 miles northeast of Jackson, 165 miles southeast of Memphis, and 150 miles west of Birmingham. It is served by U.S. Highway 82, state highways 12 and 25, and by commercial air service through Golden Triangle Regional Airport, 14 miles east of campus.

Mississippi State University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097; telephone (404) 679-4501) to award baccalaureate, master’s, specialist, and doctoral degrees.

Mississippi State University is comprised of the following academic units: the College of Agriculture and Life Sciences, including the school of Human Sciences; the College of Architecture, Art, and Design; the College of Arts and Sciences; the College of Business and Industry, including the School of Accountancy; the James Worth Bagley College of Engineering, including the Swalm School of Chemical Engineering; the College of Forest Resources; the College of Veterinary Medicine; the College of Education; the Office of Graduate Studies; and the Division of Academic Outreach and Continuing Education. Four regional research and extension centers representing both the Mississippi Agricultural and Forestry Experiment Station (MAFES) and the Mississippi State University Extension Service are located in different parts of the state. MAFES operates 10 branch stations throughout the state. The Mississippi State University Extension Service offers programs and services in all 82 counties of Mississippi. Supporting the academic and educational programs of the total university are the Mitchell Memorial Library and branch libraries.

Mississippi State University operates an off-campus, degree-granting center in Meridian, where both undergraduate and graduate programs are offered, and a program center at the Stennis Space Center. In cooperation with the U. S. Army Corps of Engineers Waterways Experiment Station, the Bagley College of Engineering offers the Master of Science degree in Vicksburg. At the request of the U.S. Navy, the College of Education offers the Master of Science degree in Counseling at the U.S. Naval Base in Roosevelt Roads, Puerto Rico.

Several university-level centers and institutes perform specialized teaching, research, or service activities. Among these are the Center for Educational Training and Technology, the Center for Safety and Health, the Center for Science, Mathematics and Technology; the Cobb Institute of Archaeology; the Diagnostic Instrumentation and Analysis Laboratory; the Electron Microscope Center; the Engineering Research Center; the Forest and Wildlife Research Center; the High Voltage Laboratory; the Institute for Neuroscience and Technology; the Mississippi State Chemical Laboratory; the National Center for Intermodal Transportation; the National Warmwater Aquaculture Center; the Raspet Flight Research Laboratory; the Rehabilitation Research and Training Center on Blindness and Low Vision; the Research and Curriculum Unit; the Social Science Research Center; the Stennis Institute of Government; and the T.K. Martin Center for Technology and Disability.

The grounds of the University are comprised of about 4,200 acres, including farms, pastures, and woodlands. The net investment in buildings and grounds is approximately $450 million.

The university began as the Agricultural and Mechanical College of the State of Mississippi, one of the national land-grant colleges established after Congress passed the Morrill Act in 1862. It was created by the Mississippi Legislature on February 28, 1878, to fulfill the mission of offering training in “agriculture, horticulture and the mechanical arts . . . without excluding other scientific and classical studies, including military tactics.” It was established to serve the northwestern part of the state.

The College received its first students in the fall of 1880 in the presidency of General Stephen D. Lee. In 1887, Congress passed the Hatch Act, which provided for the establishment of the Agricultural Experiment Station in 1888. Two other pieces of federal legislation provided funds for extending the mission of the College: in 1914, the Smith-Lever Act called for “instruction in practical agriculture and home economics to persons not attendant or resident,” thus creating the state-wide effort which led to Extension offices in every county in the State; and, in 1917, the Smith-Hughes Act provided for the training of teachers in vocational education.

By 1932, when the Legislature renamed the College as Mississippi State College, it consisted of the Agricultural Experiment Station (1887), the College of Engineering (1902), the College of Agriculture (1903), the School of Industrial Pedagogy (1909), the School of General Science (1911), the College of Business and Industry (1915), the Mississippi Agricultural Extension Service (1915), and the Division of Continuing Education (1919). Further, in 1926 the College had received its first accreditation by the Southern Association of Colleges and Schools. By 1958, when the Legislature again renamed the institution, as Mississippi State University, the Office of Graduate Studies had been organized (1936), doctoral degree programs had begun (1951), the School of Forest Resources had been established (1954), and the College of Arts and Sciences had been created (1956). The College of Architecture admitted its first students in 1973. The College of Veterinary Medicine admitted its first class in 1977, and the School of Accountancy was established in 1979.

Past Presidents of the College/University

1. General Stephen D. Lee (1880-1899)
2. John Marshall Stone (1899-1900)
3. John Crompton Hardy (1900-1912)
5. William Hall Smith (1916-1920)
6. David Carlisle Hull (1920-1925)
8. Hugh Criz (1930-1934)
9. George Duke Humphrey (1934-1945)
10. Fred Tom Mitchell (1945-1953)

VISION AND MISSION STATEMENTS

Vision

The vision of Mississippi State University is to be an accessible, responsive, and inclusive land-grant university that is engaged with the many constituencies it serves in delivering excellent programs of teaching, research, and outreach that improve the lives and opportunities of the citizens of the state, region, and world.

Mission

Mississippi State University is a public, land-grant, doctoral, research university classified as Doctoral/Research-Extensive by the Carnegie Foundation. Its mission is to provide access and opportunity to students from all sectors of the state’s diverse population and to offer excellent and extensive programs in instruction, research, and outreach.

Enhancing its historic strengths in agriculture, natural resources, science, and engineering, Mississippi State entered the twenty-first century with additional strengths in a comprehensive range of graduate and undergraduate programs. These include architecture, the arts, business, education, the humanities, the social and behavioral sciences, and veterinary medicine. The Meridian Campus focuses on meeting the needs of place-bound students and working adults through upper division and graduate programs in education, business, liberal arts, and social work.
The university’s educational programs emphasize the exploration of ideas and the discovery, application, and dissemination of knowledge. The university embraces its role as a major contributor to the economic development of the state through targeted research and the transfer of ideas to the marketplace, aided by faculty-industry relationships and by interdisciplinary initiatives. Building on its land-grant tradition, MSU extends its resources and expertise throughout the entire state for the benefit of Mississippi’s citizens. Through integration of its programs in learning, research, and service, through traditional scholarship, through statewide extension and outreach, and through engagement with business, industry, government, communities, and organizations, the university is committed to maintaining its tradition as the People’s University.

Commitments

Access and Excellence. Mississippi State University will provide access and opportunity to students from all sectors of the state’s diverse population. The university promotes citizenship and leadership in its students and fosters in them an understanding of their history and culture, an appreciation of the arts, a tolerance for opposing points of view, a facility with written and spoken language, an understanding of scientific principles and methods, a command of modern technologies, a competence in critical thinking and problem solving, a commitment to life-long learning, and a spirit of inquiry. MSU will provide mentoring and support to the students admitted to maximize their chances of success and to help Mississippi reach and surpass the national average in the percentage of our population that holds a college degree, and will provide access for working and place-bound adult learners, particularly through its Meridian Campus and distance learning programs. The university will develop competent and informed citizens and professionals who are equipped to lead in the world of work and in their communities through traditional academic programs, experiential learning, and opportunities for leadership development and community service.

Statewide Mission. Mississippi State University will serve the State of Mississippi and beyond through its broad range of instruction, research, and outreach functions. The university maintains four strategically located research and extension centers around the state and has staff in every county of Mississippi. The institution regularly enrolls students from each of the state’s 82 counties and is actively engaged with business and industry, agriculture and natural resources, schools, communities and organizations in every part of the state.

Research and Economic Development. As a principal research university in the Southeast, MSU will continue to build on existing strengths in engineering and agricultural sciences and pursue emerging opportunities in other fields that match the university’s areas of expertise and the needs of the state, including automotive research and development, computational sciences, biotechnology, early childhood learning, biological engineering, remote sensing, and alternative energy sources, among others. The university will contribute to the development and revitalization of communities throughout the state through programs such as those of the Carl Small Town Center and the Stennis Institute of Government and through projects such as the creation in downtown Meridian of the Riley Education and Performing Arts Center.

Outreach and Service. MSU will continue to build on its land-grant tradition and statewide presence through partnerships with business and industry and the agricultural sector, with communities and organizations, and with others. The university will strengthen its numerous partnerships with K-12 schools and community colleges, continue to play a major role in preparing the state’s school teachers and other education professionals, reach out to the youth of the state through 4-H and other programs targeted toward youth development, and serve non-traditional students through non-traditional means.

II. ADMISSION TO THE UNIVERSITY

A. ADMISSIONS

DISCLAIMER

Until further notice, the admission information contained in this Bulletin most accurately describes the admissions policies, regulations, requirements and procedures of the University and the Board of Trustees of Institutions of Higher Learning. The University reserves the right to delete, substitute, change or supplement any statement in this Bulletin without prior notice.

RECRUITING

Admissions counselors visit high schools and community/junior colleges to assist students in making a smooth transition to Mississippi State University by answering questions about admissions, financial aid, scholarships, on-campus housing, academic programs, fees and expenses, new student orientation, cooperative education, extracurricular activities, ROTC, and other areas of concern. Prospective students and their parents are encouraged to visit the campus, to meet students and professors, and to get an overall view of what the campus is like. To make an appointment, write to the Office of Admissions and Scholarships, Box 6334, Mississippi State, MS 39762, or call 662-325-2224. The Web address is: admit.msstate.edu, and fax requests may be sent to 662-325-1MSU.

All new students (freshmen and transfers) entering the University are encouraged to participate in the summer orientation program. The purpose of the program is to enable the student to become familiar with the University, its activities, and its academic programs. The student participates in small group activities, receives academic advisement, selects courses, and completes registration except for the payment of tuition and fees.

Invitation to Parents. At the time of student orientation, parents are invited and urged to attend a program designed to acquaint them with University policies, student activities, campus life, academic programs, and other interest areas. They also are given the opportunity to meet and talk with academic deans and department heads and with staff members in the Division of Student Affairs.

Prior to the beginning of each semester, there is an orientation program for those who are admitted to the University too late to participate in the summer programs. Students who for other reasons cannot attend orientation at an earlier date may attend these sessions.

For additional information, write to the Director of Admissions and Scholarships, Box 6334, Mississippi State, MS 39762, or telephone 662-325-2224. Find the Office of Admissions and Scholarships on the Internet at admissions.msstate.edu.

APPLICATIONS

For consideration for admission for the fall term, freshmen and transfer applications must be received by August 1. Applicants to the College of Architecture, Professional Golf Management, and the College of Veterinary Medicine have early application deadlines. Other departments may also have application deadlines. Contact the specific department for dates.

All applicants must submit a $25 non-refundable application fee. The application for admission cannot be processed until this fee is received.

Mississippi State University may void enrollment in the following situations: if an original transcript is not received; if a student is not eligible for readmission to any college formerly attended; or if any document is fraudulent or altered.

Applicants may meet general admission requirements to the University and not meet the requirements for a specific department. Applicants should contact the academic department to which they are applying for additional requirements.

The Office of Admissions and Scholarships is responsible for administering admission policies. For admission information or to inquire further about university admission requirements, contact the Office of Admissions and Scholarships, Mississippi State University, P.O. Box 6334, Mississippi State, MS 39762. Telephone: 662-325-2224. Fax: 662-325-1678 (MSU). E-mail: admit@msstate.edu. Students may apply online by visiting our Web site at www.admissions.msstate.edu. All applications may be submitted electronically.
1. Freshman Entrance Requirements

a. Regular Admission.

(1) Submit application for admission. For consideration for admission for the fall term, freshmen applications must be received by August 1.
(2) Submit a $25 non-refundable application fee.
(3) Must have graduated from an approved secondary school.
(4) Submit an official American College Test (ACT) score or Scholastic Aptitude Test (SAT) scores.
(5) Submit a high school transcript to Mississippi State University, as well as an official transcript upon graduation from high school. If the applicant has attended another college, he/she should request those transcripts also be sent to the Office of Admissions and Scholarships.
(6) Must have earned in grades 9-12, at a minimum, the units shown in the following table:

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<tr>
<td>Computer</td>
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The high school course requirements above are applicable to high school students graduating after spring 1996. Students graduating prior to spring 1996 will be screened for admission under admission standards previously in effect.

Full admission to Mississippi State University will be granted to high school graduates who complete high school courses with one of the following:

- A minimum 3.20 grade-point average on the required high school courses.
- A minimum 2.50 grade-point average on the required high school courses or standing in the top 50 percent of the class and a composite score of 16 or higher on the ACT or a combined score of 760 or higher on the SAT.
- A minimum 2.0 grade-point average on the required high school courses and a composite score of 18 or higher on the ACT or a combined score of 860 or higher on the SAT.
- Satisfy the National Collegiate Athletic Association standards for student-athletes who are full qualifiers under Division I guidelines.

Mississippi residents and out-of-state children of alumni who fail to successfully complete the counseling and testing program may be given admission:

- If the initial review indicates inadequate readiness in English, reading, or mathematics, Mississippi students and eligible children of alumni will be required to participate in counseling and testing, which will be held on campus (and other designated locations) prior to the beginning of the summer session. Students who successfully complete the counseling and testing program will be admitted to the University, with the requirement that they participate in the year-long Academic Support Program.

Mississippi students or out-of-state children of alumni who fail to successfully complete the counseling and testing program may be admitted with the requirement that they enroll in the Summer Developmental Program. This is an intensive program that concentrates on those high school subject areas (writing, reading, and mathematics) essential to success in first-year college courses. Students who successfully complete this summer program will be allowed to continue in the fall term, with mandatory participation in the Academic Support Program during their freshman year. Developmental courses taken during the Summer Developmental Program are remedial and neither count toward a degree nor are computed in a student’s program. Courses taken must not be the equivalent of those which the student will take in the senior year of high school. Students are expected to return to high school and finish a normal senior year. The courses may not be substituted for high school credits to meet college admission requirements. Credit earned is reserved until the student has graduated from high school. Information concerning the program and application forms may be obtained by writing to:

Director, Special Program for Academically Talented Students, Box 5247, Mississippi State, MS 39762.

b. Admission with Deficiencies.

If the initial review indicates inadequate readiness in English, reading, or mathematics, Mississippi students and eligible children of alumni will be required to participate in counseling and testing, which will be held on campus (and other designated locations) prior to the beginning of the summer session. Students who successfully complete the counseling and testing program will be admitted to the University, with the requirement that they participate in the year-long Academic Support Program.

Students who fail to successfully exit the Summer Developmental Program will be counseled to explore other post-secondary opportunities.

A student-athlete must meet the requirements of the Southeastern Conference and the National Collegiate Athletic Association (NCAA). Mississippi State University neither awards credit nor accepts transfer-college-credit based solely on ACT, SAT, or other comparable tests commonly administered to high school students primarily for college admissions purposes. Documents and other proof that students have met the University entrance requirements are kept on file in the Office of Admissions and Scholarships, Room 100, Montgomery Hall.

c. Early Admission.

A superior secondary-school student may be admitted to the freshman class as an EARLY ADMISSION if he or she (a) has earned a minimum of fifteen (15) acceptable credits, (b) has earned a standard composite ACT score of 25 or an SAT combined score of 1130, (c) ranks in the upper twenty-five (25) percent of his or her high school class, and (d) is recommended for early admission in a letter from his or her high school principal.

d. Special Program for Academically Talented Students (SPATS).

Academically talented students who (a) have finished at least their junior year in high school, as judged by their high school officials, (b) in the judgment of parents and high school administrators are mature enough to profit from a summer’s work in college, and (c) have a standard composite score of 25 on the American College Test, may apply for admission to a special summer program in which they may earn regular college credit.

A SPATS student may take a maximum of six credit hours (two courses) each summer term, selected from a list available for credit under this program. Courses taken must not be the equivalent of those which the student will take in the senior year of high school. Students are expected to return to high school and finish a normal senior year. The courses may not be substituted for high school credits to meet college admission requirements. Credit is reserved until the student has graduated from high school. Information concerning the program and application forms may be obtained by writing to:

Director, Special Program for Academically Talented Students, Box 5247, Mississippi State, MS 39762.

e. Admission by Examination.

An applicant who has not graduated from high school may substitute the General Educational Development Test (high school level) for the requirement of high school graduation. The GED will substitute for the requirement of high school graduation only, and not for the other requirements for freshman admission. Therefore, applicants who took the GED must submit an acceptable ACT/SAT score. An interview is required, along with review of other information. Applicants who hold the GED and who cannot meet other requirements for freshman admission may enroll at Mississippi State as transfers after meeting the normal requirements for transfer admission from another regionally accredited institution.

f. Admission to the College of Veterinary Medicine.

(See College of Veterinary Medicine section in Part II.)
2. Special Non-Degree Classification

An applicant who is twenty-one (21) years old and who does not meet the regular freshman admission requirements, may apply to the Office of Admissions and Scholarships for acceptance into the Special Non-Degree (SND) student category. Students in this category will be advised by and will schedule classes through the University Academic Advising Center. Applicants must demonstrate adequate preparation for the courses they plan to schedule. SND students may schedule a maximum of twelve (12) semester hours during a regular term and three (3) semester hours during a five-week summer term. To move from the SND status, students should satisfactorily complete twelve (12) semester hours with a C or better average in core courses that are applicable to a degree at MSU. Students wishing to gain reclassification to a traditional major should discuss this during their initial meeting with one of the professional advisors in the University Academic Advising Center. For students admitted to a degree program, a minimum of eighteen (18) semester hours of credit earned while in the SND classification may be counted toward a baccalaureate degree, pending approval by the dean of the college or school from which the degree is sought.

Degree-seeking adult applicants with previous college attendance must meet regular transfer student requirements and, therefore, may not apply for admission under the Special Non-Degree option.

Non-degree seeking adult applicants with previous college attendance who do not meet regular transfer requirements may be allowed to schedule courses for self-improvement and/or job enhancement only. Applicants should file a letter of intent with the Director of Admissions and Scholarships to enroll under this option.

3. Admission of Transfer Students

Transfer work earned from a non-regionally-accredited institution is not acceptable at Mississippi State University and applicants from these institutions attended must be submitted.

Transfer work earned from a regionally-accredited institution of higher learning and complete the courses listed below and earn an overall 2.0 GPA (as computed by Mississippi State University) on all hours attempted. Official transcripts from all institutions attended must be submitted.

- The applicant must complete the following 24 semester hours of college work at a regionally accredited college:
  - 6 semester hours of English composition
  - 3 semester hours of college algebra or higher level mathematics
  - 6 semester hours of laboratory science
  - 9 semester hours of transferable electives

Transfer Credit.

Credits transferred from a non-regionally-accredited institution are reproduced on the permanent records of Mississippi State University. In the case of students receiving VA benefits, enrollment certificates submitted to the Veterans Administration will reflect proper credit for previous education and training. This is done as a convenience for the student in providing him or her with an accurate consolidated record of courses listed below for transfer credit.

Any applicant who does not meet freshman requirements may attend a regionally accredited institution of higher learning and complete the core courses listed below and earn an overall 2.0 GPA (as computed by Mississippi State University) on all hours attempted. Official transcripts from all institutions attended must be submitted.

1. Submit application for admission. Transfer applicants must submit applications by August 1 for consideration for admission for the fall term.
2. Submit a $25 non-refundable application fee.
3. Submit an official final transcript from each college or university attended. An applicant may not ignore previous college attendance and must list all colleges attended on the application for admission. An applicant who misrepresents information or fails to provide information about prior college attendance will be subject to disciplinary action, including dismissal from the University.
4. Submit an official high school transcript and ACT or SAT scores if they seek admission under Option 1.
5. Be in good standing at the last college or university attended.

Admission Option 1:

1. Submit a high school transcript and ACT or SAT scores showing that the applicant qualified initially as a freshman enrollee (see Freshman Entrance Requirements), and
2. Earn an overall 2.0 GPA (as computed by Mississippi State University) on all courses attempted at a regionally accredited institution of higher learning.

Admission Option 2:

Any applicant who does not meet freshman requirements may attend a regionally accredited institution of higher learning and complete the core courses listed below and earn an overall 2.0 GPA (as computed by Mississippi State University) on all hours attempted. Official transcripts from all institutions attended must be submitted.

Admission Option 3:

Any applicant who does not meet freshman requirements may attend a regionally accredited institution of higher learning and earn an A.A., B.S. or equivalent from the regionally accredited institution with a 2.0 GPA (as computed by Mississippi State University). Official transcripts from all institutions attended must be submitted.

Although the transfer applicant may meet general admissions requirements to the University, he/she may not meet the requirements for a specific department. Applicants should contact the academic department for additional requirements.

Transfer work earned from a non-regionally-accredited institution of higher learning and meet the requirements for a specific department. Applicants should contact the academic department for additional requirements.

Transfer work earned from a non-regionally-accredited institution is not acceptable at Mississippi State University and applicants from these institutions must meet the admission requirements as an entering freshman.

International transfer students must meet the requirements in section 4.

Transfer Credits.

Credits transferred from a regionally-accredited institution are reproduced on the permanent records of Mississippi State University. Credits earned at another institution while on disciplinary suspension or dismissal may never be transferred or posted to the Mississippi State University record. In the case of students receiving VA benefits, enrollment certificates submitted to the Veterans Administration will reflect proper credit for previous education and training. This is done as a convenience for the student in providing him or her with an accurate consolidated record of his or her entire college career. This action is evidence that the credits are considered valid. Validity, however, is not to be confused with acceptability or applicability.

The Office of Admissions and Scholarships will accept academic transfer hours from other regionally accredited institutions. Depending on the course of study, technical credit may or may not be accepted. Remedial and Vocational credit will not be accepted. To meet graduation requirements, a transfer student must have an overall C (2.00) average, calculated by the method currently in use at Mississippi State University, on all hours attempted and rescheduled at all institutions attended, including Mississippi State University. Excess quality points earned at other institutions cannot be used to offset any deficiencies at Mississippi State University. Acceptance of junior or community college work is limited to one-half the total requirements for graduation in a given curriculum. The last half of the total hours applied toward graduation must be earned in a senior college.

Applicability of transfer work depends upon the equivalence of transfer credits with the requirements of a particular curriculum. Applicability varies from curriculum to curriculum, not only for transfer students from other institutions but for students transferring from one school or curriculum to another within Mississippi State University. In either case, the upper limit of the number of applicable credits is the number of accepted credits. Applicability is determined by the dean of the college or school to which one is admitted.

Non-traditional credits awarded by another college or university will be evaluated in terms of current policy at Mississippi State University. Unless the basis for awarding the credit is readily identifiable, no credit will be allowed until such time as the student, through the awarding institution, can establish the credibility of the work. Credits for ACT, SAT, CLEP General, or other comparable tests will not be accepted as transfer credit.

4. Admission of International Students

Undergraduate international students must submit the following documents in order to be considered for admission:
1. International application form
2. $25 non-refundable application fee
3. Certified, translated copies of all transcripts, mark sheets and diplomas.

Mississippi State University may void enrollment if an original transcript is not received; if a student is not eligible for readmission to any college formerly attended; or if any document is fraudulent or altered.
4. Mississippi State’s Declaration of Financial Support form
5. Bank or employer letter documenting financial support
6. Required test scores (see below)

**TOEFL Requirement** - All undergraduate international students must submit an acceptable score on the Test of English as a Foreign Language (TOEFL). The university minimum is 525, for paper based test or 197 for computer based tests but many departments have established higher requirements for their own students. TOEFL scores must be no more than two years old and must be verifiable. Completion of intensive English training or English Composition courses at a U.S. college does not waive the TOEFL requirement. Only students who are citizens of Australia, Bahamas, Belize, Canada, England, Guyana, New Zealand, Trinidad and Tobago, and Ghana and The Gambia are automatically exempt from this requirement. Citizens of South Africa, Botswana, Lesotho, and Swaziland are only exempt if English is listed as the first language on the Senior Certificate.

**Freshman Admission Requirements** - Diploma from secondary school or secondary leaving examination, Scholastic Aptitude Test (SAT) score of 980 or higher and appropriate TOEFL score.

**Transfer Admission Requirements:**
- Option A: One year of successful study at a foreign university and appropriate TOEFL score.
- Option B: Meet freshman admission requirements and maintain a quality point average of 2.00/4.00 or higher (as evaluated by Mississippi State University) on all college level work attempted.
- Option C: Appropriate TOEFL score and 24 semester hours of transferable credit from a regionally accredited U.S. college, with a quality point average of 2.00/4.00 or higher, as evaluated by Mississippi State University, including all of the following credits:
  - 6 semester hours of English Composition
  - 3 semester hours of College Algebra (or a higher mathematics)
  - 6 semester hours of laboratory science
  - 9 semester hours of transferable electives

**Transfer Credit from Foreign Universities** - The Office of Admissions and Scholarships certifies appropriate transfer credit from foreign universities. These courses are recorded on the Mississippi State University permanent record with the grade of S, rather than with letter grades. However, these courses are treated as graded courses (rather than pass-fail courses) in satisfying degree requirements. The student’s dean has the discretion to apply this transfer credit toward degree requirements or to reject any or all of it, just as with domestic students. Students may be asked to supply course descriptions, syllabi, tests, or other documentation to the dean or department to justify the applicability of a transferred course toward a particular degree requirement. No transfer credit will be awarded for English composition courses completed in colleges or universities outside the United States of America.

**English as a Second Language Course** - Courses in English as a Second Language (ESL) are considered developmental and are not transferable. They may not be used to satisfy any of the requirements for admission listed above. English courses taken at universities in non-English-speaking countries are considered to be ESL courses unless specific documentation is provided that literature, rather than language acquisition, was the primary focus of the course.

**Deadlines for Submission of Materials** - International students who are already inside the United States should submit all required materials for admission at least two months prior to the date of expected enrollment. Students who are outside the United States should apply at least four months in advance of enrollment. Undergraduate international application forms, required declaration of financial support forms, and additional information are available from the following address: Director of Admissions and Scholarships, Box 6334, Mississippi State, MS 39762 USA

5. Admission to Teacher Education

The College of Education is responsible for all teacher education at Mississippi State University. All students who expect to qualify to teach must be formally admitted to the teacher education program. For specific information, see “Requirements for Teacher Education” in the College of Education section of the catalog.

6. Graduate Admissions

Any person admitted to Graduate Studies for any purpose must hold a bachelor’s degree; normally the undergraduate degree must be awarded by an institution having regional accreditation. A prospective applicant, who holds a bachelor’s degree from an educational institution that does not have regional accreditation, may request consideration from the Academic Dean of the College or School of interest. Such a request to the Academic Dean should be made prior to making application for admission.

The Academic Dean of the College or School may prescribe specific undergraduate level courses as prerequisites to admission without regard to the accreditation status of the institution awarding the bachelor’s degree. The Academic Dean of the College or School has the authority to grant admission to all graduate programs in that College or School.

Graduate program areas may prescribe requirements in addition to the above conditions described for regular admission. See the current Graduate Bulletin for additional requirements.

Meeting minimum requirements for admission does not necessarily guarantee admission into a program. Each applicant must compete with all other applicants for availability in the respective programs.

Graduate applicants should consult the Graduate Bulletin or write for information and application materials to this address:

Office of Graduate Studies
Mississippi State University
P.O. Box G
Mississippi State, MS 39762

MSU gives preference to self-managed applications. Applicants are encouraged to submit all required materials in one envelope. See Graduate Bulletin for additional information.

**B. LEGAL RESIDENT STATUS**

Students are classified as in-state or out-of-state for the purpose of paying University fees. The Office of Admissions and Scholarships will make the initial classification at the time a student’s application for admission is processed. The burden of proof for establishing residency resides with the applicant. If a student misrepresents his or her status, he or she shall be responsible for paying the fees he or she would have otherwise been required to pay and will be subject to disciplinary action or dismissal from school. The University Registrar is authorized to change a student’s residence status upon receipt of evidence that the student is improperly classified.

The following state laws, court decisions and Institutions of Higher Learning policies apply in determining the residential status of students for the purpose of enrolling and paying fees at a state-supported institution of higher learning:

No student may be admitted to any institution of higher learning as a resident of Mississippi unless his residence has been in the State of Mississippi preceding his/her admission. Residence shall be as defined in Mississippi Code Sections 37-103-7 and 37-103-13 unless excepted in this chapter. § 37-103-3, Mississippi code of 1972. Residency requirement for purpose of being admitted as state resident; definition of residence.
A person who has entered the State of Mississippi from another state and enters an educational institution is considered a nonresident. Even though he/she may have been legally adopted by a resident of Mississippi, or may have been a qualified voter, or landowner, or may otherwise have sought to establish legal residence, such a person will still be considered as being a nonresident of Mississippi if he/she has entered this state for the purpose of enrolling in an educational institution. § 37-103-5, Mississippi Code of 1972. Residence of person entering state for purpose of attendance at educational institution.

Legal Residence of a Minor. For purposes of determining whether a person pays out-of-state or in-state tuition for attendance at universities, community colleges, and junior colleges, the residence of a person less than twenty-one (21) years of age is that of the father, the mother or a general guardian duly appointed by a proper court in Mississippi. If a court has granted custody of the minor to one (1) parent, the residence of the minor is that of the parent who was granted custody by the court. If both parents are dead, the residence of the minor is that of the last surviving parent at the time of that parent’s death, unless the minor lives with a general guardian duly appointed by a proper court of Mississippi, in which case his residence becomes that of the guardian. A student who, upon registration at a Mississippi institution of higher learning or community college, presents a transcript demonstrating graduation from a Mississippi secondary school and who has been a secondary school student in Mississippi for not less than the final four (4) years of secondary school attendance shall not be required to pay out-of-state tuition. This section shall not apply to the residence of a person as it relates to residency for voter registration or voting. § 37-103-7, Mississippi Code of 1972. Legal Residence of a Minor. Effective July 1, 2005.

Legal Residence of an Adult. The residence of an adult is that place where he or she is domiciled; that is, the place where he or she actually resides with the intent of remaining there indefinitely, or of returning there permanently when temporarily absent. § 37-103-13, Mississippi Code of 1972. Legal Residence of an Adult.

Removal of Parents from Mississippi. If the parents of a minor who is enrolled as a student in an institution of higher learning move their legal residence from the State of Mississippi, the minor is immediately classified as a nonresident student. § 37-103-11, Mississippi Code of 1972. Removal of Parents from Mississippi.

Residence Status of a Married Person. A married person may claim the residence of his or her spouse, or may claim independent resident status as any other adult. § 37-103-15, Mississippi Code of 1972. Residence Status of a Married Person.

Children of Parents Who Are Employed by Institutions of Higher Learning. Children of parents who are members of the faculty or staff of any institution under the jurisdiction of the board of trustees of the University of Mississippi is entitled to pay tuition and fees at the rate provided for Mississippi residents without regard to the residence requirement of twelve (12) months, for the purpose of being classified as residents of the State of Mississippi, excepting temporary training assignments en route from Mississippi. The person’s eligibility to pay tuition and fees at the rate provided for Mississippi residents under this subsection does not terminate because the person is no longer a member of the faculty or staff. § 37-103-9, Mississippi Code of 1972. Children of Parents Who Are Employed by Institutions of Higher Learning.

Military Personnel Assigned an Active Duty Station in Mississippi. Members of the armed forces and members of the Mississippi National Guard on extended active duty and/or stationed within the State of Mississippi, except those military personnel whose active duty assignment in Mississippi is for educational purposes, may be classified as residents of the State of Mississippi, without regard to the residence requirement of twelve (12) months, for the purpose of attending state-supported institutions of higher learning and junior colleges of the State of Mississippi. Resident status of such military personnel who are not legal residents of Mississippi, as defined under “Legal residence of an adult” shall terminate upon their reassignment by a physician that the student has a medical condition that requires withdrawal or non enrollment. For purposes of this subsection, a person with extended active duty shall be that of the military spouse or parent for the purpose of attendance at the institution where their parents are faculty or staff members. § 37-103-9, Mississippi Code of 1972. Children of Parents Who are Employed by Institutions of Higher Learning.

Military Personnel Assigned an Active Duty Station in Mississippi (amended). Members of the armed forces and members of the Mississippi National Guard on extended active duty and/or stationed within the State of Mississippi, except those military personnel whose active duty assignment in Mississippi is for educational purposes, may be classified as residents of the State of Mississippi, without regard to the residence requirement of twelve (12) months, for the purpose of attending state-supported institutions of higher learning and junior colleges of the State of Mississippi. Resident status of such military personnel who are not legal residents of Mississippi, as defined under “Legal residence of an adult” shall terminate upon their reassignment by a physician that the student has a medical condition that requires withdrawal or non enrollment. For purposes of this subsection, a person with extended active duty shall be that of the military spouse or parent for the purpose of attendance at the institution where their parents are faculty or staff members. § 37-103-9, Mississippi Code of 1972. Children of Parents Who are Employed by Institutions of Higher Learning.

Children and Spouses of Military Personnel. The resident status of a spouse or child of a member of the Armed Forces of the United States on extended active duty shall be that of the military spouse or parent for the purpose of attending state-supported institutions of higher learning and community/junior colleges of the State of Mississippi during the time that the military spouse or parent is stationed within the State of Mississippi and shall be continued through the time that the military spouse or parent is stationed in an overseas area with last duty assignment within the State of Mississippi, excepting temporary training assignments en route from Mississippi. Resident status of a minor child terminates upon reassignment under Permanent Change of Station Orders of the military parent for duty in the continental United States outside the State of Mississippi, excepting temporary training assignments en route from Mississippi, and except that children of members of the Armed Forces who attain Mississippi residency in accordance with the above provisions, who begin and complete their senior year of high school in Mississippi, who enrol full time in a Mississippi institution of higher learning or community/junior college to begin studies in the fall after their graduation from high school, maintain their residency status so long as they remain enrolled as a student in good standing at a Mississippi institution of higher learning or community/junior college. Enrollment during summer school is not required to maintain such resident status. (2) The spouse or child of a member of the Armed Forces of the United States who dies or is killed is entitled to pay the resident tuition fee if the spouse or child becomes a resident of Mississippi within one hundred eighty (180) days of the date of death.

(3) If a member of the Armed Forces of the United States is stationed outside Mississippi and the member’s spouse or child establishes residence in Mississippi and registers with the Mississippi institution of higher learning or community/junior college at which the spouse or child plans to attend, the institution of higher education or community/junior college shall permit the spouse or child to pay the tuition, fees and other charges provided for Mississippi residents without regard to length of time that the spouse or child has resided in Mississippi. (4) A member of the Armed Forces of the United States or the child or spouse of a member of the Armed Forces of the United States who is entitled to pay tuition and fees at the rate provided for Mississippi residents under another provision of this section while enrolled in a degree or certificate program is entitled to pay tuition and fees at the rate provided for Mississippi residents in any subsequent term or semester while the person is continuously enrolled in the same degree or certificate program. A student may withdraw or may choose not to reenroll for no more than one (1) semester or term while pursuing a degree or certificate without losing resident status only if that student provides sufficient documentation by a physician that the student has a medical condition that requires withdrawal or non enrollment. For purposes of this subsection, a person is not required to enroll in a summer term to remain continuously enrolled in a degree or certificate program. The person’s eligibility to pay tuition and fees at the rate provided for Mississippi residents under this subsection does not terminate because the person is no longer a member of the Armed Forces of the United States or the child or spouse of a member of the Armed Forces of the United States. § 37-103-19, Mississippi Code of 1972. Children of Military Personnel. Effective July 1, 2005.

Certification of Residence of Military Personnel. A military personnel on active duty stationed in Mississippi who wishes to avail himself or herself or his or her dependents of these provisions must submit a certificate from his or her military organization showing the name of the military member; the name of the dependent (if for a dependent), the name of the organization of assignment and its address (may be in the letterhead); that the military member will be on active duty stationed in Mississippi on the date of registration at the state-supported institution of higher learning or junior college of the State of Mississippi; that the military member is not on transfer orders; and the signature of the Commanding Officer, the Adjutant or the Personnel Officer of the unit of assignment with signer’s rank and title. A military certificate must be presented to the registrar of the state-supported institution of higher learning or junior college of the State of Mississippi each semester or trimester at (or within ten (10) days prior to) registration each semester for the provisions hereof to be effective. § 37-103-21, Mississippi Code of 1972. Certification of Residence of Military Personnel.

Non U.S. Citizens (Alien status). All aliens are classified as nonresidents except that lawfully admitted alien students with permanent resident status, temporary resident status, or refugee status can establish Mississippi residence by meeting the resident status requirements as any U.S. Citizen. § 37-103-23, Mississippi Code of 1972. Aliens. U.S. District Court in the case of Jagnandan v. Giles, 379 F.Supp. 1178 (N.D. Miss. 1974).

Petition for Change of Residency Classification. A person who enters the State of Mississippi from another state and enters an educational institution is considered a non-resident. Any person who has after attaining the age of twenty-one (21) and has since their twenty-first birthday established residence and resided within the State of Mississippi for twelve (12) consecutive months may: (1) upon sworn affidavit and other representation, and
(2) who can prove financial independence, petition for a change in residency classification for the purposes of fees and tuition assessment.

Residency changes are not retroactive and the following conditions apply:
1. The institution may make reasonable inquiry into the validity of the petitioner’s claim.
2. A petition for change of residency must be received **prior to the first day of class** of the term for which the student is applying for residency.

Factors Regarding Residency. Although domicile and residency for educational purposes are largely matters of intention, this intention is determined objectively from the facts and circumstances surrounding a claim of in-state residency. Some of the factors relevant to determining residency include:
- Actual physical residence of habitation
- Length of time at actual physical residence- Residence used for income tax, loan, banking and other purposes
- Voter registration
- Motor vehicle registration (Persons moving into the state on a permanent basis have 30 days to register vehicles.)
- Driver’s license held (Persons moving into the state on a permanent basis have 60 days to acquire driver’s licenses.)
- State to which personal income taxes or other taxes paid
- Status of income sources
- Location of bank, savings and other accounts

Responsibility for Reporting Change. It is the individual student’s responsibility to report immediately to the Registrar any change which will affect his or her residence status under these regulations.

Institutions of Higher Learning (College Board) and University Policies Concerning Nonresident Tuition. In addition to state laws and regulations, the University has established certain IHL Board approved regulations concerning the payment of non-resident tuition. Mississippi State University (except the College of Veterinary Medicine) may waive a percentage of the non-resident tuition for the following groups of students:
1. Those who are currently awarded athletic scholarships.
2. Those who are currently awarded band scholarships.
3. Those who are currently awarded choral scholarships.
4. All graduate students holding assistantships. (Rules applicable to these awards may be found in the Graduate Studies Bulletin or in the Graduate Assistant Handbook. Both publications are available on the MSU Web: www.msstate.edu/dept/grad/publications.
5. Children of Mississippi State University (except the College of Veterinary Medicine) alumni. (Application deadline is April 1) For this purpose, an alumnus or alumna is defined as one who has earned a minimum of 48 MSU undergraduate credit hours or 30 MSU graduate credit hours of course work or received a degree from Mississippi State University. Graduate students must maintain a B (3.0) grade point average to continue eligibility for this award. STUDENT AFFAIRS OP 91.178: Policy on Out-of-State Tuition Waivers is available on the MSU Web: www.msstate.edu/dept/audit/mainindex.
6. Non-resident students who are certified participants in The Academic Common Market.

Academic Common Market. Academic Common Market out-of-state tuition waivers are available for specific academic programs for students from certain states. Application must be made first with the awarding state. The student must be a legal resident of that state and approved for a specific major at MSU. Both undergraduate and graduate students are eligible to apply. A qualified student must maintain full time status. The waiver is 100 percent of out-of-state tuition and will remain at this level unless the student’s field of study changes, or a student no longer has full time status.

To be eligible for the non-resident waiver during the first semester of enrollment, applications and resident verification must be submitted to and approved by the Office of the Provost and Vice President for Academic Affairs prior to the first day of class. For more information about submission and deadlines, please contact that office at 662-325-3742.

Students seeking information on the Academic Common Market waiver should write to the Academic Common Market at the Southern Regional Education Board, 592 10th Street, N.W., Atlanta, GA 30318-5790. The Web site may be accessed at www.sreb.org/programs/acm/acmindex.asp.

C. THE COOPERATIVE EDUCATION PROGRAM

The Cooperative Education Program is a special way of going to college. Increasing numbers of students in various fields are taking advantage of the opportunity the program offers for combining practical experience with formal schooling in a five-year program of alternating semesters of study and gainful work with a cooperating employer. For the qualified student, the program can provide an expanded college education and a direct avenue to a career.

The work under this program is in, or closely related to, the student’s field of study. Upon completing three semesters of alternating work experience in the program and becoming academically eligible for graduation, a co-op student is designated a Cooperative Education Graduate. Permanent job offers to graduates of the Cooperative Education Program often provide substantially higher starting salaries and more responsible positions than for regular four-year graduates. The co-op student is not obligated for permanent employment with his or her employer, nor is the employer obligated to hire him or her upon graduation.

A high school graduate becomes eligible to begin a work assignment after satisfactorily completing one year at Mississippi State University; during this year he or she must establish at least a 2.50 average (on a 4.00 grading system). The student must be at least 18 years of age to begin the first work semester. Co-op credit hours may not be used to satisfy **University-wide degree requirements**.

A junior-college or senior-college transfer student who has at least a 2.50 overall average (on a 4.00 grading system), is eligible for participation. A student interested in the program who plans to transfer to Mississippi State University should communicate with the Cooperative Education office for application materials.

Qualified students majoring within the following colleges and schools are eligible to participate:
- School of Accountancy
- College of Agriculture and Life Sciences
- College of Architecture, Art, and Design
- College of Arts and Sciences
- College of Business and Industry
- College of Education
- James Worth Bagley College of Engineering
- College of Forest Resources

The program requires a semester-to-semester rotation. Once a student has accepted employment with one of the cooperating organizations, he or she is expected to regularly rotate each semester from work—to school—to work, etc. Approximate co-op work semester dates begin on January 1, May 15, and August 15.

Co-op students are required to pay a $25 registration fee for applicable work semesters. Co-op students may optionally elect to pay part-time student activity fees and/or a Sanderson Center usage fee during scheduled work semesters. Part-time student activity fees cover use of student facilities, participation in intramural sports, admission to intercollegiate athletic events, the student newspaper (Reflector), student health services, and other benefits. Optional activity fees are calculated at the current hourly rate times three (3) hours. Assessment of optional activity fees may be requested by the student. Co-op students are not required to purchase a yearbook (Reveille) and the yearbook fee is not included in the activity fee for part-time students. Co-op students may purchase a yearbook, pending availability, from the Reveille office. (All fees are subject to change by action of the Board of Trustees of State Institutions of Higher Learning, State of Mississippi.)
D. NATIONAL STUDENT EXCHANGE

The National Student Exchange program is a consortium of more than 175 colleges and universities in the United States and extends beyond the borders of the United States to include some Canadian Provinces. Mississippi State University is a member of this program.

The NSE program provides the opportunity for the eligible student to attend a college or university in another state for up to one calendar year without having to pay for the high cost of out-of-state tuition. Students register, pay tuition and fees at Mississippi State University as they usually do; they do not pay tuition and fees at the host campus, but are responsible for room and board.

Mississippi State University students who participate in the National Student Exchange program remain as degree-seeking, registered students at Mississippi State University. Any financial aid that is normally available can be applied to the exchange obligations. Because NSE is an officially approved program of the university, all courses with their respective credit hours and earned grades will be recorded on the Mississippi State University transcript and be calculated in the GPA.

For information, contact the NSE Coordinator in the Office of Academic Affairs, 608 Allen Hall or 662-325-3742 or visit www.nse.org.

E. INTERNATIONAL STUDY PROGRAMS

COOPERATIVE CENTER FOR STUDY ABROAD (CCSA)

Both undergraduate and graduate students may earn academic credit in courses identified to meet MSU degree requirements by the major department. CCSA courses in diverse disciplines are offered in English-speaking countries abroad – England, Scotland, Ireland, New Zealand, Australia, Kenya and Barbados. Consortium faculty members from the 22 American member institutions include outstanding MSU faculty members. Costs of program participation vary according to location and time.

For more information: Cooperative Center for Study Abroad, 45 Magruder Street, University Honors Program, Mississippi State, MS 39762; UHP@honors.msstate.edu; Bgardner@honors.msstate.edu; www.msstate.edu/dept/uhp; 662-325-2522

COLLEGE OF ARCHITECTURE, ART, and DESIGN

The College of Architecture, Art, and Design offers a six-week Italian Study Program open to all students in the college having completed their second year of study. Students receive elective credit for a history course on the Italian Renaissance, and a sketching/drawing class. The program is housed in Vicenza, Italy with travel venues that include the cities of Rome, Florence, Venice, Milan, Verona, and Padova, as well as the villas and architecture of northern Italy.

The School of Architecture offers fourth-year students the opportunity to study abroad during the fall semester at either the University of Plymouth, England or the Delft University of Technology in Delft, The Netherlands where classes are taught in English. Ideally, an equal number of students come from Plymouth and Delft to study at MSU. In addition to international study programs, the School of Architecture also offers students an opportunity to study at the Washington-Alexandria Architecture Center in Alexandria, Va., during the fall semester of their fourth-year. The School of Architecture students are selected by March 1 based upon GPA and faculty assessment of their overall academic careers. These students pay normal MSU tuition.

For more information contact, the College of Architecture, Art, and Design, Box AQ, Mississippi State, MS 39762 or 662-325-2202.

The Department of Art offers students opportunities to study art history and have studio experiences in many different areas around the world. Past locations have included Horn Island, Gulf of Mexico; Blue Ridge Mountains, North Carolina; Alaska; Australia; France; Italy; Scotland. These programs occur during the summer and students enroll and pay tuition at Mississippi State University.

For more information contact, Kay DeMarsche, Box 5182, Mississippi State, MS 39762 or 662-325-8926 or kud2@ra.msstate.edu.

COLLEGE OF ARTS AND SCIENCES

Laval University Foreign Language Study Abroad

The Department of Foreign Languages offers a French language program in Quebec City, with the option of an internship in a Canadian business firm. Students will have the unique opportunity to attain fluency in French, while gaining experience in an international setting. The French language program at Laval University is specially designed for non-native French speakers. Courses are taught every morning, Monday through Friday, for a period of four hours by carefully selected native French speakers. A 3-day review session and introduction to Quebec City will precede the start of classes. Students will be awarded six credit hours for the language component of the program. In addition, three credit hours may be earned from MSU upon completion of a project agreed upon by the student and the director of the program. Honors credit may be arranged for this program.

For more information contact, Dr. Edmond Emplaincourt, Box FL, Mississippi State, MS 39762. 662-325-3480 or eaempl@ra.msstate.edu.

Pueblo, Mexico Foreign Language Study Abroad

The Department of Foreign Languages offers FLS 2133 and FLS 2143 in Pueblo, Mexico. This unique opportunity helps students sharpen language skills and satisfy the foreign language requirement with six hours of credit in Spanish. Classes held each morning provide a basic review of grammar, readings at an intermediate level, and intensive oral-aural practice. Special assignments and afternoon activities with native “accompanantes” will help to involve students linguistically, socially, and culturally in their Mexican history and folklore of Mayan, Aztec, and Toltec civilizations. The opportunity to study the Spanish language in its natural setting is a unique and unforgettable experience.

For more information contact, Dr. Edmond Emplaincourt, Box FL, Mississippi State, MS 39762. 662-325-3480 or eaempl@ra.msstate.edu.

Quebec, Canada Foreign Language Study Abroad

The Department of Foreign Languages offers FLS 2133 and FLS 2143 in Quebec City, Canada to help sharpen language skills in French and to fulfill the foreign language requirement with six hours credit in French. Classes are designed for intermediate-level students, provide over 17 hours a week of review of grammar, intensive oral-aural practice and readings, plus being a French-speaking area makes this a unique educational experience. Classes are held in the morning, leaving the afternoon and evening time for study, extra-curricular activities, or to explore on your own the museums, monuments and other places of interest of this city where you will find a rich blend of two cultures, North American and French. Organized excursions take students through historic and modern Quebec City, the Beaufre Coast, the Island of Orleans, the beautiful Montmorency Falls, Parliament and several museums.

For more information contact, Dr. Edmond Emplaincourt, Box FL, Mississippi State, MS 39762. 662-325-3480 or eaempl@ra.msstate.edu.

San Jose, Costa Rica Foreign Language Study Abroad

Specially recommended for International Business double-degree majors. Limited to 15 students. Participants take two upper-division courses, Advanced Spanish, and Business Spanish at the University of Costa Rica, taught specifically for our students in the morning by faculty from UCR. Each course will carry three credit hours. In the afternoon, participants have internships in businesses selected and supervised by the Chamber of Commerce of Costa Rica. Three hours of credit in FLS will be given for a project on the internship. Total credit hours is nine.

For more information contact, Dr. Edmond Emplaincourt, Box FL, Mississippi State, MS 39762. 662-325-3480 or eaempl@ra.msstate.edu.
Malaga, Spain Foreign Language Study Abroad

Specially recommended for Foreign Language majors, graduate students, double majors and minors. The program is designed for native English speakers. Courses are taught 8:30 a.m. to 2:30 p.m. Monday through Friday. Undergraduate students will be awarded six credit hours in Spanish language from the language school which will be transferred to Mississippi State University and three MSU credits in Spanish culture and civilization. Graduate students will receive six MSU credit hours. Undergraduate participants must have successfully completed at least eight hours of college-level Spanish courses or the equivalent.

For more information contact, Dr. Edmond Emplaincourt, Box FL, Mississippi State, MS 39762. 662-325-3480 or eaempl@ra.msstate.edu.

Bahamian Field Program

The Bahamian Field Program was developed at MSU, in cooperation with the Gerace Research Center (GRC) on San Salvador Island, Bahamas, to present MSU undergraduate and graduate students the opportunity to do field research in a cultural and physical environment unlike that found in Mississippi. Faculty, in addition to mentoring undergraduate and graduate students, have been able to develop additional research projects of their own. The program is generally run over the winter break, after Christmas but prior to the start of the spring semester, and occasionally between the spring semester and the start of summer school. The GRC is affiliated with MSU, which grants MSU students and faculty reductions in costs and increased access to field sites.

The field course begins with structured field trips to expose students to the environment of living and fossil reefs, caves, beaches, inland water bodies, archaeological sites, lagoons, and other sites of natural history significance. Evening lectures are given, and labs are used to analyze samples. As students gain a greater familiarity with the island’s many environments, they make decisions about doing research projects with faculty, graduate students, other students, or alone. The remainder of the time on the island is used to execute these research projects. Students are encouraged to schedule free time to enjoy both the Bahamian culture and the scenic landscapes. All students are required to keep a journal and submit it at the end of the trip.

For more information contact, John Mylroie, Box 5448, Mississippi State, MS 39762. 662-325-8774 or mylroie@geosci.msstate.edu.

COLLEGE OF BUSINESS AND INDUSTRY

International Business Academic Internship

The International Internship is an agreement among Mississippi State University, the International Business Academic Programs student and a company in this area. The intern work experience builds skills in business application and provides cultural immersion while living abroad. A business resume’, passport, and academic achievement are required to participate.

For details, see the Director of International Business, John Lox, Box 9582, MSU, MS 39762. 662-325-7005 or jlox@cobilan.msstate.edu.

COLLEGE OF ENGINEERING

Engineering Summer Study Abroad

The Engineering Summer Study Abroad Program takes place during the time frame of MSU’s second summer session (July-August). It includes four weeks of study at the University of Bristol, one of the top engineering universities in England. Students live with local families who provide them two meals a day. The experience of living with a host family is one of the most rewarding experiences of the trip. After the four weeks of study in Bristol, the students have two weeks for independent travel in Europe. The students receive six credit hours toward their engineering degree. Three credit hours are for HI 4653, The History for Science and Technology, which can be used as a humanities elective. The other three hours are for either Computer Aided Design and Manufacturing or Digital Signal Processing, which can be used as a technical elective in engineering.

For information you may contact, Dr. Allen Greenwood, Box 9542, Mississippi State, MS 39762. 662-325-7216 or greenwood@ie.msstate.edu

Global Engineering Educational Exchange

The Global Engineering Education Exchange is a consortium of U.S. engineering institutions with counterpart institutions in Europe, Latin America, and Asia to provide reciprocal opportunities for undergraduate and graduate students to receive academic and practical training in each other’s countries with no net exchange of funds between participating universities. Students spend a complete term at the international institution. Courses are selected with an academic advisor to apply toward MSU engineering degrees. Students pay tuition and fees at MSU. Scholarships and other financial aid can still apply. Many institutions are available where English is the language of instruction.

For information you may contact, Dr. Allen Greenwood, Box 9542, Mississippi State, MS 39762. 662-325-7216 or greenwood@ie.msstate.edu

III. DEGREES, CORE REQUIREMENTS, ACADEMIC RECORDS, GRADUATION

A. DEGREES, DEGREE REQUIREMENTS, and SCHEDULING

1. Baccalaureate Degrees. MSU awards the following baccalaureate degrees: Bachelor of Arts (B.A.), Bachelor of Business Administration (B.B.A.), Bachelor of Fine Arts (B.F.A.), Bachelor of Science (B.S.), Bachelor of Landscape Architecture (B.L.A.), Bachelor of Music Education (B.M.E.), Bachelor of Architecture (B.Arch.), Bachelor of Accountancy (B.ACC.), Bachelor of Interior Design (B.I.D.) and Bachelor of Social Work (B.S.W.) (Master’s, Specialist, and Doctor’s degrees are listed under Office of Graduate Studies in this catalog, and in the Graduate Bulletin.)

2. University-Wide Requirements. In order to complete a baccalaureate degree, a student must (1) satisfactorily complete the curriculum requirements, (2) make an overall C average on all hours scheduled and rescheduled at all institutions attended, including Mississippi State University, (3) complete in residence at Mississippi State University no less than 1/4 of his/her degree program in junior and senior subjects (courses numbered 3000 through 5000) approved by the dean of the college or school in which he or she is enrolled, and (4) complete the last 25 percent of course work taken to fulfill degree requirements in residence at Mississippi State University. (Any exception to the 25 percent residence requirement must be made in writing with the Dean prior to taking course work at another institution.)

a. Board of Trustees Core Curriculum. All students who enter Mississippi State University must meet the common core curriculum requirements approved by the Board of Trustees, Institutions of Higher Learning of the State of Mississippi, to qualify for any bachelor’s degree. This core curriculum consists of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>6</td>
</tr>
<tr>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>6</td>
</tr>
<tr>
<td>Humanities and Fine Arts</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

(Note: These requirements are included in the University Core Curriculum which follows.)

b. University Core Curriculum. All students graduating after January 1, 1990, in order to receive any bachelor’s degree from Mississippi State University, must earn a minimum of 36 semester hours of credit (or equivalency) in courses making up the University Core Curriculum, as follows: (Specific courses to satisfy the Core Curriculum will vary by academic major.)
Students may obtain a list from their advisor or Dean’s office of approved courses SELECTED from the following to meet individual degree requirements.

English Composition .................................................................6 semester hours
Refer to Core Curriculum Requirements—Numbers and Course Titles for approved choices.

Mathematics and Natural Sciences .................................................15 semester hours
Mathematics: 6-9 semester hours. Consult an advisor in your major for approved choices.
Natural Sciences: 6-9 semester hours. Consult an advisor in your major for approved choices.

Humanities/Fine Art........................................................................9 semester hours
Six hours must be humanities and three hours must be fine art.
Refer to Core Curriculum Requirements—Numbers and Course Titles for approved choices.

Social/Behavioral Sciences .........................................................6 semester hours
Refer to Core Curriculum Requirements—Numbers and Course Titles for approved choices.

In addition, students must show proficiency in public speaking, computer literacy, and advanced writing skills. Courses to meet these requirements are determined by the academic departments.

Total .......................................................................................36 semester hours

Core Curriculum Requirements - Numbers and Course Titles

NOTE: Students must check course descriptions of core classes for prerequisites and/or grade requirements.
NOTE: Core requirements apply to all students enrolling Fall 2005.
Honors sections may be available in selected courses listed below. Consult advisor.

English Composition - Freshman level (6 hours)
EN 1103 English Composition I
EN 1113 English Composition II
EN 1163 Accelerated Composition I
EN 1173 Accelerated Composition II

Mathematics and Statistics (6-9 hours)
MA 1303 Quantitative Reasoning or MA 1313 College Algebra
MA 1313 College Algebra or MA 1303
MA 1323 Trigonometry (fulfills second mathematics only with Credit for college algebra)
MA 1413 Structure of the Real Number System
(Designed primarily for special and elementary education majors.)
MA 1423 Problem Solving with Real Numbers
(Designed primarily for special and elementary education majors.)
MA 1433 Informal Geometry and Measurement
(Designed primarily for special and elementary education majors.)
MA 1453 Precalculus with Graphing Calculators

Natural Sciences (6-9 hours)
ARC 2713 Passive Building Systems I
BIO 1004 Anatomy and Physiology*
BIO 1023 Plant and Humans*
BIO 1001 Biology Lab*
BIO 1033 Biological Science*
BIO 1203 Plant Biology*
BIO 1123 Animal Biology*
BIO 1504 Principles of Zoology*
BIO 3304 General Microbiology*
CH 1043 Survey of Chemistry I
CH 1053 Survey of Chemistry II
CH 1051 Experimental Chemistry (Lab)
CH 1213 Chemistry I
CH 1211 Investigations in Chemistry (Lab)
CH 1223 Chemistry II
CH 1221 Investigations in Chemistry II (Lab)
EPP 2213 Introduction to Insects
GG 1111 Earth Sciences I (Lab)
GG 1113 Survey of Earth Sciences I

Humans (at least 6 hours)
ARC 2313 History of Architecture I
ARC 3313 History of Architecture II
ARC 3323 History of Architecture III
EN 2203 Introduction to Literature
EN 2213 English Literature
EN 2223 English Literature
EN 2243 American Literature

HI 1163 World History Before 1500
HI 1173 World History Since 1500
HI 1213 Early Western World
HI 1223 Modern Western World
PHI 1103 Introduction to Philosophy
PHI 1113 Introduction to Logic
PHI 1123 Introduction to Ethics

* indicates Life Sciences; remaining Natural Sciences are considered Physical Sciences
3. Other Degree Requirements. The announcements of the various colleges and schools specify the additional requirements for the bachelor’s degree in the various departments and programs.

4. Second Baccalaureate Degree Requirements. In order for a student to qualify for a second baccalaureate degree, requirements for the second degree must be satisfied by the appropriate dean as having been met and must include 30 hours in courses numbered 3000 or above, in residence beyond the requirements for the first degree.

5. Advisement and Registration. Every student in the University is provided with an academic advisor. A student who has selected a specific major will find the names of the advisors for that major listed under the name of the department or the major subject in the appropriate college or school section of this catalog. A student who is uncertain of his or her choice of major may register as Undeclared. In addition, advisors are assigned in the appropriate colleges for students wishing to pursue degrees in General Agriculture, General Business, General Liberal Arts, General Science and Interdisciplinary Studies.

Before registering for any semester, each student is responsible for consulting his or her advisor to work out and secure approval for a specific schedule of courses. With the signed schedule, the student then enters his/her schedule in the computer by using the Student/Faculty Web System, resolves conflicts, and the student is officially enrolled in each class on the perfected schedule.

A period for schedule planning and registration for the following semester is provided near the end of each regular term; registration for the summer school terms may also be accomplished in the spring registration period. Prospective new students may be advised and registered during Summer Orientation. Late registration, as always, is conducted immediately prior to the beginning of classes.

A student who has previously attended Mississippi State University and who wish to re-enter must apply for readmission. Undergraduate students who have previously attended Mississippi State University and who wish to re-enter must apply for readmission under the terms of the Academic Calendar but may find the choices of courses and sections limited.

6. Readmission. Undergraduate students who have previously attended Mississippi State University and who wish to re-enter must apply for readmission and secure a registration permit from the Registrar’s Office. Former students who have attended another college for at least one quarter or semester must be eligible to re-enter that institution, if they desire to return to Mississippi State University. Students who have attended another institution are required to provide the Registrar’s Office official transcripts from all other institutions attended prior to receiving a registration permit. Provisional permits may be issued to former MSU students whose MSU and cumulative GPA’s are 2.0 or higher. All readmission students must meet the academic standing guidelines outlined in section 3-Academic Standing. If their GPA is less than the required average, they may be readmitted only on the recommendation of their dean and with the approval of the provost.

Students readmitted with an MSU cumulative average less than 2.0 will be readmitted on academic probation.

7. Student Course Load. The normal load for an undergraduate student in a regular semester is 15-18 credit hours. Course load limits at Mississippi State University are based on Grade Point Averages (GPA). These limits are based on MSU cumulative averages as noted below.

a. Students on academic probation (AOP 12.15) are limited to an enrollment of 14 credit hours (including ensemble and academic support/developmental classes.)

b. Students between 2.0 and 2.99 are limited to 19 hours excluding ensemble classes. (Any student without a cumulative GPA such as a freshman or a transfer student will be limited to 19 hours.)

c. Students between a 3.0 and 4.0 GPA may elect to take up to 24 semester hours. Students in this category must secure permission of their advisor and academic department head to schedule more than 19 semester hours.

7. Student Course Load. The normal load for an undergraduate student in a regular semester is 15-18 credit hours. Courseload limits at Mississippi State University are based on Grade Point Averages (GPA). These limits are based on MSU cumulative averages as noted below.

a. Students on academic probation (AOP 12.15) are limited to an enrollment of 14 credit hours (including ensemble and academic support/developmental classes.)

b. Students between 2.0 and 2.99 are limited to 19 hours excluding ensemble classes. (Any student without a cumulative GPA such as a freshman or a transfer student will be limited to 19 hours.)

c. Students between a 3.0 and 4.0 GPA may elect to take up to 24 semester hours. Students in this category must secure permission of their advisor and academic department head to schedule more than 19 semester hours.

d. A student in a five week summer session may take one course in addition to the normal load (two courses), provided his or her dean approves, and provided his or her MSU cumulative average is between 3.0 and 4.0.

e. Exceptions to the above course loads require the approval of the Advisor, Department Head, Dean and Associate Vice President for Academic Affairs.

Independent study or extension courses will be included in determining the maximum number of hours a student may take on campus, if registration therein overlaps any period of regular enrollment at the University. Such credits earned by either independent study or extension, in excess of the loads specified above must be approved by the student’s dean; these hours will count in certifying a student’s full time or part time enrollment status for financial aid or other purposes.
For purposes of reporting a student as full-time to the Board of Trustees, Veterans Administration, Social Security or other similar agencies, an undergraduate student must be enrolled in at least twelve (12) semester hours and a graduate student must be enrolled in at least nine (9) or more semester hours at the time the report or certification is submitted. This applies to fall and spring semesters only.

(1) A student's enrollment status is classified according to the following chart:

<table>
<thead>
<tr>
<th></th>
<th>Undergraduate</th>
<th>Graduate</th>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Fall-Spring Semesters</td>
<td>12 + sem. hrs.</td>
<td>9 + sem. hrs.</td>
<td>6 + sem. hrs.</td>
<td>6 + sem. hrs.</td>
</tr>
<tr>
<td>Summer School term</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>6 to 11 sem. hrs.</td>
<td>5 to 8 sem. hrs.</td>
<td>3 to 5 sem. hrs.</td>
<td>3 to 5 sem. hrs.</td>
</tr>
<tr>
<td>Half-time</td>
<td>less than 6 sem. hrs.</td>
<td>less than 5 sem. hrs.</td>
<td>less than 3 sem. hrs.</td>
<td>less than 3 sem. hrs.</td>
</tr>
<tr>
<td>Less than Half-time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Regular” Load</td>
<td>15-18 sem. hrs.</td>
<td>12-15 sem. hrs.</td>
<td>6 sem. hrs.</td>
<td>6 sem. hrs.</td>
</tr>
</tbody>
</table>

(2) Concurrent enrollment in independent study, off-campus centers and other institutions will be considered as part of a student's load, and must be approved by his or her dean before it may apply toward meeting degree requirements. All MSU course hours will count in certifying a student’s full time or part time enrollment status for financial aid or other purposes.

8. College/School/Campus Changes. A student changing from one college, school or campus to another must complete all arrangements for the transfer prior to beginning the new course of study. Before making the change, the student must initiate a change form in the college or school in which the student is currently, or was last, enrolled. Transfer to a new college, school or campus is subject to approval by the new dean.

9. Schedule Changes - Fall and Spring Semesters. A student has through the fifth class day into the semester to add a course and through the tenth class day to drop a course without being assessed a fee or an academic penalty. From the tenth class day through the 30th class day, a student who elects to drop a course must receive the approval of his/her advisor, will be assigned a “W” on his/her academic record, and be assessed a $50 fee. After the 30th class day, a student cannot drop courses except in documented cases of serious illness, extreme hardship, or failure of the instructor to provide significant assessment of his/her performance. A request to drop a course after the 10th class period must be approved by the student’s advisor and academic dean (Director of Graduate Studies for graduate students). A student receiving permission to drop will receive a “W” on his/her academic record and be assessed a $50 fee after the last day to drop a course.

Summer Terms. A student has through the third class day into a 5-week summer term and through the sixth class day into a 10-week summer term to drop a course without being assessed a fee or an academic penalty. A student may not add a course after the third class day into a 5-week summer session or after the sixth class day into a 10-week summer session. After the third class day through the 14th class day in a 5-week summer term and the sixth class day through the 28th class day in a 10-week summer term, a student who elects to drop a course must receive the approval of his/her advisor, will be assigned a “W” on his/her academic record, and be assessed a $50 fee. After the 14th class day into a 5-week summer term and after the 28th class day into a 10-week summer term, a student cannot drop a course except in documented cases of serious illness, extreme hardship, or failure of the instructor to provide significant assessment of his/her performance. A request to drop a course during this period must be approved by the student’s advisor and academic dean (Director of Graduate Studies for graduate students). A student receiving permission to drop will receive a “W” on his/her academic record and be assessed a $50 fee.

Undergraduate/Graduate Policy - Regardless of these and/or other University policies, a student’s dean may remove a course (or courses) from a student’s schedule at any time during a period of enrollment in case of special circumstances such as accident, illness or scheduling errors. Requests for such changes should be directed to the student’s dean. A student will not be permitted to drop a course after the 30th day of classes because of a heavy course load, a change of major, or the likelihood of poor grades. All requests must be documented in writing.

10. Auditing. During registration and the first 10 days of class in the semester, students are not permitted to enter classes as auditors unless authorized by the Dean of the College or School and by the Registrar, upon recommendation of the instructor concerned. A student may not change from credit to audit or audit to credit status after the tenth day of class. A course being audited counts as part of the regular load on the same basis as if taken for credit. Auditors are not required to take tests and/or examinations or to prepare other written assignments. Otherwise, conformity to regular classroom decorum is the same as that required for all students. At the time the request for audit is approved, the professor will inform the auditor of attendance expectations.

11. Pass-Fail Option. An undergraduate student who has successfully passed fifteen (15) semester hours may elect, with the approval of his or her academic dean, to schedule courses under the pass-fail option. This program is open to undergraduate students only and is limited to a maximum of four (4) courses, no more than two (2) of which may have the same course symbol.

A student may register under the pass-fail option for only one course per semester and must meet the prerequisites for the course or have permission of the instructor teaching it. A change from pass-fail enrollment to enrollment for a regular grade, or vice-versa, must be made by the deadline date for adding courses published in the University calendar.

Courses taken to satisfy University core requirements may not be scheduled under the pass-fail option, nor may courses that are specified by course title in the curriculum in which a student is currently enrolled. In the event that a student changes majors, credit for any courses passed and required in the new major may be allowed with the approval of the student’s dean. The instructor shall be informed which students are enrolled in his or her course under the pass-fail option, and he or she shall report a regular grade at the time progress grades are submitted and either S for satisfactory or U for unsatisfactory at the end of a term or semester. A grade of A, B, or C will be considered as satisfactory and a grade of I (incomplete) will be allowed. Other than a grade of I, only a grade of S, U, or W will be recorded on a student’s permanent record.

The number of hours passed will be applied toward the hours required for graduation; however, neither a passing nor a failing grade will be considered in the computation of the grade point average.

12. Assessment. Students may be required to undergo testing for the purpose of assessing institutional effectiveness.

13. ROTC Course Credit Toward Academic Degrees. All ROTC courses are bona fide University courses. The total number of ROTC hours allowed as elective credit toward a specific degree varies. Most schools and colleges at the University accept six (6) or more hours of ROTC courses offered toward degrees conferred. A student should contact the appropriate college, school, or department to determine allowable ROTC course credit toward a particular degree.

14. Military Credit. Mississippi State University offers credit for training and experience in the Armed Services for currently enrolled undergraduate students. Army veterans, Army National Guard, and Army Reservists may request an AARTS (Army/American Council on Education Registry Transcript) transcript by mailing the request to AARTS Operations Center, 415 McPherson Avenue, Fort Leavenworth, KS 66027-1373. Sailor/Marine veterans, and members of Navy and Marine National Guard, and Reserve units may request a SMART (Sailor/Marine American Council on Education Registry Transcript) transcript by mailing the request to NETPDTC, Navy College Center, Code N27, 6490 Saufley Field Road, Pensacola, FL 32509-5204. Also, transcript request forms are available in the Veteran’s Assistance Office, 176 Garner Hall.

Air Force veterans, National Guard and Reservists may request a Community College of the Air Force transcript by mailing the request to CCAF/RRRA, Simler Hall, Suite 128, 130 Maxwell Blvd., Maxwell AFB, AL 36112-6613. CCAF transcripts are mailed directly to the Office of Admissions, P.O. Box 6305, Mississippi State, MS 39762
B. ACADEMIC RECORDS

1. Confidentiality and Disposal of Student Records

The University recognizes that the maintenance of student information and educational records is necessary and vital to assist the student’s education and development and to provide opportunities for University research and policy formulation. The University recognizes its obligation to exercise discretion in recording and disseminating information about students to ensure that their rights of privacy are maintained.

The University will furnish annual notification to students of their right to inspect and review their educational records/the right to request amendment of educational records considered by them to be inaccurate or misleading or that violate privacy or other rights; and of their right to a hearing should the University decline to amend such records. This annual notice will be published in the University’s Bulletin. The University utilizes The Guide for Retention and Disposal of Records as published by American Association of Collegiate Registrars and Admissions Officers as the policy for disposal of student records.

The following guidelines have been developed to insure the privacy rights of students. For the purposes of this policy statement a student is defined as an individual who has been admitted and has been in attendance in a component unit of the University. Classification as a student in one component unit of the University (e.g., an undergraduate program) does not infer that the person has been accorded the rights outlined below in other component units (i.e., graduate school, professional schools, branch campus).

2. Student Access to Records

Students have the right to be provided a list of the type of educational records maintained by the University which are directly related to the student; the right to inspect and review the contents of these records; the right to obtain copies of these records; the right to a response from the University to reasonable requests for explanation and interpretation of these records; the right to an opportunity for a hearing to challenge the content of these records; and if any material or document in the educational record of a student includes information on more than one student, the right to inspect and review only the part of such material or document as relates to the student.

Students do not have access to: financial records of their parents; confidential letters and statements of recommendation which were placed in the educational record prior to January 1, 1975, provided such letters or statements were solicited or designated as confidential and are not used for purposes other than those for which they were specifically intended; confidential recommendations, if the student signed a waiver of the right of access, respecting admission, application for employment, and the receipt of an honor or honorary recognition.

Students do not have access to: instructional, supervisory, and administrative personnel records which are not accessible or revealed to any other individual except a substitute; Campus Security records which are maintained apart from educational records, which are used solely for law enforcement purposes, and which are not disclosed to individuals other than law enforcement officials of the same jurisdiction; employment records except when such employment requires that the person be a student; and the Alumni Office records.

Students do not have access to physical or mental health records created by a physician, psychiatrist, psychologist or other recognized professional acting in his or her capacity or to records created in connection with the treatment of the student under these conditions which are not disclosed to anyone other than individuals providing treatment. These records may be reviewed by a physician or appropriate professional of the student’s choice.

3. Procedures for Access

Students should contact the appropriate office to inspect and review their records. An office may require that a University official be present when a student inspects and reviews his educational records. Any questions concerning a student’s access to records should be directed to the Registrar.

4. Release of Directory Information

Directory information may be released by the University without the student’s written consent. Directory information is identified in Academic Operating Policy and Procedure 12.13 Academic Record. It also includes email addresses. Participation in recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, the most recent previous educational agency or institution attended, and other similar information is considered directory information.

A student may deny the release of directory information by requesting that the information not be released. The student who is in attendance must notify the Registrar’s Office in writing to deny the release of this information. To deny the release of participation in recognized activities the student must notify the Provost and the Academic Dean in writing. To deny the release of athletic information the student must notify the Director of Athletics in writing. To deny the release of directory information a student must give the above notification prior to registration. A former student, one who is not in attendance, must contact the appropriate offices above to deny the release of directory information.

Student Directory Information will be made available to private businesses, religious organizations, and other non-university organizations in the following manner: (1) the Campus Directory for the current school year is available for purchase in the MSU Bookstore. While the Campus Directory is believed to be accurate (some students may have requested their names not be listed), the University is not responsible for inaccuracies in the data; (2) a list or computer labels will not be available to any non-university group; (3) appeals will be handled by a subcommittee composed of the Registrar, the Director of Admissions, and the Dean of Office of Graduate Studies.

5. Release of Educational Records

The University will release a student’s educational record(s) upon the student’s written request. The student must:
1. Specify the records to be disclosed.
2. Include the purpose or purposes of the disclosure.
3. State the party or parties and the address to whom the information is to be disclosed.

The student shall, upon request, receive a copy of the record that is to be disclosed. It is University policy to furnish single copies of a student’s record at no charge except for the standard transcript fee, if applicable.

The University may release students’ educational records to the following without prior written consent:
1. University officials who have a legitimate educational interest in the records. University officials are defined as teachers, administrative personnel and other employees except personnel of the security or law enforcement unit of Mississippi State University who in the performance of their normal duties require access to student records. If University officials are required in the performance of their duties to review the educational records of a student, this will be considered to be a legitimate educational interest.
2. Officials of another school in which the student intends to enroll upon request of the transfer school.
3. Government representatives of the Comptroller general of the United States, the Secretary of Education, the U.S. Commissioner of Education, the Director of the National Institute of Education, the Assistant Secretary for Education, State educational authorities, and State officials to whom such information is specifically required to be reported or disclosed by State law adopted prior to November 19, 1974.
4. Appropriate authorities in connection with financial aid with the understanding that only the necessary records will be released.
5. Organizational conducting studies for or on behalf of, the University or its agencies for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction and student life provided that the studies will not permit the personal identification of students and their parents by individuals other than representatives of the organization and provided that the personally identifiable information furnished will be destroyed when no longer needed for the purposes for which the study was conducted.
6. Accrediting organizations to carry out their accrediting functions.
7. Parents of a dependent student as defined in section 152 of the Internal Revenue code of 1986. University officials may release educational records to parents on the basis of written certification from the parent that the student is a dependent as defined under the Code.
8. Comply with a judicial order or lawfully issued subpoena with the understanding that the student will be notified in advance insofar as possible.
9. Appropriate parties to protect the health and safety of the student or other individuals in emergencies with the understanding that only information essential to the emergency situation will be released; that information will only be released to a party who would be in a position to deal with the emergency, and that the student will be notified insofar as possible of the information released, the purpose for the release, and to whom the information was released.

No personal information on a student will be released without a statement from the University to the party receiving the information that no third party is to have access to such information without the written consent of the student.

This policy is adopted pursuant to the Family Educational Rights and Privacy Act of 1974, as amended (20U.S.C. §8 1232g), and is not intended to impose any restrictions or grant any rights not specifically required by this Act.

6. Disciplinary Suspension and Expulsion

The following information will be recorded on a student’s academic record:
1. Permanent Expulsion - a “W” grade will be recorded on the permanent record for each course on the student’s schedule at the time of expulsion. “Permanent Expulsion” and the effective date will also be placed on the permanent record. This will remain on the permanent record indefinitely or until an appeal is held by the Dean of Students and the expulsion is approved for removal. In a case of appeal and approval by the Dean of Students to remove the expulsion, the words “Permanent Expulsion” will be replaced by the word “Withdrew.”
2. Disciplinary Suspension - a “W” grade will be recorded on the permanent record for each course on the student’s schedule at the time of suspension. “Disciplinary Suspension” and the effective date will also be recorded on the permanent record. Students may petition the Dean of Students to have “Disciplinary Suspension” removed from the permanent record. If the Dean of Students approves the request, the words “Disciplinary Suspension” will be replaced by the word “Withdrew.”
3. Credits earned at another institution while on disciplinary suspension or dismissal may never be transferred or posted to the Mississippi State University record.

C. CREDITS, GRADES, and STANDING

All credits earned at Mississippi State University are in semester hours. In most curricula, taking an average load of 16-18 hours for a regular semester will enable a student to make normal progress toward graduation.

Year or quarter hours transferred from another institution are converted into semester hours for purposes of uniformity in determining graduation requirements.

Transfer credits are accepted only from institutions accredited by or in candidate status with a regional accrediting body, such as the Southern Association of Colleges and Schools.

Not more than 25 percent of any curriculum may be earned by advanced standing examinations, College-Level Examination Program (CLEP), evaluated military service credits, tutorial, extension courses, and correspondence courses (a maximum of 20% of the total degree hours can be correspondence courses). Evaluated military service credits are classified as extension work. Not more than 20 percent of any curriculum may be earned through correspondence courses. Correspondence courses must be approved by the dean before being taken by students in residence. USAFI credits are classified as correspondence work.

1. Credit by Examination

a. Advanced Placement Examinations. Students entering Mississippi State University for the first time are allowed credit on the advanced placement examination administered by the College Entrance Examination Board. Grades of Satisfactory (S) appear on the transcript for courses in which advanced placement credit is earned. These courses do not affect grade-point averages. Applicability of such credit to a specific degree is to be determined by the appropriate dean. The following table provides the details on how credit is presently assigned in the various subject areas by the deans.

<table>
<thead>
<tr>
<th>AP EXAMINATION</th>
<th>SCORE</th>
<th>HOURS</th>
<th>CREDIT</th>
<th>RELATED COURSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ART</td>
<td></td>
<td></td>
<td></td>
<td>ART 1213</td>
</tr>
<tr>
<td>General studio credit</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. BIOLOGICAL SCIENCE</td>
<td>4</td>
<td>3</td>
<td>BIO 1123</td>
<td></td>
</tr>
<tr>
<td>3. CHEMISTRY</td>
<td>5</td>
<td>6</td>
<td>BIO 1123 and BIO 1023</td>
<td></td>
</tr>
<tr>
<td>4 or 5</td>
<td>3</td>
<td></td>
<td>CH 1213 and CH 1223</td>
<td></td>
</tr>
<tr>
<td>4. COMPUTER SCIENCE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Exam</td>
<td>4 or 5</td>
<td>3</td>
<td>CSE 1233</td>
<td></td>
</tr>
<tr>
<td>AB Exam</td>
<td>3</td>
<td>3</td>
<td>CSE 1233</td>
<td></td>
</tr>
<tr>
<td>4 or 5</td>
<td>3</td>
<td></td>
<td>CSE 1233</td>
<td></td>
</tr>
<tr>
<td>5. ECONOMICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>4 or 5</td>
<td>3</td>
<td>EC 2113</td>
<td></td>
</tr>
<tr>
<td>Microeconomics</td>
<td>4 or 5</td>
<td>3</td>
<td>EC 2123</td>
<td></td>
</tr>
<tr>
<td>6. ENGLISH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language &amp; Comp.</td>
<td>3</td>
<td>3</td>
<td>EN 1103</td>
<td></td>
</tr>
<tr>
<td>Language &amp; Comp.</td>
<td>4 or 5</td>
<td>6</td>
<td>EN 1103 and 1113</td>
<td></td>
</tr>
<tr>
<td>Literature &amp; Comp.</td>
<td>3</td>
<td>3</td>
<td>EN 1103</td>
<td></td>
</tr>
<tr>
<td>Literature &amp; Comp.</td>
<td>4 or 5</td>
<td>6</td>
<td>EN 1103 and 1113</td>
<td></td>
</tr>
<tr>
<td>7. FRENCH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language Level 3</td>
<td>3</td>
<td>9</td>
<td>FLF 1113,1123,2133</td>
<td></td>
</tr>
<tr>
<td>Language Level 3</td>
<td>4 or 5</td>
<td>12</td>
<td>FLF 1113,1123,2133,2143</td>
<td></td>
</tr>
<tr>
<td>Literature Level 3</td>
<td>3</td>
<td>9</td>
<td>FLF 1113,1123,2133</td>
<td></td>
</tr>
<tr>
<td>Literature Level 3</td>
<td>4 or 5</td>
<td>12</td>
<td>FLF 1113,1123,2133,2143</td>
<td></td>
</tr>
</tbody>
</table>
DEGREES, CORE REQUIREMENTS, ACADEMIC RECORDS, GRADUATION

8. GERMAN
   Language Level 3  3 9  FLG 1113,1123,2133
   Language Level 3  4 or 5 12  FLG 1113,1123,2133,2143

9. GOVERNMENT and POLITICS
   Comparative 4 or 5 3  PS 1513
   United States 4 or 5 3  PS 1113

10. HISTORY
    American 3 3  HI 1063
    European 3 3  HI 1213
    4 or 5 6  HI 1213 and HI 1223

11. LATIN
    Vergil 3 9  FLL 1113,1123,2133
    Vergil 4 or 5 12  FLL 1113,1123,2133,2143
    Catullus-Horace 3 9  FLL 1113,1123,2133
    Catullus-Horace 4 or 5 12  FLL 1113,1123,2133,2143

12. MATHEMATICS
    AB Exam 3,4 or 5 3  MA 1713
    BC Exam 3 3  MA 1713
    4 or 5 6  MA 1713 and MA 1723
    Statistics 4 or 5 3  ST 2113

13. PHYSICS (no lab credit)
    B Exam 3 or 4 3  PH 1113
    CI Exam 5 6  PH 1113 and PH 1123 or PH 2213
    CII Exam 4 or 5 3  PH 1113 or 2213
    CII Exam 4 or 5 3  PH 2223

14. PSYCHOLOGY
    4 or 5 3  PSY 1013

15. SPANISH
    Language Level 3  3 9  FLS 1113,1123,2133
    Language Level 3  4 or 5 12  FLS 1113,1123,2133,2143
    Literature Level 3  3 9  FLS 1113,1123,2133
    Literature Level 3  4 or 5 12  FLS 1113,1123,2133,2143

As more high schools develop Advanced Placement courses, Mississippi State University will consider their inclusion in this listing for credit.

Advanced Placement credit earned by approved testing may be applied to UHP credentials if the student successfully completes an MSU honors course in the same subject matter, i.e., both credits for testing and for graded courses may apply to UHP Phases I and II. (For example: AP credit for Composition I and Honors Composition II or AP credit for Calculus I and Honors Calculus II would yield six hours for each subject area.)

b. Advanced Standing Examinations. Applications for advanced standing examinations must be submitted to the Provost and Vice President for Academic Affairs; application forms are available in that office and must be filled out in quintuplicate. Contact the Office of Academic Affairs for information on deadlines, etc. The applicant must be a regularly enrolled student in residence on the campus, when he or she files the application and takes the examination.

Advanced standing examinations must be taken within two weeks from the date of approval by the Provost and Vice President for Academic Affairs and the grade card (signed by the instructor who graded the examination, the head of the department, and the student’s dean), fee slip, a copy of the examination questions, and the examination paper must likewise be filed in the office of the Provost and Vice President for Academic Affairs within the same two-week period; otherwise, the student’s application becomes null and void.

After an application is approved, the instructor whose name appears on the application form, and the student, will be notified. It is the responsibility of the student to make arrangements with the instructor as to the time and place of the examination. The student must appear for the examination on the date agreed upon.

Grades of C or better are passing grades and will be recorded on the student’s permanent record. No student is permitted to take more than one advanced standing examination during any semester or summer term, and only 15 hours of credit so earned will count toward graduation.

Credits earned through an advanced standing examination in any course considered prerequisite for an advanced course will be applied toward graduation hours and the grade-point average only if the examination is passed before the advanced class has been completed. Under no circumstances will any credit earned by advanced standing examinations count toward graduation if the student already has credit for the course or its equivalent on his or her high school record.

c. College-Level Examination Program (CLEP). A total of not more than 25 percent of any curriculum may be earned by advanced standing examinations, College-Level Examination Program (CLEP), evaluated military service credits, correspondence, tutorial, extension, and USAFI courses. Evaluated military service credits are classified as extension work, and USAFI credits are classified as correspondence work. Mississippi State University serves as an open testing center for both the General and Subject Examinations. Academic credit on the Subject Examinations is awarded to students who are enrolled at the University and who make a scaled score of 50 or above. Credit is neither awarded nor accepted for transfer credit for the General Examinations. Credit is considered the same as extension credit and is subject to the same limitations. The applicability of credit toward degree requirements is determined by the dean and/or department head concerned. At present, the only courses for which credit may be obtained through the CLEP Program are these:

<table>
<thead>
<tr>
<th>Exam Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEGREES, CORE REQUIREMENTS, ACADEMIC RECORDS, GRADUATION</td>
<td>Core Courses</td>
</tr>
<tr>
<td>MKT 3013</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>EC 2113</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>HI 1213</td>
<td>Early Western World</td>
</tr>
<tr>
<td>HI 1223</td>
<td>Modern Western World</td>
</tr>
<tr>
<td>HI 1063</td>
<td>Early U.S. History</td>
</tr>
<tr>
<td>HI 1073</td>
<td>Modern U.S. History</td>
</tr>
<tr>
<td>MA 1313</td>
<td>College Algebra</td>
</tr>
<tr>
<td>MA 1323</td>
<td>Trigonometry</td>
</tr>
<tr>
<td>MA 1713,1723</td>
<td>Calculus I, II</td>
</tr>
<tr>
<td>EPY 2513</td>
<td>Human Growth and Development</td>
</tr>
<tr>
<td>EPY 3503</td>
<td>Principles of Educational Psychology</td>
</tr>
</tbody>
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Advanced standing examinations must be taken within two weeks from the date of approval by the Provost and Vice President for Academic Affairs and the grade card (signed by the instructor who graded the examination, the head of the department, and the student’s dean), fee slip, a copy of the examination questions, and the examination paper must likewise be filed in the office of the Provost and Vice President for Academic Affairs within the same two-week period; otherwise, the student’s application becomes null and void.

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<table>
<thead>
<tr>
<th>Exam Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 3013</td>
<td>Principles of Marketing</td>
</tr>
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<td>Early U.S. History</td>
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</tr>
<tr>
<td>MA 1313</td>
<td>College Algebra</td>
</tr>
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<td>Trigonometry</td>
</tr>
<tr>
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<td>Calculus I, II</td>
</tr>
<tr>
<td>EPY 2513</td>
<td>Human Growth and Development</td>
</tr>
<tr>
<td>EPY 3503</td>
<td>Principles of Educational Psychology</td>
</tr>
</tbody>
</table>
For further information about CLEP and a form for application to take the tests, please write to: Computer Based Testing, P.O. Box 9747, Mississippi State, MS 39762, or call 662-325-6610.

d. The International Baccalaureate (IB). The International Baccalaureate program is a comprehensive and rigorous two-year curriculum, leading to examinations, for students between sixteen and nineteen years of age. To accommodate differences among cultures regarding academic standards, it is a deliberate compromise between the specialization required in some national systems and the breadth preferred in others. The general objectives of the IB are to provide students with a balanced education; to facilitate geographic and cultural mobility; and to promote international understanding through a shared academic experience. The student who satisfies its demands demonstrates a strong commitment to learning, both in terms of the mastery of subject content and in the development of the skills and discipline necessary for success in a competitive world.

The IB curriculum consists of six subject groups:
- Language A (best language) including the study of selections from World Literature
- Language B (second language) or another Language A
- Individuals and Societies: History, Geography, Economics, Philosophy, Psychology, Social Anthropology, Business and Organization
- Experimental Sciences: Biology, Chemistry, General Chemistry, Applied Chemistry, Physics, Environmental Systems, Design Technology, Physical and Chemical Systems
- Mathematics: Mathematics, Mathematical Methods, Mathematical Studies, Advanced Mathematics
- Electives: Art/Design, Music, Latin, Classical Greek, Computing Studies, History and Culture of the Islamic World, Advanced Mathematics, a second subject from the humanities or the sciences, a third modern language, a school-based syllabus approved by the IB

All IB Diplomas candidates are required to offer one subject from each of the groups. At least three and not more than four of the six subjects are taken at the Higher level, the others at the Subsidiary level. Each examined subject is graded on a scale of 1 (minimum) to 7 (maximum). The award of the Diploma requires a minimum total of 24 points and the satisfactory completion of three additional requirements: the Extended Essay of some 4000 words, which provides the first experience of the independent research paper; a course entitled Theory of Knowledge (ToK), which explores the relationships among the various disciplines and ensures that students engage in critical reflection and analysis of the knowledge acquired within and beyond the classroom; the compulsory participation in Creativity, Action, and Service (CAS) extracurricular and community-service activities. Bonus points may be awarded for the exceptional essay or performance in Theory of Knowledge.

Mississippi State University recognizes the IB Program. Advance standing credit will be considered for the Higher level subject examinations with scores of 5, 6 or 7 pending approval of the various colleges, schools and major departments of the university.

A final official IB transcript will be sent by the International Baccalaureate North America (IBNA) regional office following the grade awarding and upon the request of the student. The document will indicate the level of the subjects, the grade awarded in each, the total point score and the completion of the additional Diploma requirements. Results are available in late July for May session candidates.

2. Grades and Quality Points

The class work of the student will be rated according to the following pattern of values:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Quality Points Per Credit Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Excellent)</td>
<td>4</td>
</tr>
<tr>
<td>B (Good)</td>
<td>3</td>
</tr>
<tr>
<td>C (Satisfactory)</td>
<td>2</td>
</tr>
<tr>
<td>D (Poor)</td>
<td>1</td>
</tr>
<tr>
<td>F (Failure)</td>
<td>0</td>
</tr>
<tr>
<td>I (Incomplete)</td>
<td>—</td>
</tr>
<tr>
<td>S (Satisfactory)</td>
<td>—</td>
</tr>
<tr>
<td>U (Unsatisfactory)</td>
<td>—</td>
</tr>
<tr>
<td>W (Withdrawn Without Penalty)</td>
<td>—</td>
</tr>
</tbody>
</table>

The quality-point average shall be determined on the basis of semester hours scheduled and rescheduled in which grades of A, B, C, D, and F are recorded. However, a student may not earn credits or quality points for a course or its equivalent in which he or she has already earned a grade of A or B.

A grade of I (incomplete) may be submitted in lieu of a final grade when the student, because of illness, death in his or her immediate family, or similar circumstances beyond his or her control, is unable to complete the course requirements or to take final examinations. A grade of I will not be submitted for reasons other than previously described. Except for circumstances noted above, an I grade will not be given to extend the semester so that a student may complete a required assignment(s).

Undergraduate students who receive an I grade must complete all work within thirty (30) calendar days from the date of the student’s next enrollment. A student who receives an I grade may make up only that part of course work not completed because of an emergency. If a grade of I is not resolved into a passing grade within the allotted time, the grade becomes an F.

Graduate students who receive a grade of I must complete all work no later than the last day of class of the next semester (excluding summer) whether the student is enrolled or not. Failure of graduate students to remove an I grade during the specified time will result in an automatic grade of “F.”

Once a grade of I has been converted to an “F” because of the student’s failure to complete necessary course work or a lapse of the allowable time, no additional grade change will be allowed except under extreme circumstance(s) as recommended by the deans and approved by the Vice President for Academic Affairs. In the case of students receiving VA benefits, all courses scheduled will appear on the permanent record and a final grade will be recorded for each course. If the student withdraws from school and/or drops a course, the last date of attendance will be recorded.

3. Academic Standing

a. Undergraduate. The University prescribes minimum standards of scholarship for determining whether a student is to be continued or disqualified. This determination is made at the end of the fall and spring semesters, at the end of the summer session, or any part of a semester in which the student has been enrolled. While the academic standing of a student is determined by the MSU Cumulative Grade Point Average (GPA), students must earn a 2.0 GPA on both the MSU and overall cumulative GPA’s to earn a degree.

1. Students with a semester GPA of less than 2.0 who have at least 24 hours of GPA coursework at Mississippi State University AND who fail to meet the following MSU Cumulative GPA requirements will be suspended.

\[
\begin{align*}
\text{CH} & \quad 1213 \quad \text{Fundamentals of Chemistry} & \quad 1223 \quad \text{Fundamentals of Chemistry} \\
\text{PS} & \quad 1113 \quad \text{American Government} & \quad 2133 \quad \text{Spanish III} \\
\text{SO} & \quad 1003 \quad \text{Introduction to Sociology} & \quad 2143 \quad \text{Spanish IV}
\end{align*}
\]
Classified earned hours are as follows:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Hours</th>
<th>MSU Cumulative GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seniors</td>
<td>90 or more</td>
<td>2.0</td>
</tr>
<tr>
<td>Juniors</td>
<td>60-89</td>
<td>2.0</td>
</tr>
<tr>
<td>Sophomores</td>
<td>30-59</td>
<td>1.8</td>
</tr>
<tr>
<td>Freshmen</td>
<td>29 or fewer</td>
<td>1.6</td>
</tr>
</tbody>
</table>

2. This policy is effective Fall Semester 2004 for all first-time entering students (i.e. students who have not established a Mississippi State University GPA prior to Fall 2004) and to all students who enroll thereafter. By Fall Semester 2008, this will apply to all students at Mississippi State University regardless of the semester they enrolled.

3. Up to Fall Semester 2008, all students with a GPA established at Mississippi State University prior to fall 2004 will be placed on suspension with the following GPA cutoffs: Seniors 1.9, Juniors 1.7, Sophomores 1.3, and Freshmen 1.0.

4. No student will be suspended for failing to achieve the required grade point average without first having had at least one semester of probationary notice (not necessarily the immediately preceding semester).

5. Academic suspension shall be for at least one regular (fall or spring) semester. For students suspended at the end of a spring semester, the suspension precludes enrollment in any summer school session as well as the following fall semester. The student will be readmitted on academic probation following the expiration of the first suspension. A student who attends another university during a suspension from MSU must maintain a 2.0 GPA (calculated by MSU standards) on any transfer work. Students who fail to meet these criteria may be readmitted only on the recommendation of their dean and with the approval of the Provost. A student may continue in school during the second term of summer session, irrespective of his or her record during the first term.

6. A student who has already received an academic suspension who fails to earn a current GPA of 2.0 or higher, and who has less than the required MSU Cumulative GPA, will be placed on academic dismissal. A student who receives an academic dismissal will not be automatically readmitted. In addition, readmission will not normally be considered until the student has been absent from the University for one calendar year. The Vice President for Academic Affairs may approve the readmission of an academically dismissed student only upon the recommendation of the student’s academic dean based on a written petition by the student. Application for readmission should be filed with the student’s Department Head no later than fifteen days prior to the first day of classes.

7. Appeal for a waiver of suspension or dismissal, because of unusual circumstances, should be made through the student’s academic dean to the Vice President for Academic Affairs. No additional appeal beyond the Vice President for Academic Affairs is possible.

b. Veterans’ Academic Status. The following regulations, in addition to those above, apply to all students receiving U.S. Dept Veterans Affairs benefits:

1. A student must maintain an acceptable cumulative GPA to be in good standing. If the cumulative average falls below the acceptable level, the student will be placed on “first probation.” During the probation semester, the student must improve his cumulative GPA or benefits will be suspended at the end of the semester. However, if the cumulative GPA improves but, an acceptable level is still not achieved a “second probation” semester will be allowed. Should the standards of progress not be achieved at the end of the second probation semester, benefits will be suspended and students will not receive further benefits until approved by the VA.

<table>
<thead>
<tr>
<th>ACCEPTABLE STANDARDS OF PROGRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

A student must maintain at least a 2.00 cumulative GPA after the fourth semester or he/she will be placed on first probation and follow the order of procedure as outlined above.

2. Based on VA rules and regulations, students receiving VA educational benefits will receive benefits for courses that apply toward a degree program only. Any change in student status, such as drops/adds, major changes or withdrawals from the University, must be reported to the VA Supervisor located in the Registrar’s Office.

c. Academic Amnesty. Students who have not been enrolled in any post-secondary institution for five years may apply for admission or readmission under the academic amnesty policy through their academic dean’s offices. Academic Amnesty may be applied to a student’s record only once. Students admitted under this policy must complete current curriculum requirements in residence to earn a degree. (AOP 12.19 applies.)

d. Academic Fresh Start. Students who have not been enrolled in any post-secondary institution at any time for at least 24 consecutive months may petition for admission or readmission through their academic dean’s offices under the academic fresh-start policy. All college credits earned prior to being granted academic fresh start will be eliminated from the computation of the student’s grade point average and may never be used toward graduation at Mississippi State University. (AOP 12.17 applies.)

e. Academic Forgiveness (Course Retake) Policy. Effective fall semester 2004 for courses taken during or after fall semester 2003, an undergraduate student will be permitted to retake up to two (2) courses, not to exceed six (6) credit undergraduate semester hours, in which the student made a grade of D or F, with the original grade remaining on the transcript but not counted towards the student’s GPA. This policy will be applied only to courses taken at Mississippi State University. For specific regulations and instructions on this policy, students should contact the Registrar’s Office or refer to Academic Operating Policy 12.20.

D. CLASS ATTENDANCE

Upon registration the student accepts the responsibility of attending all classes and doing any work the instructor may prescribe. When absence from class is essential, it is the responsibility of the student to make arrangements satisfactory to the instructor with regard to work missed. These arrangements should be made prior to the absence when possible.

Instructors shall record and report the absences of all students on both the midterm (where applicable) and final grade reports submitted to the Registrar. The same procedure will be followed by the instructor when at any time, in the opinion of the instructor, the student is not making satisfactory progress. All absences and last dates of attendance (where applicable) will become a part of the student’s file in the Registrar’s Office. Instructors may report absences to the Division of Student Affairs at any time they feel it appropriate to do so and are expected to report students with continued, consecutive absences.

E. WITHDRAWAL

Any student leaving the University prior to the end of the period of enrollment, except for temporary absences, should initiate withdrawal procedures at his/her Academic Dean’s office. By completing this procedure, the student may prevent future difficulties in obtaining transcripts, or in reentering the University, and will avoid having F’s automatically recorded for all courses taken during the semester.
A student who withdraws after the 10th day of classes will receive a grade of W for each course scheduled. No withdrawals will be allowed during the last two weeks before the beginning of final examinations for the fall and spring semesters, and during the last week prior to the beginning of examinations for each five-week/two-week summer term.

The withdrawal of any student shall not be effective on a date prior to the last day of class attendance.

In highly unusual circumstances resulting from extreme hardship, a student may petition to withdraw retroactively from a semester within one calendar year. The request for withdrawal will be considered only when accompanied by appropriate documentation of the situation (e.g., medical emergency or administrative error) which was related to the student’s recorded academic performance for the semester in question. Such requests must be approved by the student’s advisor, department head, dean, and the Provost. For cases other than administrative error in which final grades were recorded, the student’s instructors should be consulted before a final decision is rendered and should be notified after the decision is made. In no case will more than one semester’s work be retroactively withdrawn during a student’s matriculation at Mississippi State University.

F. CLASSIFICATION OF STUDENTS

Students are classified according to the total hours earned:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>29 or fewer semester hours</td>
</tr>
<tr>
<td>Sophomore</td>
<td>30-59 semester hours</td>
</tr>
<tr>
<td>Junior</td>
<td>60-89 semester hours</td>
</tr>
<tr>
<td>Senior</td>
<td>90 or more semester hours</td>
</tr>
</tbody>
</table>

G. UNIVERSITY HONORS PROGRAM

Director: Dr. Nancy McCarley
Office: 45 Magruder Street

The University Honors Program is a challenging variation of the standard curriculum, through which many undergraduate students throughout the University enrich their academic experiences. For many courses, both required and elective, Honors sections have been established. These are limited enrollment sections taught by selected senior faculty members. There are Honors courses and seminars in addition to these sections of regular courses. To enroll in Honors courses, one must have been admitted to the program. Requirements for joining the program and a full explanation of its phases and offerings are explained below.

Students who complete Phase I and/or Phase II of the University Honors Program are identified as participants in the Program, and their achievement is noted in all official University records.

The Honors Program exists primarily to offer outstanding academic experiences to highly qualified students. Courses applicable to every degree program are available through the UHP, and Honors students benefit from priority scheduling in pre-registration. The Honors sections differ from regular sections because the smaller classes focus on individualized instruction that emphasizes each student’s training and experience. The most outstanding members of the faculty teach Honors courses; therefore, UHP sections are more challenging and interesting than the regular sections for which they substitute. Many students find the courses appealing because they are guided to inquire beyond what they have studied previously. Freshmen and sophomores take courses applicable to basic curriculum requirements for all majors; juniors and seniors take seminars and advanced courses. Seniors may participate in governmental or research agency in Washington or Jackson, or conduct research and write an Honors thesis.

In a conventional course for which there is not an honors counterpart, usually an upper division course, students may seek the opportunity to do a special project for honors credit. Such initiative yields an agreement between the student and the professor and, ultimately, an internal notation of the successful completion of the project on the UHP record.

Professors can design a project and offer multiple qualified honors students the opportunity to pursue the project for honors credit. Some have found this medium a rewarding means to pursue an academic interest, draw on external resources (visiting scholars, field trips, etc., perhaps funded by the UHP), or simply to expand the focus of the course for selected students.

The University Honors Program is a university-wide program that reports to the Provost. It equally serves all eight colleges/schools and cooperates with all academic departments in tailoring programs for talented students. Credits offered through the Honors Program support the unique Honors design sequence in the College of Architecture; the programs for Schilling, Hearin-Hess, Stennis, Truman, and Rhodes preparatory scholars; the Early Admissions Program of the College of Veterinary Medicine; and the Chairman’s Scholars Programs in the Departments of Nuclear and Mechanical Engineering. Individual departmental courses in five colleges offer field trips and exchanges with other regional, national, and international institutions. Advanced students frequently conduct independent research and special projects in their major fields for Honors credit. Recent notable curricular additions are a guide to honors options in Biomedical-Engineering, the College of Engineering Entrepreneurial Seminar, and study abroad programs in technical fields.

The UHP provides experiential study programs under the auspices of the University. The program supports several study-travel programs in Europe, the Far East, Canada, and the Caribbean, as well as the Honors Semester Program under the auspices of the National Collegiate Honors Council. The Honors Program also offers diverse study opportunities in England, Scotland, Ireland, New Zealand, Barbados, Kenya, and Australia through its membership in the Cooperative Center for Study Abroad.

The University Honors Program has an important role in the cultural and social lives of hundreds of students and faculty members. The Honors Forum and co-sponsored programs with every college and with the Cultural Diversity Center, the President’s Commission on the Status of Women, the Stennis Institute, the Women’s Study Program, the Black Student Association, the Institute for the Humanities, the Architecture lecture series, the Presidential Forum, the Mock United Nations, the Lectern Series, and the Center for International Security and Strategic Studies offer Honors students unique opportunities.

A few examples of former participants include: Hartmut Michel, 1988 Nobel Laureate in Chemistry; Harvey Gantt, Architect; the late Dr. Christian Barnard, notable surgeon; playwright Beth Henley; writers Alex Haley and Ellen Gilchrist; historian William McFeely; journalist Edwin R. Newman, Editor of Inostrannaya Literature, Nickolai Anastasiev; Bauck van der Wal, director of the Anne Frank Center in Amsterdam; Takashi Miyazaki, Consul General of Japan; Guenther Van Well, Ambassador of the German Republic; Emmanuelle de Margerie, Ambassador of France; and the late Rita Kilmova, Ambassador of Czech-Slovak Republic. Many government officials including former U.S. Ambassador Robert Pugh, the late Senator John C. Stennis, Lt. Governor Amy Tuck, and former legislator and IHL Board member Scott Ross (UHP alumnus) have also participated in Honors Forum, as have alumni representing the Law Alumni Association and the Medical Alumni Association. The UHP also has co-sponsored presentations and symposia on W. B. Yeats, Eudora Welty, William Faulkner, Haley’s Comet (American Astrological Society), Caribbean ecology, Emily Dickinson, and Gabriel Garcia Marquez.

UHP-sponsored exhibitions and gallery talks have included the Roger Ogden collection that now forms the Museum of Southern Art in New Orleans and the works of such artists as William Wegman, William Dunlap, Walter Anderson, Marie Hull, John Digby and Maude Gatewood. The Honors Program has provided performances and lecture-recitals by notables such as Sarah Johnson, violinist; John Paul, harpsichordist; the Vienna Chamber Trio, The Martha Graham Company, Ballet Mississippi, the Alvin Ailey Dance Company, the National Shakespeare Company, and Malagro Vargas and dramatic productions by workshops by playwrights and performers such as John Pielmeir (Agnes of God) and David Dallas (A Gentleman from Mississippi).
Students’ achievements in every realm of university life confirm an advocacy that study and personal development are complementary in the undergraduate experience. UHP students hold leadership roles in the Student Association, Housing and Residence Life, the Greek system, the bands, and every major honorary society, including Phi Kappa Phi, The Society of Scholars, Who’s Who, Mortar Board, Golden Key, Cardinal Key, Omicron Delta Kappa, and college organizations. In recent years, the editors of The Reflector and The Reveille have been UHP students. The slate of elected officers of the Student Association has been dominated by UHP leaders in the past five years.

Students are central to the Honors Program. They elect representatives to the Honors Council, which advises the Director and plans activities of the program. The UHP has earned national recognition for its participation in regional and national meetings of the National Collegiate Honors Council, to which students have traveled with expenses paid to such cities as New Orleans, Chicago, and Miami. The Council supervises the Honors House, where all Honors students have access to electric typewriters, a xerox machine, and a video system. The 1989 facility also provides a separate Council office, a browsing library, and a seminar room. The students form intramural teams and organize social activities such as film showings, dances, and picnics. At the end of each academic year, outstanding students are honored at an awards ceremony.

Outstanding faculty contribute significantly to students’ opportunities to learn from teaching and research that have yielded numerous awards for that faculty. The Giles Distinguished Professors serve as the faculty advisory group for the program; winners of the John Grisham Master Teacher Awards, the Burlington Northern Teaching Awards, and the MSU Alumni Association Awards routinely teach lower division honors classes and serve as mentors for students; conducting independent research. Students conduct separate evaluations of all honors courses and make the results available to all students selecting honors courses; students also select outstanding UHP faculty members for recognition each year.

Entering freshman have the opportunity to apply to live in Hull Hall, the only co-residential facility that houses both freshmen and upper division students who are qualified for admission to the University Honors Program. The Office of Housing and Residence Life makes assignments on the basis of first come, first-served applications. Residents have access to both academic and co-curricular programming intended to offer the most productive orientation to a total university experience.

To apply for the Honors Program, an entering freshman should have a minimum composite ACT of 26 and/or an outstanding academic record of grades and rank in class. The UHP offers detailed information on admission requirements to more than 20 courses each semester stressing the importance of individual advising and access for all interested students at any class level. A transfer student should have a 3.40 GPA on at least 15 hours of course work. Transferred Honors credits may be applied to UHP certifications. Anyone who enters the Program must maintain a 3.40 average, but an individual may enroll in a single course or selected courses, pursue certification in Phase I or Phase II or both, and earn recognition as a “University Honors Scholar”. Inquiries regarding the UHP should be directed to:

Director, University Honors Program
P.O. Box EH; Mississippi State, Mississippi 39762
E-mail: Director, nmccarley@honors.msstate.edu
Admission, bgardner@honors.msstate.edu
FAX 662-325-0086

Application to the Honors Program may be made online at www.msstate.edu/dept/uhp. The regularly offered Honors courses are listed online; however, the diversity of the program is reflected in topics of advanced departmental courses and UHP seminars. Some of the recent topics include:

- Alternate Energy Sources
- Interdisciplinary Seminar on the 1920’s
- Endangered Species: Ecosystems, Aesthetics, & Economics
- Art, Architecture, Music
- The Soviet Mind in Film and Literature
- Science and Pseudoscience
- Scientific, Social, and Ethical Impact of Biochemical Research
- Utopias, Dystopias, and Contemporary America
- Vietnam and American Politics and Literature
- Words in Collision
- The U.S.S.R.

The U.S.S.R.

After qualifying for a Freshman Academic Scholarship and gaining admission to the Honors Program, an entering freshman may compete for one of 50 Honors Program Scholarships. The Honors Program Scholarship is one of the few awards that can be added to a Freshman Academic Scholarship. Recipients receive widespread recognition and play a dynamic role in the UHP. The Stewart Bridgforth Honors Scholarships are awarded to students accepted for admission to the University Honors Program who have earned the status of National Merit Scholar. All scholarship inquiries and applications must be directed to the Office of Student Financial Aid and Scholarships.

H. RECOGNITION OF ACADEMIC ACHIEVEMENT

Recognition for outstanding academic achievement is accorded to full-time students each regular semester (does not apply to students in College of Veterinary Medicine). For these purposes, a student must complete at least twelve (12) semester hours of course work toward graduation, with no incomplete grades nor grades lower than C. The levels of recognition are as follows:

President’s Scholars. Students who achieve a 3.80 average or above.
Dean’s Scholars. Students who achieve a 3.5 to a 3.79 average.

I. GRADUATION and COMMENCEMENT

1. Commencement. Candidates should submit formal application for degrees during registration for the period of enrollment in which they expect to complete their degree requirements, but not later than the last day to apply, as published in the Academic Calendar. Candidates will not be allowed to participate in the commencement ceremony until requirements have been met for a degree. Payment of debts to the University is a requirement for the granting of degrees and awarding of diplomas. All University holds must be cleared before a student can graduate.

2. Graduation with Honors. Students completing the requirements for baccalaureate degrees with exceptional scholastic averages and with a minimum of one-half the total hours required for their degrees at Mississippi State University may be graduated with honors. The levels of recognition will be recorded on the students’ diplomas and permanent records.

In determining eligibility for recognition, the grade point average will be figured on the basis of all hours attempted. If a student’s last period of enrollment raises his or her average to the level required for honors, or to a higher level of honors, this notation will be made on the diploma and transcript. The hours may include, not only residence credit, but also correspondence and extension credit to the extent permitted by the University regulations for graduation.

Transfer students must achieve the specified grade point average in two senses: (1) on all hours attempted at all institutions attended and (2) on all hours attempted at Mississippi State University. The level of attainment will be determined by either the overall average or the Mississippi State University average, whichever is lower. The grade-point values currently in use at Mississippi State University will be used to calculate the quality-point average on all transfer credits.

The levels of recognition and the grade point averages required for each are as follows: Summa Cum Laude—3.80, Magna Cum Laude—3.60, and Cum Laude—3.40.
IV. STUDENT HOUSING

A. GENERAL INFORMATION

A student desiring a definite room reservation for the fall semester must submit a completed housing application and a nonrefundable $50 application fee to the Department of Housing and Residence Life. Reservations must be made in the full name of the student as it appears on the application for admission or readmission. A nine-month housing contract must be signed and returned to the Department of Housing and Residence Life once an assignment is offered and accepted.

Priority is given to students retaining their assigned room and paying required fees. Students wishing to request one another as roommates should submit applications at the same time to the Department of Housing and Residence Life or together in the same envelope by mail. Both students wishing to room together MUST request each other in writing. Mutual requests received by April 1 have priority.

Freshman and transfer students may submit housing applications after August 1, 2005, for the 2006-2007 academic year. Assignment of transfer students and currently enrolled off-campus students will not be made until after assignment of returning residence hall students has been completed at the end of spring semester, and into summer, as space is available. Freshman and transfer students will receive their assignments after summer orientation.

MSU students cannot cancel their housing contract and room assignment after the residence halls officially open each semester. The residence hall contract is for both semesters (nine months) if the student is enrolled in school. The residence halls open several days before the first day of classes.

Requests for private rooms will be accepted and honored as space for assignments is available. First priority will be given to double occupancy assignments. The rate for a private assignment will be higher than for a double room. Check with the Department of Housing and Residence Life for rates.

All room changes must be approved by the residence director. A student who makes an unauthorized change must pay a $25 penalty and move back to the assigned space. The assigned occupants are financially responsible for all property in the room, including doors and windows.

The University reserves the right to inspect rooms and to move any student to another assignment for reasons of space management or for the maintenance of order. At the beginning of each school term, students without roommates may choose one of three options: 1) move together voluntarily with another student who is without a roommate, 2) be reassigned with another student who is without a roommate, or 3) pay the private room rate if private rooms are an option. Whatever the option chosen, the student must coordinate his/her actions with his/her residence director.

Please contact the Department of Housing and Residence Life for more information: Box 9502, Mississippi State, MS 39762; Phone: 662-325-3555; FAX: 662-325-HOME (4663); email: housing@saffairs.msstate.edu; Web site: www.housing.msstate.edu. The Web site is the best source for exploring specifics about facilities, policies, and options for students, especially those with families.

V. SERVICES

A. LIBRARIES

The Mississippi State University Library System is composed of the Main Library (Mitchell Memorial Library) and its library branches which include Architecture, the College of Veterinary Medicine, the Jackson Center Library and the Meridian Campus.

The University Libraries include a collection of over 2,051,615 volumes and over 18,103 journal/serial titles, including 6,945 electronic subscriptions. The Libraries regularly receive many of the publications of leading universities and scholarly societies. The Library, already a 95 percent Government Documents Depository, is also a United Nations Depository.

The Libraries have significantly increased electronic access to bibliographic and full text information held locally as well as at remote sites. Through Galaxy and/or the Libraries’ Web page, patrons have access to a wide variety of over 148 databases, many of which provide full-text articles from journals not owned by the Libraries. The Access Services Electronic Reserves program further supports teaching and research. Membership in a number of consortia within the state and region extends the number of resources available.

Expedited electronic document delivery services in support of research materials and journal articles not available in the Libraries’ immediate collections are obtained via Infotrieve in support of graduate students, researchers and faculty. Initial work in partnership with the University’s Engineering Research Center, has begun toward the development of the University’s Geospatial Digital Library.

The resources of the Special Collections Department include materials of research value on the local, state, regional and national levels. Among the valuable documentation in the Archives of the University are papers of the university’s presidents and other officers, college, division and departmental records, faculty papers, records of committees and university related organizations. The Manuscripts Division includes many significant collections, especially in the areas of journalism, civil rights, agricultural, and political history. Among the most important are the Turner Catledge Papers, Hodding and Betty Welrhein Carter Papers, Mississippi Republican Party Papers, and the Delta and Pine Land Papers. The Mississippian Collection contains significant works about Mississippi and by Mississippi authors and a large rare book collection. The Congressional and Political Research Center houses the papers of Senator John C. Stennis, Congressman G. V. “Sonny” Montgomery, David Bowen, Charles Griffin, Mike Espy, and Chip Pickering as well as papers of Wiley Carter and Wayne Weidie, aids to Senator Thad Cochran and Representative Gene Taylor respectively. The Center is working with the Stennis Institute of Government and the Stennis Center for Public Policy to produce newsletters, seminars and other programs to promote research and interest in all levels of government. Other notable papers within the department include those of Norma Fields, Eugene Butler, Norman Bradley, Bill Monor, Sid Salter, Mark Bolton and John Grisham.

The Templeton Music Collection, a unique collection of ragtime, blues, show tunes and war song sheet music is highly recognized and used by musicians, scholars and researchers throughout the region and nation. Digitized portions of this collection are available on the web.

The Library computer lab contains approximately eighty-five Pentium IV 1.6 gigahertz PC’s with 17-inch color monitors, and five G4 IMac computers. Students who want to use the sound capabilities of the Internet may plug their own headphones into headphone jacks on the PC’s and Macs. The lab also offers two laser printers and a color laser printer. As the University’s newest and largest computer lab, the Computer Commons is open until 2:00 a.m. Sunday through Thursday and closes at 8:00 p.m. on Friday and Saturday.

The Instructional Media Center (IMC) provides an environment for educational technology activities and a learning center to utilize techniques related to digital multimedia. The staff provides assistance in identifying, digitizing, and organizing content materials including resources from the Libraries’ collections for use in Web page design or presentation. IMC houses eight computers with CD-ROM players, four computers with flatbed scanners that can be used for scanning documents, pictures, photographs, etc., two typewriters, five TV/VCR stations for students to listen to music as required for various courses. Two of these stations also have record players. Music composition stations consist of electronic keyboards attached to Macintosh computers. The IMC also provides small listening areas with TVs and VCRs for groups to view videos for classes.

The Libraries, a charter member of the Southern Library Network (SOLINET), hold memberships in the American Library Association, Association of College and Research Libraries, the Networked Digital Library of Theses and Dissertations (NDLTD), EDUCAUSE, EPSCOR/ESIG libraries, CNI and CLR, and was a founding member of SPARC. The Libraries are one of five supporting regional libraries within the National Agricultural Library Aquaculture Library Network, established to link the research and extension activities of the Regional Research Centers with the Network. The Main Library plays a major role in Mississippi’s statewide consortium MAGNOLIA (Mississippi Alliance for Gaining New Opportunities through Library Information).
B. BOOKS and SUPPLIES

The MSU Bookstore is operated on behalf of the University by Barnes and Noble. The store’s primary function is to provide students, faculty and staff with textbooks, reference and trade books, and related supplies. The Bookstore is located on the ground floor of the Student Union Building. It stocks all course-required texts and supplies, carries a complete stock of school supplies and a selection of paperback books and insignia items. In addition, Apple and IBM computers, related hardware, and software packages are available at substantial educational discounts.

During the academic year, the Bookstore is open Monday through Friday from 8 a.m. to 6 p.m., Saturday 11 a.m. to 3 p.m., and Sunday 12 p.m. to 4 p.m. Reduced hours are observed during the summer months and between academic semesters. The Bookstore extends its hours of operation concurrent with campus activities such as home football games.

C. UNIVERSITY DINING SERVICES

The University operates a variety of campus dining facilities which provide the student with a wide range of menu choices, atmospheres, and prices. The campus community may choose from the newly remodeled Perry Cafeteria, the Union Food Court, the Pegasus Dining Room in the Wise Center, the newly renovated State Fountain, Gooch’s, McArthur Court in McArthur Hall, and Food for Thought in Mitchell Library, as well as a full service Catering Department.

MSU’s historic Perry Cafeteria, located in the heart of campus, offers a varied breakfast menu, from omelets and pancakes to hearty southern-style fare. For lunch, students will find hot food lines serving homestyle meals, a salad bar, a deli bar, a potato bar and a pizza bar. Chargrilled entrees and a pasta line are featured daily. Satisfy that craving for something sweet with MSU ice cream or MSU baked pies, cakes or cobblers. For dinner, students may feast on “all you can eat” buffet.

The Union Food Court features Chick-fil-A®, Wendy’s®, Subway®, and the Great Wall of China® as alternative choices for students. One of the best kept secrets on MSU’s campus is the Pegasus Dining Room at the Wise Center. Great food is enhanced by a cheerful dining room and patio area. The Pegasus serves a made to order breakfast from the grill, hot homestyle lunches, salad bar, and a soup kettle. The student plate is a daily feature at the Pegasus.

The State Fountain is always a favorite stop for MSU ice cream, milk shakes and sundaes. Students are drawn into the Fountain early each morning by the tempting trays of MSU pastries, fresh baked breads and steaming mugs of Starbucks® coffee. The pleasant greenhouse atmosphere is a wonderful place to relax and take a well deserved study break with cookies or a slice of cheesecake. When the occasion calls for a gift, the Fountain offers cakes, pies, balloons, customized baskets and its special MSU cookie tins delivered on campus or anywhere in the continental United States. Parents may phone in orders for birthday cakes, special occasions, or the Bully Birthday Special.

The residence hall area location of Gooch’s makes it a popular stop for students. Located next to University Parking Services, Gooch’s offers Stone Willy’s pizza, an assortment of short order items, soft drinks, and snacks. An “After hours packaged meal” is available for those on the meal plan who miss the evening meal at the Perry Cafeteria. Enjoy viewing our mini Jumbo-tron while you eat.

Food for Thought, located in the Library, is a snack shop that offers a quick bite for students on the run. The shop offers soft drinks, sandwiches, snacks, and a lot of other items.

Dining Service’s newest food location, McArthur Court, is located in McArthur Hall on Barr Avenue. It is convenient for those located on the west side of campus who need a snack, full breakfast or lunch. The shop offers a sandwich bar, a salad bar, a choice of two soups each day and a “build your own” potato bar, in addition to pastries, bagels and sausage biscuits for your “pick me up” breakfast. It is an ideal place to sit and study or to just take a break with a friend.

Students may pay for purchases at the above locations with cash, personal checks, MoneyMate, Dining Only, or Meal Plan. MoneyMate. MoneyMate is a declining balance account that utilizes the student’s ID card. MoneyMate is accepted at Dining Service locations, as well as many other locations on campus.

Dining Only works in conjunction with a student’s MoneyMate account, earmarking a certain amount of MoneyMate funds for use in Dining Service locations.

Dining Service offers seven voluntary meal plans from which students may choose. The meal plans are discounted, so they cost less than if cash were used each time you eat. Meal plans are for one academic year (fall & spring) and are billed to student accounts at the beginning of each semester.

The “Lo the Turbo” plan offers $4.50 daily allowance to use at any All Perry Club location from 7 a.m. to 4 p.m., Monday-Friday, for $329.

The Bailey Howell offers five evening meals (all-you-can-eat) each week, Monday-Friday at the Cafeteria for $484 per semester.*

The Palmeiro is ideal for athletes or anyone with a huge appetite! It includes four “grand slam” all-you-can-eat evening meals, including an enhanced buffet on Thursday, plus a $5.50 daily allowance restricted to Perry Cafeteria, for $670.*

The Doubles offers a daily allowance of $4.50 per day, Monday-Friday at all Dining Service locations and dinner (all-you-can-eat) at the Cafeteria for $771 per semester.*

The Johnnie Cooks offers a daily allowance of $7.50 per day, Monday-Friday at all Dining Service locations as well as dinner (all-you-can-eat) at the Cafeteria for $963 per semester.*

Weekend Series! Add a weekend option to any of the three above meal plans. This option allows an additional $5.00 per Saturday and Sunday for $140.00 per semester.*

The Local Joe is a seven-day-a-week meal plan. Start with a daily allowance of $10.00 (Monday-Friday) at any Dining Service location and dinner (Monday-Friday) at the Cafeteria (all-you-can-eat). Then, on Saturday and Sunday spend up to $15.00 per day for meals at any of our Dining Service locations. You get all of this for only $1,770.00 per semester.*

For information about Dining Services or meal plans, contact Dining Service, P. O. Box 6229, Mississippi State, MS 39762, 662-325-2965.

* Prices subject to change without notice. See www.msstate.edu/dept/dining for up-to-date information.

D. JOHN C. LONGEST STUDENT HEALTH CENTER

The Longest Student Health Center is designed to provide comprehensive, accessible, high-quality and economic healthcare to students during college years. The Center is open during regular school sessions to all Mississippi State University students who pay the student health fee.

It is recommended that all students use the Longest Student Health Center as their preferred provider of care while at Mississippi State. The Center is staffed with well-qualified family practice physicians and registered nurses to provide primary medical care for students. Ancillary services include pharmacy, laboratory, x-ray, and physical therapy. Other services offered include nutrition counseling and health education. The health fee covers the physical and professional charge for an unlimited number of clinic visits. Ancillary services are provided on a fee-for-service basis. Ambulance service is available through Oktibbeha County Hospital.

Those who need more specialized care than the Center can provide will be referred to the appropriate resource.

Clinical hours: 8:00 a.m. - 5:00 p.m., Monday - Friday. The Center is closed on Saturday and Sunday and during regularly scheduled student holidays.

Health records are to be sent directly to the Longest Student Health Center, where they are kept confidential. Health records are not a part of the school records and will be kept indefinitely for future reference.
The Student Health Center does accept insurance assignments from health insurance companies recognizing the Center as an authorized provider of health care. Medicare does not recognize the Center as an authorized provider and will pay only to the patient or physician. A Student Accident and Sickness Insurance Plan has been developed specifically for Mississippi State University students and is intended as a supplement to the care provided by the Student Health Center. Sponsored by the Student Association, it is a voluntary plan for students and their dependents. International students are required by the University to subscribe to this policy unless they provide proof of equal coverage.

Information on student health services and student health insurance is available by writing to Director, John C. Longest Student Health Center, P.O. Box 6338, Mississippi State, MS 39762; telephoning 662-325-2431; or emailing health@saffairs.msstate.edu. Visit our Web page at: http://www.health.msstate.edu.

E. INTERNATIONAL SERVICES OFFICE

The International Services Office (ISO), a unit of the Division of Student Affairs, is charged with the responsibility of immigration matters as they relate to students and exchange visitors. This includes advising and providing information to students, research scholars, visiting professors, and MSU faculty and administrators about rules and regulations of the Department of Homeland Security, maintenance of lawful status, work authorization, and other matters which affect the international community at Mississippi State University. The Department of State’s Exchange Visitor Program is administered in this office, providing DS 2019 documents for qualified J-1 visitors. Through liaison with community organizations and businesses, cultural experiences for international participants are facilitated and encouraged. Semiannual orientation programs for new students are conducted by the ISO. An ISO-administered electronic mail bulletin provides current information regarding immigration regulations, university deadlines, campus and community activities, issues of importance on a national or international scale which affect some or all of MSU’s international community, opportunities for employment, and other matters of interest to the subscribers. The ISO is located in the Callejas International Center at 15 Morgan Avenue.

F. STUDENT COUNSELING AND TESTING SERVICES CENTER

Student Counseling and Testing Services (SCTS), located in Lee Hall, Room 103, offers a variety of services free to all full-time students, Monday through Friday, from 8:00 a.m. to 5:00 p.m. Appointments may be made in person or by calling 662-325-2091. The center also provides walk-in services for urgent concerns, as well as on-call services for serious crises 24 hours per day, seven days per week, when the University is open. SCTS also offers very brief crisis intervention and referral services to faculty and staff. If a counselor is needed after regular business hours, contact campus police at 662-325-2121.

STAFF: SCTS staff is composed of competent professionals with extensive training in counseling psychology, social work, and counseling, who are experienced in facilitating personal growth and development. They respect the ability of each individual to make actualizing choices.

PERSONAL COUNSELING: Many university students have personal concerns which may interfere with their academic success. SCTS staff provides an atmosphere in which students may discuss problems with the assurance that all counseling information is confidential and would be released only with the student’s written consent.

GROUP COUNSELING: SCTS provides a variety of small group experiences ranging from personal growth groups, to study skills groups, to vocational exploration workshops. Students who wish to improve communication or interpersonal skills may participate in growth groups where they can experiment with new types of behavior in a safe and accepting environment. For those students experiencing academic difficulty, study skills groups provide direct instruction and supervised activity designed to improve study skills and habits. Students can gain insight regarding their interests, abilities, and decision-making styles, as well as the world of work, while participating in vocational exploration workshops.

OUTREACH AND CONSULTATION: SCTS provides psycho-educational outreach to the MSU campus and local communities, as well as psychological consultation to students, faculty, and staff. See our Web site at www.msstate.edu/dep/cts for more information.

TESTING: SCTS serves as the University’s testing center for national testing programs such as ACT, GRE, NTE, LSAT, GMAT, MCAT, and MAT. Applications for these tests, which are available at SCTS at 100 Lee Hall, should be completed and fees paid well in advance of the desired testing date. Other tests used in counseling are also administered at SCTS. These include personality tests, tests of ability, and other instruments as needed to assist students.

COMPUTER-BASED TESTING: Student Counseling and Testing Services also administers the University’s Computer Based Testing program located at 54 Magruder Street. Students and community members may call 662-325-6610 to register for computerized applications of the CLEP, GMAT, GRE, Praxis, and TOEFL. See our Web site at www.msstate.edu/dep/cts/testing.

G. THE LEARNING CENTER

The major purpose of The Learning Center (TLC) is to help Mississippi State University students improve their academic performance. TLC offers both credit courses and non-credit services to graduate and undergraduate students. For more information, contact the TLC office at 662-325-2957 or come to 267 Allen Hall.

Credit Classes. The primary focus of the credit classes of The Learning Center is to assist in retention of students by strengthening their reading and study efficiency. LSK 1023 College Reading and Study Skills emphasizes development of time management, vocabulary, note taking, test preparation and other study skills. TLC offers a speed reading course, LSK 1013, as well as a one-hour study skills course, LSK 1011. In addition, the center offers LSK 1001 Freshman Seminar, a one hour course designed to orient incoming freshmen and transfer students to the university.

Non-credit Laboratory Services. TLC offers tutoring in major subject areas. Assistance is available in all areas of English, mathematics and statistics, chemistry, physics, and preparation for professional examinations. These services are free to all MSU students. In addition, The Learning Center provides equipment for checkout, photocopying, and instructional resource materials for a nominal fee. The Learning Center houses a general computer lab available to students and faculty.

H. THE CAREER CENTER

The MSU Career Center, through quality programs, events and services, empowers individuals to develop skills that will enhance professional preparation oriented toward careers. The Career Center also serves as a catalyst between employers, students and alumni by offering on-campus interviewing and networking opportunities as well as relevant work experiences prior to graduation. Assistance is provided that compliments the career decision/preparation process in the form of personality and interest inventories, career counseling, resume writing, resume critiques and mock interviewing. In addition, special events are hosted by the Career Center that provide students and alumni with enhancements related to the job search process. Major events held on a regular basis each semester include Career Day, Education Interview Day and Cooperative Education Interview Days. Special emphasis workshops including dining etiquette, dressing for success, evaluating job offer, etc., are held regularly.

Types of employment available for job seekers through the Career Center include:

• Full-time employment for graduating seniors and alumni
• Cooperative Education (see section on Cooperative Education Program)
• Internship and Professional Practice Internships
• Employment
• Part-time employment during school semesters

Details on all events, programs and services of the Career Center may be found at http://www.career.msstate.edu or by contacting Director, Career Center, PO Box P, Mississippi State, MS 39762.
I. THE HOLMES CULTURAL DIVERSITY CENTER

The Holmes Cultural Diversity Center primarily serves minority students, especially African American, Hispanic, Native American and Asian American. It is, however, committed to providing programs and services sensitive to all students’ needs. The Center serves as a resource for faculty and staff. The Holmes Cultural Diversity Center supports the missions of the Division of Student Affairs and the University.

www.its.msstate.edu

User Services. 117 Allen Hall. 662-325-0631. User Services operates the Help Desk, which serves as the primary point of contact for students, faculty, and staff when requesting services or reporting problems to Information Technology Services. Additionally, User Training and Support conducts training sessions, short courses, and provides consulting services to campus information technology users while Desktop Services provides computer support to faculty and staff.

Telecommunications. 117 Allen Hall. 662-325-2212. Telecommunications manages the university telephone system and card access systems. All residence hall rooms are equipped with a telephone line for Local Telephone Service. Standard features on all residence hall lines include basic caller ID, voice mail, call waiting, and more. Long Distance service is also available to students, faculty, and staff at competitive rates. For access to campus network resources and the Internet, Dial-Up Network Access accounts are set up and managed by Telecommunications. This department also operates the Campus Card Office and the University’s declining-balance spending account system, MoneyMate.

Systems and Networks. 117 Allen Hall - 662-325-0728. Systems and Networks is responsible for the planning, deployment, support, and operation of the University’s information technology infrastructure. This infrastructure is comprised of the campus fiber optic backbone, departmental and building networks, the campus wireless data network, wide area network connections (including Internet and Internet2), and large scale computer, server, and information resources. The Primary Data center in Allen Hall is the focal point for oversight of the campus network which encompasses over 155 campus buildings, numerous off-campus locations, and several thousand PC, Macintosh, and UNIX workstations. This facility also houses the Internet and Internet2 gateways, a dial-up modem pool, and several large-scale UNIX, Novell, and Windows servers used by academic, research, and administrative units of the University. Systems and Networks also maintains general-use Computer Labs in Butler Hall, Mitchell Memorial Library, and several of the Residence Halls. The Butler Hall and Mitchell Memorial Library facilities are open to all students, faculty, and staff, providing PC, and Macintosh workstations with a robust array of applications software. The Residence Hall facilities are open only to students living in campus housing.

Information Systems. 117 Allen Hall - 662-325-0610. Information Systems is responsible for application development, maintenance, and support of a broad array of systems throughout the University. Systems supported range from small departmental applications to the comprehensive, integrated Enterprise Resource Planning system (Banner) for financial, human resources, and student administration. Information Systems is composed of the following units: Application Administration, Web Services, Business Systems, and Student Systems. Responsibilities include database administration and the system design, programming, implementation, and on-going maintenance and support of the various information systems utilized by students, faculty, and staff.

K. STUDENT SUPPORT SERVICES

The department of Student Support Services (SSS) is a federally-funded program through the U.S. Department of Education. It is a TRIO program designed to assist eligible low income college students, first generation college students, and college students with disabilities to succeed in completing their college education. A limited number of students can be served under the federal grant program. The primary mission of SSS is to enhance educational opportunities for eligible students to improve their academic and social skills, increase their retention toward graduation and as appropriate, facilitate their entrance into graduate and/or professional schools. Additionally, Student Support Services verifies legitimacy of students who identify themselves as having disabilities. Students with disabilities who need academic accommodations must identify themselves to SSS, provide appropriate documentation of their disability, and make their requests known to the department. Documentation guidelines can be obtained from SSS. Student Support Services staff reviews the documentation, assesses the needs of students with disabilities, and makes recommendations to the faculty and the University regarding the needs. The department serves as a resource and clearing house for dissemination of information related to disabilities and compliance with section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ADA). For additional information or services visit Student Support Services, Montgomery Hall or call 662-325-3335.

VI. STUDENT and CAMPUS LIFE

A. THE COLVARD UNION

The Colvard Union, named for former President Dean W. Colvard, serves as the community center of the Mississippi State campus. The Union organizes and implements many social, cultural, educational, and recreational activities and events for the MSU community throughout the year.

The Campus Activities Board (CAB) and Music Maker Productions develop and coordinate a variety of programs that include films, speakers, concerts, musical performances, holiday programs, craft fairs, skills presentations, and the like.

The Colvard Student Union makes available to the campus community meeting and conference rooms, reception rooms, the multi-purpose Ballroom, the Small Auditorium, the Art Lounge, display space, banquet and dining rooms, and food service in the Union Food Court. The Union also houses the Office of Student Life, the CABS and Music Maker offices, Union Station Hair Designers, the MSU Bookstore, and the Dawg House Coffee Shop.

The Union Information Desk, located on the second floor, is open daily until 10:00 p.m.; it furnishes information about activities and events happening in the Union and around campus. Adjacent to the Information Desk is the Campus Outreach & Service Learning Center, which helps in the coordination of volunteer activities on campus and throughout the Starkville community, and the Union Reservations Office.

B. THE STUDENT ASSOCIATION

The Student Association exists to serve all Mississippi State University students. The five officers, who are elected during the spring semester, are the leaders of the SA. These officers include the president, vice president, secretary, treasurer, and attorney general. They not only work to ensure that established policies and programs are successfully continued, but also initiate improvements in MSU’s student government.

The president and the SA cabinet comprise the executive branch of the Mississippi State Student Association. These cabinet members are selected to work with their student committees to implement programs and services which will benefit the entire student body.

The vice president heads the legislative branch and presides over the SA Senate. There are 50 senators elected to represent the various colleges and schools, as well as areas of student residence.

The judicial branch of the SA includes the Judicial Board, which is made up of seven students appointed by the SA president and approved by the senate. The Judicial Board rules in cases involving student discipline and other matters dealing with MSU students.
All students are automatically members of the SA when they enroll at MSU. Students who want to learn more about the SA and become involved should visit the SA office located behind the State Fountain and Bakery in the lower level of Perry Hall Cafeteria, call 662-325-3917, or visit the Web site at www.sa.msstate.edu.

C. STUDENT PUBLICATIONS

The Reflector, the campus newspaper, appears twice weekly during the regular term. Edited and managed by students, it provides a wide range of news, features, and commentary of interest to the campus community. Its editorial offices are in the Student Media Center.

The Reveille, the annual yearbook, is published each year by a selected student staff to provide for the participants a lasting record of life in the University. The Reveille offices are in the Student Media Center.

D. STUDENT ORGANIZATIONS

Mississippi State University has more than 300 registered organizations, grouped as follows: Departmental/Academic (95), Fraternities (18), Sororities (11), Honorary (42), International/Ethnic (16), Fine/Performing Arts (12), Political (4), Recreation/Hobby (25), Religious (28), Residence Life (17), Service (36), and Publications (4).

Organizations which represent the interests of a large segment of or the entire campus include: The Student Association (SA), the Residence Hall Association (RHA), the Inter-Fraternity Council (IFC), the National Pan-Hellenic Council (NPHC) Undergraduate Council, the Black Student Alliance (BSA), the Panhellenic Council (PH), the Campus Activities Board (CAB), Music Makers Productions, The Reflector (newspaper), and The Reveille (yearbook). The name and phone number of the advisor of each organization on campus are listed on the MSU Web site and in the SA Office (lower level of Perry Cafeteria).

E. SOCIAL SORORITIES and FRATERNITIES

Eighteen national social fraternities have established chapters at the University; 12 have chapter houses on the campus, and one resides off campus. Self-government of the fraternities is provided by the Interfraternity Council, composed of the president and one delegate from each of the national fraternities. The national fraternities at Mississippi State University are: Alpha Gamma Rho, Alpha Phi Alpha, Alpha Tau Omega, Delta Chi, FarmHouse, Iota Phi Theta, Kappa Alpha Order, Kappa Alpha Psi, Kappa Sigma, Lambda Chi Alpha, Omega Psi Phi, Phi Beta Sigma, Phi Delta Theta, Phi Gamma Delta, Pi Kappa Alpha, Sigma Alpha Epsilon, Sigma Chi, and Sigma Phi Epsilon.

Eleven national women’s social sororities have established chapters at Mississippi State University; six have built chapter houses on the campus. Panhellenic Council is the self-governing body for sororities and is composed of two delegates from each sorority. State’s sororities include: Alpha Kappa Alpha, Chi Omega, Delta Delta Delta, Delta Gamma, Delta Sigma Theta, Delta Xi Phi, Kappa Delta, Phi Mu, Sigma Gamma Rho, Zeta Phi Beta, and Zeta Tau Alpha.

Included among the 29 Greek organizations at MSU are nine historically African-American chapters: Alpha Kappa Alpha, Delta Sigma Theta, Sigma Gamma Rho, and Zeta Phi Beta sororities, and Alpha Phi Alpha, Iota Phi Theta, Kappa Alpha Psi, Omega Psi Phi, and Phi Beta Sigma fraternities. These organizations belong nationally to the National Pan-Hellenic Council (NPHC), and they are represented on campus by the NPHC Undergraduate Council, their self-governance body.

F. PROFESSIONAL and HONORARY FRATERNITIES

More than 70 professional and honorary fraternities are active on the campus. They include: Alpha Epsilon Delta Pre-Med (Pre-Medical), Alpha Kappa Delta Sociological (Sociology), Alpha Lambda Delta (Freshman Scholastic), Alpha Pi Mu (Industrial Engineering), Assoc. of Economic Scholars, Beta Beta Beta Biological (Biology), Blue Key National Honor Fraternity (Activities), Cardinal Key (Leadership), Chi Sigma Iota (Counseling), Delta Pi Epsilon, Elder Statesmen (Upper Classmen), Eta Kappa Nu (Electrical Engineering), Gamma Beta Phi (Educational Service), Gamma Iota Sigma (Business), Gamma Sigma Delta, Golden Key (Student Leadership), Kappa Delta Pi (Education Honorary), Kappa Omicron Nu (Leadership/ Home Economics), Kappa Pi (Home Economics), Lambda Pi Eta (Communication), Lambda Sigma, (Sophomore Collegians), Mortar Board (Leadership), Mu Kappa Tau (Marketing), Omicron Delta Kappa (Leadership), Phi Alpha Theta (History), Phi Delta Kappa (Educational), Phi Eta Sigma (Freshman Scholastics), Phi Kappa Phi (Scholastic Honoraty), Phi Sigma Pi, Phi Theta Kappa Alumni (Transfer Students), Pi Delta Phi (French), Pi Omega Pi (Business Education), Pi Sigma Alpha (Government), Psi Chi (Psychology), Sigma Alpha Lambda, Sigma Gamma Epsilon (Earth Science), Sigma Gamma Tau (Aerospace Engineering), Sigma Tau Delta (English), Society of Scholars in Arts and Science, Tau Beta Pi (Engineering), Theta Tau (Professional), University Honors Council (General Scholarship), Upsilon Pi Epsilon (Computer Science).

G. LYCEUM, SPEAKERS FORUM, BLACKFIARRS

Numerous groups and agencies enrich the cultural life of the campus. Important among these are the Lyceum series, the Speakers Forum program, and Blackfriars Drama Society, which utilize the excellent theater and gallery in McComas Hall.

For many years, the Lyceum series has brought the community a select and varied program of musical, dramatic, dance, and other artistic offerings, including symphony orchestras, ballet companies, traveling theatrical companies, and noted individual artists and performers. The Lyceum is supported by student fees, season ticket sales, an allocation from the University, and private contributions and managed by the student-faculty Performing Arts Committee.

The Speakers Forum series, managed by a committee of the Campus Activities Board, brings to the campus speakers of current interest to students and faculty. The Speakers Forum Committee is made up entirely of students. Admission to the lectures is typically free to students.

The Blackfriars Drama Society, supported by the Department of Communication, usually presents at least two major plays each semester, as well as student-directed one-act plays. In addition, in the fall of each year Blackfriars plays host to the MSU Drama Festival.

H. MUSICAL ORGANIZATIONS

All MSU students, regardless of academic major, are enthusiastically invited to participate in one or more of the musical ensembles offered through the University Band and Choir programs and the Department of Music Education. These ensembles offer diverse performance opportunities both on and off-campus. Membership is available through audition. Scholarships and tuition waivers are available in the band and choir programs based on talent and experiences as demonstrated through audition.

Founded in 1902, the Maroon Band Program is one of the oldest and best-known bands in the Southeast. The Famous Maroon Band is at the center of game-day spirit, is one of the most visible groups on campus, and serves as musical ambassador for the university. The band appears at all home football games and travels to championship and bowl games. Interested members of the Maroon Band audition for placement in two Basketball Pep Bands to continue supporting the Bulldogs in the basketball season.

The Wind Ensemble, Symphonic and Concert Bands offer opportunities for students of all ability levels to pursue the study of the instruments through the performance of advanced ensemble literature, with the Wind Ensemble serving as the premiere instrumental concert ensemble. The Jazz Band is offered for those with an interest in jazz, and numerous chamber ensembles for winds and percussion are offered through the Music Education Department.

The Chamber Singers are the premiere, touring ensemble on the MSU campus. Comprised of students from various disciplines, each member is committed to singing choral music at the highest level. A significant amount of previous experience in vocal and choral music is usually expected for
The concerts on campus each year and with the Famous Maroon Band during the annual patriotic halftime show.

The Chapel of Memories, with its George D. Perry Carillon Tower, in the center of the campus, is open to individual students for meditation and prayer throughout the day and evening. It may also be reserved through the Director of Facilities Use for weddings, funerals, initiations, and group religious activities. Student religious groups are registered through the Office of Student Life to provide the co-curricular involvement of students in programs of study, worship, fellowship, and service. Four of these groups, the Baptist, Methodist, Catholic, and Church of Christ, have off-campus facilities. In those cases where a minister or faculty advisor is not provided by the preferred group, every effort will be made to put the student in touch with someone of his or her faith in the area.

The University Common Ministry, composed of ministers engaged in campus ministry at the University, has been serving the needs of students since December 20, 1978. In addition, more than 25 active student religious groups are registered with the Office of Student Life.

In addition to the practice of religion within the student religious groups, an opportunity to learn about religions of the world is provided through credit courses in the Department of Philosophy and Religion, as well as non-credit courses offered through the church-related groups.

J. RECREATIONAL SPORTS

The Department of Recreational Sports conducts a comprehensive program of leisure services. The program consists of men’s, women’s, and co-recreational sports; fitness programs and activities; tennis and racquetball court reservations, equipment check-out services; informal recreation programming; sport club opportunities; and special events.

The Joe Frank Sanderson Center opened in the summer of 1998 and offers a wide range of recreational opportunities for Mississippi State students, faculty, and staff. The state-of-the-art facility includes six basketball/volleyball courts; eight racquetball courts; a fitness room complete with weight and cardiovascular work-out equipment; jogging track; and an indoor swimming pool. The department also operates the RecPlex, a sports field complex with playing areas for softball, flag football, and soccer.

The Intramural Sports program offers competition for men and women in a variety of activities including badminton, basketball, flag football, racquetball, soccer, softball, tennis, table tennis, and volleyball.

K. INTERCOLLEGIATE ATHLETICS

Mississippi State University is a member of the Southeastern Conference, which includes in its membership 12 of the leading universities of the South. Regulations regarding participation in athletics are subject to the action of the National Collegiate Athletic Association and the Southeastern Conference. Intercollegiate sports for men include football, basketball, baseball, track, tennis and golf. Intercollegiate sports for women include basketball, volleyball, tennis, golf, cross-country, track, soccer and softball. Overall supervision of intercollegiate athletics is provided by Larry O. Templeton, Director of Athletics.

Campus athletic facilities include Davis Wade Stadium at Scott Field (football stadium), with a current capacity of 55,080 and the Leo Seal M Club Center, the John H. Bryan Athletic Administration Building, a multi-purpose coliseum which seats 10,200 for basketball, four practice football fields, a six-court tennis complex, an indoor tennis practice facility, a lighted baseball park with a capacity of 6,700, an all-weather running track, a soccer field, a softball field, an indoor practice facility for basketball and volleyball, and a physical fitness complex with a football field covered with astro turf, a weight room, a training room, a team meeting room, and a locker room.

VII. TUITION and REQUIRED FEES FOR 2005-2006

Except for tuition and required fees for the College of Veterinary Medicine stated hereafter, the following fees apply to students enrolled full time during the fall or spring term.

Tuition and required fees are assessed on a per credit hour basis at the prevailing rates as determined by The Institution of Higher Learning, the governing board of the University. These rates are subject to change without notice.

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Tuition &amp; Required Fees</td>
<td>$2,156.00</td>
<td>$2,156.00</td>
</tr>
<tr>
<td>B. Residence Halls and Apartments</td>
<td>$1,540.00</td>
<td>$1,540.00</td>
</tr>
<tr>
<td>C. Non Resident Tuition:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional fee for out-of-state students:</td>
<td>$2,730.00</td>
<td>$2,730.00</td>
</tr>
</tbody>
</table>

Note: Final registration includes payment of fees. Enrollment is not completed until fees are paid.

Tuition and required fees (Hourly, Rounded)

| Undergraduate (for 1-11 hours) | | | |
|------------------------------|----------------|-------------|
| Resident                     | $179.75 per hour |
| Non-resident fee             | $239.75 per hour |
| Graduate (for 1-8 hours)     | | | |
| Resident                     | $227.50 per hour |
| Non-resident fee             | $303.50 per hour |

A student will be considered full-time for tuition and fee purposes when registered for 12 or more hours undergraduate and 9 or more hours graduate. Part-time (on-campus) students registered for 1 to 11 hours undergraduate and 1 to 8 hours graduate will be charged at the per-credit-hour rate for tuition and required fees.
Audit Charges
There are no extra fees for auditing a course; tuition is the same whether a course is taken as an audit or for credit.

International Student Charges
All international students are assessed an Administrative Programming fee of $100 each fall, spring, and summer term. Sponsored international students whose programs of study are administered through the International Services Office are assessed an additional Administrative Service Fee of $200 each fall, spring, and summer term. Health insurance for international students will be assessed at the prevailing rate for the fall semester and for the spring/summer semester. All international students are required to pay the International Health Insurance Fee unless an acceptable, alternative policy can be proven and accepted by the International Services Office, preferably prior to registration. Health insurance charges will not be removed after the 10th class day.

Sponsored International Student Charges
The International Services Office will administer the programs of study for international students who receive all or most of their financial support in the form of scholarships, grants, or awards from U.S. government agencies, foreign government agencies, private and/or international agencies, or foreign employers, and students whose financial support is administered by foreign embassies and third-party billed by Mississippi State University, assessing a fee of $200 each fall, spring and summer term.

Tuition Waivers
Mississippi State University employees who have appropriate approval may have tuition and required fees remitted for up to six (6) hours per semester with a maximum of 18 hours per calendar year. Employees are required to pay tuition and required fees for any additional hours taken during the enrollment period and other assessments to their student account. Students, faculty and staff are responsible for service fees incurred if tuition waiver approval is not finalized on a timely basis.

Senior citizens (65 or over) may take courses without paying tuition and required fees, although registration is on a space available basis and must be completed after classes begin.

Unpaid balances from previous semesters
Any outstanding and past due amounts owed to the University must be paid in full before a student may register for additional courses or make schedule changes. All payments received on student accounts will be applied to charges in the same order in which the charges were incurred. A student who has a hold on his/her record because of an overdue account may not receive a transcript or a diploma until the account is cleared.

OTHER INFORMATION
Student Activities
All students, by payment of tuition and required fees, are eligible for use of facilities, participation in intramural sports, admission to intercollegiate athletic events, the student newspaper, student health services and other benefits.

Billing
Billing statements are available to students on about the 15th of each and every month via the University’s Web page. These statements contain a comprehensive summary of most charges to the students account by the University. It is the responsibility of the student to maintain a current billing addresses via the Web.

Service Charges
There is a 25-day grace period to make payment on billed charges. There will be a service charge at the rate of 1.5 percent assessed per month on any charges outstanding greater than 25 days from billing. As a rule, the regular monthly due date falls on the 9th of each month.

Attorney and Collection Fees
Students who do not pay their fees by the end of the term may be turned over to an outside collection agency for assistance in collecting. The prevailing collection cost rate will be added to the amount owed by the student to cover the collection agency cost. If an Attorney’s services are needed to collect an unpaid balance, the student shall be responsible for payment of the attorneys’ fees, plus all court and other collection cost incurred.

Course Participation Fees
Fees in addition to tuition are associated with some courses which require the use of special equipment, facilities or materials. These fees, which vary from course to course, will be collected as part of registration.

Schedule Change Fees
Courses may not be added after the first 10 class days of a semester. Any change in class schedules between the 10th class day and two weeks before the end of a semester will incur a charge of $50 per drop. Schedule changes made after initial registration and payment of fees may generate additional charges to students. Such additional charges are subject to the same payment schedules and penalties as the initial charges, and additional charges should be paid promptly to avoid service fees.

Other fees
Fees which may be incurred by students include Thesis/Dissertation Binding Fee, $12; Microfilm Fee, Dissertation, $55, Thesis, $45; Copyright $35; Student Identification Card Replacement Fee, $10; and Spouse Identification Card, $16 per semester (allows student spouse to attend campus events in same manner as student), and Professional Golf Management Fee, $500.

Housing Fees
To live in a residence hall, students must sign a nine-month housing contract. Contact Housing and Residence Life for current rates of room rental.

PAYMENT and REFUNDS
Current tuition and required fees should be paid at the established monthly due date. Partial payments of an account balance are permitted during the semester/term. However, a monthly service fee (1.5 percent) will be assessed on charges unpaid by the due date (approximately 25 days from the billing date). All service charges are subject to the same payment schedules and penalties as the initial charges, and additional charges should be paid promptly to avoid service fees.

You are responsible for payment of all tuition and fee charges unless you either CANCEL YOUR SCHEDULE OR WITHDRAW FROM SCHOOL. See refund schedule on the Web, click on Refund Policy for details of refund amounts at various stages of cancellation or withdrawal. Failure to take appropriate withdrawal action may result in significant payment obligations.

Accepted Forms of Payment: Personal or corporate checks, money orders, cashiers’ checks, and credit cards (American Express, Discover, MasterCard, Visa). PLEASE PROVIDE YOUR NET ID WITH ALL PAYMENTS. Cash payments may be made only at cashier windows. DO NOT mail or place cash payments in drop boxes.

Payment of fees by students receiving financial aid or scholarships
Students who receive a scholarship or need-based financial aid from the University are expected to use their financial aid or scholarship award to complete payment of tuition and required fees. The remaining balance of scholarship and financial aid funds is available to be used for other educational expenses only after tuition and fees have been paid. A “Memo” balance of Financial Aid on your statement may not prevent service fees after the first billing for the term. Only timely filing of your Financial Aid will assure a timely disbursement to prevent service fees.
Refunds of tuition and fees
During the first 10 class days of an academic semester, courses dropped result in a 100 percent tuition and fees refund. No refunds are made for courses dropped after the 10th class day.

Drop Policy For First And Second 5-Week Summer Terms
Drops for first five week and second five week summer terms will be refunded at 100 percent during the first three class days. After the third class day, no refunds are made for individual courses dropped. The 10 week term will be refunded at 100 percent during the first five class days. A refund schedule for withdrawals may be obtained from the Registrar.

Student Accounts. A financial record for each student is kept in the Account Services Office in Garner Hall. The information is considered confidential; however, the records of students will be available for examination by authorized representatives of the Government.

COLLEGE of VETERINARY MEDICINE - 2005-2006
To inquire about tuition and fee information, please contact the College of Veterinary Medicine at 662-325-1129 or visit the Web site at www.cvm.msstate.edu.

The College of Veterinary Medicine shall require a $500.00 deposit from all new entering students into the (DVM) program. This deposit will be due as described in the letters of invitation from the College and shall be applied to the regular tuition of the student and is not refundable.

Overdue Accounts
The administrative authorities of the University will withhold the transcripts and diplomas, degree certification, letters of good standing, and other certification of enrollment and deny readmission of any student who incurs an overdue financial obligation to the University.

If a financial hold is released based upon a financial agreement and the terms and conditions of that agreement are not met, we reserve the right to void the current term class schedule without notice and without promise of reinstatement of the same class schedule.

Student Obligation: Students who do not pay their fees by the end of the term may be turned over to an outside collection agency for assistance in collecting. The prevailing collection cost rate will be added to the amount owed by the student to cover the collection agency cost. If an Attorney’s services are needed to collect an unpaid balance, the student shall be responsible for payment of the attorneys’ fees, plus all court and other collection cost incurred.

Use of Checks in Payment of University Fees and other Charges; Banking Facilities
Payment by Check. The University will accept checks in payment of amounts due to the University for University fees, residence hall or housing rentals, utility bills, and other University charges.

The University reserves the right to defer payment on the balance of any check tendered in excess of the amount due the University, until the check has had time to clear for payment through banking channels. A student may be dropped from enrollment when a check offered to the University is not honored by the bank on which it is drawn.

The University expects that each debt created by a returned check will be promptly and fully corrected. Failure to respond to a notice concerning a returned check may result in legal action, the denial of readmission, and the withholding of records. The maximum penalty allowed by law will be charged for any check returned by your bank for any reason. Returned checks are considered non-payment and will result in the voiding of scheduling and assessment of appropriate fees. The University reserves the right to refuse acceptance of checks presented by students who have had previously returned checks. In such cases payment must be made by cash, money order, certified bank check, or credit card.

Banking Facilities. Automated teller machines are located in the One Stop on East Lee Boulevard and on the ground floor of Colvard Union. These machines offer 24 hour banking services for students, faculty and staff. There are four banks located in downtown Starkville. These banks offer full banking services to all students of Mississippi State University.

Information - Telephone Numbers (MSU Information 325-2323)
Web Instructions to Access Your Account:
From the MSU main Web page, select Intranet; secure user access using your personal user i.d. and pin; from the menu select personal information main menu;
1. To change your billing address or E-mail address, select Update Address Information.
2. To view your current or prior billing statement, select View Your Billing Statement.
3. To view your current account detail, select View Your Account Detail.
4. To make a payment by credit card, select Make a Payment by Credit Card.

For assistance with Fees and Expenses you may use the following resources:
Account Services 325-2071
Student Financial Aid and Scholarships 325-2450
Registrar’s Office 325-2022
Housing and Residence Life 325-3555
MoneyMate 325-3387
Sponsored Student Programs 325-8017
Telecommunications 325-2212
VIII. STUDENT FINANCIAL AID

General Information

Many Mississippi State University students receive various types of financial aid to help pay the costs associated with attending college. The following information is provided to inform students and their families of the estimated costs of attending MSU, the types of financial aid available to help pay these costs, some of the general aid eligibility requirements, and the aid application procedures. The information contained in this section is accurate as this document went to print. Please visit our Web site at www.sfa.msstate.edu for further information and updates.

I. Student Expenses - The Cost of Attending MSU - 2005-2006

The following list of basic university expenses covers those for a full-time, undergraduate student living in a residence hall on campus for a nine month academic year. Note: These costs are average costs, based on the 2004-2005 school year costs and are subject to change.

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Fees</td>
<td>$4,106.00</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$ 800.00</td>
</tr>
<tr>
<td>Residence Halls</td>
<td>$2,648.00</td>
</tr>
<tr>
<td>Meals</td>
<td>$3,035.00</td>
</tr>
<tr>
<td>Personal And Transportation</td>
<td>$2,790.00</td>
</tr>
<tr>
<td>Total (Mississippi Resident)</td>
<td>$13,379.00</td>
</tr>
<tr>
<td>Non-Resident Total</td>
<td>$18,579.00</td>
</tr>
</tbody>
</table>

(Additional fees - $5,200)

II. Sources of Financial Aid

Federal Sources of Financial Aid Programs are “need based” or “non need based” as determined by the federally mandated needs analysis formula.

A. Federal Sources of Financial Aid

1. Pell Grants - A federal student aid program designed to provide a foundation of gift aid to students who demonstrate financial need. All undergraduate students enrolled for their first undergraduate degree are eligible to apply for Pell Grants. Pell Grants awards for the 2004-2005 year ranged from $400 to a maximum of $4,050. Depending on Congressional allocations, Pell Grant amounts may change each year.

2. Federal Work-Study - A program of part-time employment for students who demonstrate financial need. Eligible students may work up to 18 hours per week during regular school sessions.

3. Stafford (subsidized and unsubsidized) Student Loans - Long-term loans may be provided by participating banks and/or other lending institutions for students who need assistance in meeting educational expenses. Subsidized loans are based upon financial need. Unsubsidized loans are not based upon financial need.

4. Perkins Student Loans - A program of long-term, low-interest loans to students who demonstrate financial need to meet college expenses. No interest accrues, nor does payment begin, until after the borrower ceases to be at least a half-time student.

5. Supplemental Educational Opportunity Grants - A federally sponsored program to provide gift aid for undergraduate students with exceptional financial need. Funds are limited. Apply early each year.

6. Parent Loan for Undergraduate Students (PLUS) - PLUS Loans are for the parents of dependent students. Parents may borrow on behalf of their eligible dependent student. PLUS Loans are non-need based in that parents are eligible to be certified by the school if other funds have not covered the student’s cost of attendance.

7. Leveraging Educational Assistance Partnership Program (LEAP) - A federal and state sponsored program to provide gift aid for undergraduate students with exceptional financial need. Funds are limited. Apply early each year.

B. Institutional Sources of Financial Aid

1. Undergraduate Tuition Remission Policy for Children of Faculty and Staff - The partial tuition remission policy applies to all single dependent children of full time faculty and staff. See tuition remission policy for any restrictions that may apply.

2. Emergency Short-Term Loans - The University has available for students a means of borrowing small sums of money to meet emergency expenses during the academic year. Such loans are repayable during the same semester in which the loan is made. Application is made to the Dept. of Student Financial Aid.

C. Institutional Sources of Scholarships

1. Academic Scholarships - These awards are provided by the University to recognize outstanding academic and personal achievement by students attending MSU. Scholarships are awarded on a competitive and funds available basis by the University Scholarship Committee.

2. Regional Scholarships - This limited number of awards provide for payment of out-of-state fees for non-residents attending the University. Awards are made by the University Scholarship Committee on a competitive basis, depending on a student’s academic and personal achievement.

3. Out-of State Fee Waivers
   a. Child of Alumni Waiver - This scholarship waives 50 percent of the non-resident tuition for sons and daughters of alumni. The minimum qualification for alumni status is 48 semester hours of work completed at MSU.
   b. Freshman Waivers – Non resident freshmen who have an ACT composite score of 24 or above or a combined SAT score of 1090 or above, a minimum “B” core high school grade point average, and who are admitted by February 1, will receive a 100 percent waiver of the out-of-state tuition.
   c. Community College Transfer Waiver - This scholarship waives 100 percent of the out-of-state tuition normally paid by non-Mississippi residents that are community college transfer students with 48 or more transferable semester hours, a 3.5 or higher cumulative grade point average, and who are admitted by April 1.

4. Departmental Scholarships - Colleges and Departments within the University offer scholarships designed to assist students majoring in a specific discipline. Most are competitively awarded and renewable.

5. Sumners Scholarships - are available to permanent residents of Attala, Carroll, Choctaw, Montgomery and Webster counties in Mississippi. A Sumners Scholarship application is available online at www.admissions.msstate.edu and must be submitted annually. The supplemental Sumners Academic Excellence Scholarship recognizes outstanding achievement in current full time undergraduate and graduate students with an MSU grade point average of 3.5 or greater; all eligible applicants will be considered for the supplement.

6. A portion of student tuition and fee charges is used for scholarships, tuition waivers and other operating costs.

D. State and Other Sources of Financial Aid

1. Army/Air Force ROTC Four-Year Scholarships - Scholarships available to students interested in commissions as officers in either the Army or the Air Force. Scholarships are based on ACT scores and high school grades, not financial need. Visit the following Web pages for further information. Army ROTC: www.msstate.edu/dept/militaryscience/info. Air Force: www.msstate.edu/dept/afrotc.
2. The Mississippi Tuition Assistance/Mississippi Eminent Scholars Grant (MTAG/MESG) and other state aid programs are available to residents of the state of Mississippi. Information about these programs can be obtained from the Mississippi Office of Student Financial Aid in Jackson, MS. Phone: 1.800.327.2980. Web site: www.mississippiuuniversities.com

III. To Apply for Financial Aid at MSU
For the 2006-2007 academic year the following forms MUST be completed by the student:
A. Federal Student Aid - (Federal Pell Grant, Federal SEOG, LEAP, Federal Work Study, Federal Perkins Loan, Federal Stafford Subsidized and Unsubsidized Student Loans and the Federal PLUS Loan). Applicants must complete the Free Application for Federal Student Aid (FAFSA) each year. The FAFSA can be submitted in paper form or over the web at www.FAFSA.ed.gov and should be submitted as soon as possible after January 1st each year for the coming school year. Any required verification or tax documents should be delivered to the Department of Student Financial Aid at MSU by April 1. Late applicants will be considered on a funds available basis. Mississippi State University’s Federal School Code Number is 002423.
B. Academic and/or Regional Scholarships - Submit an Application for Admission and General Scholarships and an online resume. Please refer to www.admissions.msstate.edu for additional information and applicable priority dates.
C. Summers Scholarships - Students should submit the 2006-07 Summers Scholarship application to MSU via the Web at www.admissions.msstate.edu by the April 1 priority deadline.

IV. Scholarship and Financial Aid Policies
A. Scholarship Criteria:
1. All scholarship awards, academic and regional, are made in accordance with guidelines established by the MSU Scholarship Committee.
2. Students currently enrolled at MSU are evaluated primarily on the basis of a submitted online scholarship resume and cumulative grade-point average.
3. Transfer students are evaluated on the basis of a submitted on-line scholarship resume, cumulative grade point average, transferable hours and admission by the April 1 priority date.
4. Entering freshmen are evaluated on the basis of their ACT composite score, core high school grade point average, high school class standing, leadership attributes and admission by the February 1 priority date.
5. Students from Attala, Carroll, Choctaw, Montgomery and Webster counties in Mississippi may be eligible to apply for the Summers Scholarship. Permanent residency in one of these five counties for 12 continuous months prior to the award period is the primary basis of eligibility. Recipients of the Summers Scholarship must maintain Satisfactory Academic Progress (Section C).
6. All students have the right to appeal their Scholarship status. Exceptions may be made in cases of mitigating circumstances such as: Death in the immediate family, personal injury, illness, etc., as determined by the Office of Admissions and Scholarships and the University Scholarship Appeals Committee.

B. Federal Programs of Financial Aid
1. All Federal student-aid funds are awarded on the basis of criteria established by the United States Congress and the Department of Education, as required by Title IV of the Higher Education Act of 1965, as amended.
2. Priority in the awarding of some need-based aid is given to students with the greatest financial need first, within the availability of funds.
3. Funds that are limited are awarded until depleted. Applicants are encouraged to apply early each year.
4. The family of a student is expected to make a maximum effort to assist the student with college expenses. Financial assistance from the University and other sources should be viewed only as supplementary to the efforts of the family. In determining the extent of a student’s financial need, the University will take into account the financial support which may be expected from income, assets, and other resources of the parents and of the student as required by Federal Regulations.
5. Students themselves are also expected to use all available resources for their college expenses. This includes savings accounts, trust funds, etc.
6. The total amount of financial assistance offered by the University and other sources must not exceed the amount of financial need as determined by the student’s cost of attendance and federal financial need analysis report as derived from the FAFSA. The student is responsible for notifying the Department of Student Financial Aid and Scholarships at Mississippi State University upon learning that additional educational resources/benefits (scholarships, tuition waivers, etc.) have been awarded or received.
7. Because the amount of financial assistance awarded usually reflects the financial situation of the student’s family, the University does not make a public announcement of the amount of financial aid awarded.
8. The University will clearly state the total yearly cost of attendance. (See costs listed under “Students Expenses” or visit our Web site at www.sfa.msstate.edu.)
9. All financial assistance is awarded on an annual basis and no award implies automatic renewal from year to year. A new FAFSA, MTAG/ MESG, and Summers application must be submitted each year. Other applications may also be required. Always check with the granting agency to determine application procedures and deadline dates.

C. Satisfactory Academic Progress for Purposes of Student Financial Aid

Purpose
To define reasonable standards for measuring academic progress in order for students to remain eligible for financial aid under Title IV.

Policy
Mississippi State University, as required by federal law, defines and enforces minimum standards for Satisfactory Academic Progress. Students receiving federal financial aid and Summers funds must conform to these minimum standards of Satisfactory Academic Progress. Students receiving federal financial assistance and Summers funds must enroll in courses leading to, and earning credit toward, a degree. These satisfactory academic progress standards will include an evaluation of each student’s progress in terms of quality and quantity of progress toward the degree. Students who are not successfully completing appropriate courses will not be considered to be making satisfactory academic progress and will not be eligible for further federal financial aid. These satisfactory academic progress standards supersede any award letter that the student might have received. This policy applies to all Title IV federal Financial Aid programs at Mississippi State University and the Summers Scholarship Program.

For details regarding this satisfactory academic progress policy, including the appeals process, and other consumer information, visit our Web site at www.sfa.msstate.edu.
D. Withdrawal from School

Treatment of Student Aid Funds when a Student Withdraws from School:

Students who choose to withdraw from the University prior to the end of an enrollment period (semester) should follow the University’s guidelines for withdrawing from school. An Official Withdrawal Form must be completed and submitted to the proper office before a student can be considered officially withdrawn. Information concerning the details of withdrawal procedures can be found in the MSU Bulletin or by contacting the University Registrar.

Federal student aid recipients who begin attending classes during a semester and who cease attending or performing academic activities prior to the end of the semester, and never complete an Official Withdrawal Form, are considered by the federal government to have unofficially withdrawn. If University records indicate that a student did begin attending classes but subsequently unofficially withdrew, the University will consider the Unofficial Withdrawal date to be the midpoint of the semester (unless documentation exists of an earlier or later date of academic activity by the student).

When a federal student aid recipient withdraws, officially or unofficially, after attending at least the first class day, the University will return, and the student aid recipient will be required to repay, a prorated portion of funds received based upon a federally required calculation.

If University records show a federal student aid recipient never attended a class and/or never performed an academically related activity for a semester or term, then the recipient never established eligibility for any aid funds that may have been disbursed for that semester or term. In addition, any student aid recipient who withdraws, drops all classes, or voids his/her schedule, etc., with an effective date prior to the first day of class for a semester or term did not establish eligibility for any aid funds that may have been disbursed for that semester or term. In either case, the student aid recipient must repay the entire amount of aid disbursed for that semester or term.

If a student did not receive any federal student aid but did receive other types of aid funds, and subsequently officially withdraws, refunds and repayments will be based upon the University’s refund schedule.

For more information regarding return and repayment of Title IV (federal) funds, see the Return of Title IV Funds section of “withdrawal from school” on the Web site at www.sfa.msstate.edu under Policies/Consumer Right to Know.

Note: The information contained in this section is subject to change, without notice, in order to comply with federal, state, or university requirements.

IX. SCHOLARSHIPS, MEMORIALS, and LOANS

UNIVERSITY SCHOLARSHIPS AND MEMORIALS

Mississippi State University is committed to the recognition of outstanding students whose academic credentials confirm their potential for success as university students. Outstanding students may be eligible for various scholarships and honors.

Numerous privately funded scholarships support the University Scholarship Program to recognize continued academic success. Please visit our Web site at www.msstate.edu/dept/sfa for information regarding eligibility criteria and application information. Once an application is submitted, consideration will be given for all of the applicable awards as follows:

- **Daryl Ray Arnold Memorial Endowed Scholarship** - established by Danny and Peggy Arnold. Candidates must be full-time students enrolled in the College of Business & Industry and Department of Microbiology in the College of Arts & Sciences at MSU. Must have demonstrated academic achievement, a minimum of 3.0 GPA and be active participants in student activities. Priority will be given to eligible Kappa Sigma fraternity members.

- **Attala MSU Alumni Chapter Annual Scholarship Fund** - established by the Attala Chapter of the Mississippi State University Alumni Association. Candidates must be residents of Attala County in Mississippi and be entering freshmen at MSU for the upcoming fall semester. Must have demonstrated academic achievement at high school level, be of good moral character, demonstrated leadership ability and financial need.

- **Robert G. Barnett Foundation Scholarship** - established by the Robert G. Barnett Foundation. Candidates must be full-time students enrolled at Mississippi State University. Scholarship is available to all classifications - freshman through senior. Current students must have demonstrated academic achievement by maintaining a minimum of 2.5 GPA (based on a 4.0 scale). Must be graduates of either Indianola Academy or Indianola Gentry High School in south Sunflower County in Mississippi.

- **The Birmingham Alumni Chapter Scholarship Fund** - established by the Birmingham Chapter of the Mississippi State University Alumni Association. Applicants must be full-time entering freshman students at MSU with a minimum high school GPA of 3.0, be residents of the Birmingham, Alabama area, be of good moral character, have demonstrated leadership ability, and have financial need.

- **The Black Voices Scholarship** - established by the Black Voices Alumni Association. Applicants must be full-time student at MSU, active member of the Black Voices Choir.

- **Bolivar County Alumni Scholarship** - established by the Bolivar County Alumni Chapter. This award is available to entering freshmen from Bolivar County based on a minimum GPA of 3.0, good moral character, leadership qualities, financial need.

- **William F. “Sonny” Bruce Scholarship Fund** - established by friends of Sonny Bruce. Applicants must be full-time students at MSU with minimum high school GPA of 2.8 or higher and an ACT score of 23 or higher, be graduates of an accredited high school in Lowndes or Warren County, Mississippi, be of good moral character with demonstrated leadership and good citizenship, and have financial need.

- **James R. and Ressie Carpenter Scholarship** - established by friends of Dr. Carpenter for his service with Mississippi Cooperative Extension Service. Applicants must be full-time students at MSU as sons or daughters of MCES employees.

- **Central Mississippi Chapter of the MSU Alumni Association Annual Scholarship** - established by the Central Mississippi Chapter of the MSU Alumni Association. This scholarship will be awarded to deserving high school seniors who are planning to attend MSU and who are residents of Hinds, Madison, and Rankin counties in Mississippi.

- **Coahoma County MSU Alumni Chapter Annual Scholarship** - established by the Coahoma County Alumni Chapter of the MSU Alumni Association. The scholarship will be used to assist enrolled students who are residents of Coahoma County.

- **Johnny and Bessie Lynn Crane Endowed Scholarship** - established by Johnny and Bessie Lynn Crane. These scholarships will cover the cost of tuition, fees, room, and board for up to eight undergraduate semesters. Full-time entering students may apply. Applicants must also have a minimum ACT score of 29 (SAT score of 1280), distinguished academic achievement, and leadership ability.

- **Will R. Cooper Memorial Scholarship** - established by Brenda C. Cooper to honor her late husband. Students must be classified as junior, senior, or graduate level and demonstrate good moral character and strong leadership ability.

- **Jack and Mavis Cristil Scholarship** - established by the Lee County Alumni Chapter in memory of Mrs. Mavis Cristil and in honor of Mr. Jack Cristil’s many years of service to Mississippi State University as the “Voice of the Bulldogs.” This award is available to full-time freshmen students who have academic ability but do not have the financial resources to attend college and who have a 3.0 GPA or equivalent at the high school level.

- **George H. Critz Memorial Scholarship** - donated by the George H. Critz Estate. This award is available to upper class students based on academic excellence.

- **Archibald Stuart Davis Memorial Scholarship** - established by Miss Alice Davis in memory of her father. This award is available to students from Mendenhall or Simpson County, or surrounding counties depending on financial need and academic achievement.
Luke and Ruth Davis Presidential Endowed Scholarship - established by Luke and Ruth Davis. These scholarships will cover the cost of tuition, fees, room, and board for up to eight undergraduate semesters. Full-time entering student may apply. Preference will be given to students from Tippah County, Mississippi. Applicants must also have a minimum ACT score of 29 (SAT score of 1280), distinguished academic achievement, and leadership ability.

Thomas C. and Shirley M. Dawkins Presidential Endowed Scholarship - established by Thomas and Shirley Dawkins. These scholarships will cover the cost of tuition, fees, room, and board for up to eight undergraduate semesters. Full-time entering students may apply. Applicants must also have a minimum ACT score of 29 (SAT score of 1280), distinguished academic achievement, and leadership ability.

Deanes-Johnson Scholarship Endowment - established by Marie Deanes Johnson to be awarded to Claiborne County residents.

Desoto County Alumni Chapter Annual Scholarship - established by the Desoto County Alumni Chapter. Must be a resident of Desoto County. Students must be full-time entering freshmen who graduated from Desoto County high schools with a minimum GPA of 3.0 and have demonstrated leadership skills. In the event there are no eligible candidates, currently enrolled MSU students who graduated from Desoto County high schools will be considered.

Jehu J. Dillard Scholarship - established by Jehu J. Dillard. Recipients for this award usually have a minimum composite ACT score of 28 and a 90 percent or greater high school grade point average and must have graduated from Mississippi high schools.

Charles E. Donald, Sr. and Grover Goodman Endowed Scholarship - established by the Claiborne-Jefferson County MSU Alumni Chapter in honor of the late Charles Donald, Sr. and Grover Goodman. This award is available to entering freshmen from Chamberlain-Hunt Academy, Jefferson County High School, or Port Gibson High School based on good moral character and leadership qualities.

S. R. Evans, Scholarship - established by the LeFlore-Carroll County Alumni Chapter in honor of Mr. Evans. This award is available to entering freshmen who have demonstrated academic achievement at the high school level or upperclass students with a minimum GPA of 3.0 based on good moral character, leadership qualities, and financial need.

Farmers Grain Terminal - established by Farmers Grain Terminal. Candidates must be a full-time entering freshman at MSU. Consideration given to students from East Carroll, West Carroll, Richland, Madison, Tensas, Catahoula, and Concordia parishes in Louisiana; Bolivar, Washington, Sunflower, LeFlore, Humphreys, Holmes, Yazoo, Sharkey and Issaquena counties in Mississippi; Drew Desha, Ashley, and Chicot counties in Arkansas. Must have demonstrated academic achievement by maintaining a minimum GPA of 3.0 in high school (based on a 4.0 system).

The John H. Filgo Trust Fund - established by the estate of John H. Filgo. Applicants must be full-time students at MSU, residents of Sunflower County, Mississippi, be worthy scholars maintaining appropriate scholastic progress while being enrolled in a boba fide degree program, and exhibit leadership qualities, high moral character, and good citizenship. Financial need will be a consideration, but not a determining factor for selection.

Jack “Soap” Francis Scholarship - established by members of the Monroe County Alumni Chapter of MSU. Must be residents of Monroe County. Priority will go to entering freshmen. Must have demonstrated academic achievement, a minimum of 3.0 GPA based on a 4.0 scale. Must have demonstrated need and merit.

Dan G. and Hilda E. Frank Memorial Scholarship - donated by the late Dan Gaston Frank. This award is available to full-time students who demonstrate academic achievement.

Paul A. and Mary Elgie Frederic Memorial Endowed Scholarship - established by the Trust of Paul A. Frederic and the Trust of Mary Elgie Frederic. Candidates must be full-time students enrolled at Mississippi State University. Must be residents of Warren County, Mississippi. Must be a graduate of St. Aloysius High School, Vicksburg High School or Warren Central High School, all located in Warren County, Mississippi. Must have demonstrated academic achievement, maintaining a 3.0 GPA on a 4.0 scale. Must have demonstrated financial need.

Harry S. Fugate Memorial Scholarship - established by the estate of Mrs. Virginia Black Fugate. Applicants must be full-time, entering freshmen, have demonstrated academic achievement, leadership ability, financial need, and be of good moral character.

Malcolm E. Gillis Endowed Scholarship - established by Malcolm E. Gillis. Candidates must be full-time students enrolled at Mississippi State University. Must be a student in good standing.

David L. and Marsha K. Grady Scholarship - established by David L. and Marsha K. Grady. Candidates must be full-time students at Mississippi State University. Must have demonstrated academic achievement, maintaining a minimum 3.0 MSU and cumulative GPA on a 4.0 scale. Must have earned a minimum 27 semester hours (for emerging leaders) or a minimum of 54 semester hours (for current leaders) by the end of the spring semester. Must be in good disciplinary standing at Mississippi State University.

Vaughn A. and Neva Reed Green Endowed Scholarship - Established by Carole Green Henderson and James S. Green as a memorial to their parents. Candidates must be full-time students who have demonstrated academic achievement and leadership ability.

John and Renee Grisham Presidential Endowed Scholarship - established by John and Renee Grisham. These scholarships will cover the cost of tuition, fees, room, and board for up to eight undergraduate semesters. Full-time entering students may apply. Applicants must also have a minimum ACT score of 29 (SAT score of 1280), distinguished academic achievement, and leadership ability.

T.P. Groome Scholarship - established by T.P. Groome. This award is available to students who demonstrate academic achievement and financial need.

Senator Dick Hall Endowed Scholarship - established by family and friends of Senator Dick Hall on the occasion of his birthday. Applicants must be full-time students, have demonstrated academic achievement, leadership ability, financial need and be of good moral character.

The Hancock County Alumni Association Scholarship - established by the Hancock County Chapter of the MSU Alumni Association. Applicants must be residents of Hancock County and entering freshmen at MSU.

Harrison-County MSU Alumni Chapter Annual Scholarship - established by the Harrison County Chapter of the MSU Alumni Association. This scholarship will be used to assist students who are residents of Harrison County. Must be an undergraduate or graduate student at MSU.

Charles D. Havens, Sr. Annual Scholarship - renamed for the Huntsville-Decatur, Alabama MSU Alumni Chapter Annual Scholarship. This scholarship was named in memory of the late Charles D. Haven, Jr., who was a very active and loved member of this chapter. This award is available to entering freshmen from the Huntsville-Decatur, Alabama Alumni area, based on leadership ability and good moral character.

Hunter and Lila Henry Presidential Endowed Scholarship - established by Hunter W. Henry, Jr. These scholarships will cover the cost of tuition, fees, room, and board for up to eight undergraduate semesters. Full-time entering students may apply. Applicants must also have a minimum ACT score of 29 (SAT score of 1280), distinguished academic achievement, and leadership ability.

Mickey and Babs Holliman Presidential Endowed Scholarship - established by Mickey and Barbara Holliman. These scholarships will cover the cost of tuition, fees, room, and board for up to eight undergraduate semesters. Full-time entering students may apply. Applicants must also have a minimum ACT score of 29 (SAT score of 1280), distinguished academic achievement, and leadership ability.

John Kenneth Holloway Memorial Scholarship - established by the Greer Family. Candidates must be full-time students enrolled at Mississippi State University. Priority on the first award from this scholarship will be given to an entering freshman. Must have demonstrated academic achievement, a minimum 3.0 on a 4.0 scale. Must have demonstrated financial need. Preference will be given to first generation college students.

Richard Holmes Scholarship - named in honor of the first African-American student to receive a degree from Mississippi State University, Dr. Richard Holmes. This award is available to junior and senior students only and is based on need, merit, and academic record.

Laura and Larry Homan Endowed Scholarship – established by Larry E. Homan. Candidates must be full-time entering freshmen students enrolled at Mississippi State University. Must be a student(s) in good standing who were valedictorians of their high school graduating class and who score below 26 on the ACT. If multiple applicants meet the above criteria, the committee will consider factors such as involvement in high school organizations/clubs, leadership activities, community service and financial need.
Houston, Texas MSU Alumni Chapter Scholarship - established by the members of the Houston, Texas MSU Alumni Chapter. Must be residents of Houston, Texas area. This area will be defined for purposes of this scholarship as the counties of Harris, Montgomery, Waller, Fort Bend, Brazoria, Galveston, Chambers, Liberty, Matagorda, Wharton, Jefferson, Orange, Washington, Austin, Grimes, Brazos, Walker and San Jacinto in the state of Texas. Must be full-time entering freshmen who graduated from schools in the Houston, Texas area. In the event that there are no eligible applicants, currently enrolled students from the Houston, Texas area will be considered. Must have demonstrated academic achievement, a minimum 3.0 on a 4.0 scale. Must have demonstrated leadership skills. Leadership skills may include but are not limited to the following: community service, volunteer work, employment, club membership, awards and honors, and participation in athletics. Must write a one-page essay explaining why he or she is to attend Mississippi State University.

The Jackson County Alumni Association Endowed Scholarship Fund - established by the Jackson County Chapter of the MSU Alumni Association. Applicants must be residents of Jackson County, who are entering freshman for the upcoming fall semester, and have demonstrated academic achievement, moral character, leadership ability and have financial need. (There are two Jackson Co. Scholarships.)

C.W. “Charley” and Novis M. Jones Endowed Scholarship - established by the children of C.W. “Charley” and Novis M. Jones. Candidates must be full-time students enrolled at Mississippi State University. Must be classified as juniors when the award is received. Must be residents of the State of Mississippi. Must have demonstrated academic achievement, a minimum of 2.5 GPA on a 4.0 scale. Must have demonstrated financial need.

Steven Thomas Jones Memorial Scholarship - donated by the family and friends in memory of Steven Thomas Jones. Applicants must be entering freshmen who graduated from Starkville High School. Three letters of recommendation from Starkville High School officials must accompany the application.

Kemp Foundation Annual Scholarship - established by the Nelson and Charleen Kemp Foundation. Candidates must be full-time students enrolled at Mississippi State University. The scholarship is available to all classifications. Must be graduates of Winfield High School in Winfield, Alabama. Must have demonstrated academic achievement, a minimum 3.0 GPA on a 4.0 scale. Must be a student in good standing.

Leah Langley Annual Scholarship - established by Ling (Leah) Lin. Students must be full-time students enrolled at MSU with a minimum GPA of 3.5, have demonstrated academic achievement. Must be attendant(s) (placed by Mississippi State University’s Student Support Services) who care for students with disabilities.

Mozelle Leach Scholarship - established by Ms. Leach. This award is available to entering freshmen from Oktibbeha County with preference given to minorities and graduates of Alexander High School based on moral character, academic achievement, leadership qualities, and financial need.

Lee County Alumni Chapter Endowed Scholarship - established by the Lee County Alumni Chapter. Candidates must be full-time students enrolled at Mississippi State University. Must be entering freshmen who graduated from schools in Lee County. In the event there are no eligible candidates, currently enrolled MSU students who graduated from high school in Lee County will be considered. Must have demonstrated academic achievement, maintaining a 3.0 GPA on a 4.0 scale. Must have demonstrated leadership ability.

George R. Lewis Scholarship - established by friends and colleagues of Dr. Lewis upon his retirement after 28 years as Director of the MSU Mitchell Memorial Library. This award is available to junior or senior students who are residents of Webster County, Mississippi, have a minimum GPA of 3.0, and have demonstrated leadership ability and financial need.

Lincoln County Alumni Scholarship - established by the Lincoln County Alumni Chapter. This award is available to entering freshmen from Lincoln County based on moral character, leadership qualities, and financial need.

Lewis Love Memorial Scholarship Fund - established by the API Warrior Basin Chapter. Must be full-time entering freshmen at MSU. If there are no eligible candidates, then currently enrolled MSU students who meet qualifications may be considered. Priority will be given to dependents of an API member or oil field related personnel. Must have demonstrated leadership characteristics.

Bobby and Barbara Martin Presidential Endowed Scholarship - established by Bobby and Barbara Martin. These scholarships will cover the cost of tuition, fees, room, and board for up to eight undergraduate semesters. Full-time entering students may apply. Applicants must also have a minimum ACT score of 29 (SAT score of 1280), distinguished academic achievement, and leadership ability.

E. B. McCool Scholarship - donated by the late Inez and E. B. McCool. This award is available to upperclass students based on academic record.

James Leonard McCullough Scholarship - donated by family and friends of Dean McCullough to be awarded to children of former Mississippi State athletes.

Alex McKeigney Scholarship - established by family and friends of Alex McKeigney. This award is available to upperclass students based on financial need and academic record.

Mississippi Homemaker Volunteers, Inc. Endowed Scholarship - established by the Mississippi Homemaker Volunteer Organization. Must be a full-time student of Mississippi State University. Must have completed requirements for high school graduation or have started college work or higher education. Must be a Mississippi Homemaker Volunteer member, or a child or grandchild of a Mississippi Homemaker Volunteer member for a minimum of 5 years prior to application. Must have at least a “C” average to apply. Must be of good character and have demonstrated leadership ability and financial need.

The Mississippi State University Women’s Club Annual Scholarship - Established by the MSU Women’s Club. Applicants must be full-time students enrolled in graduate studies in any discipline and be a United States citizen.

Alexander, Alabama Alumni Scholarship - established by the Mobile, Alabama Alumni Chapter to be awarded to students from the Mobile area who enroll at Mississippi State University.

Montgomery, Alabama Alumni Scholarship - established by the Montgomery, AL Alumni Chapter to be awarded to students of their area who enroll at MSU.

Janice Montgomery-Green Scholarship Fund – established by Jennifer Evans, Shawn and Marcus Montgomery. Candidates must be full-time students enrolled at Mississippi State University. Students with exceptional need may apply to the Dean of Students to receive funds.

G.V. “Sonny” Montgomery Scholars Program - established in honor of G.V. “Sonny” Montgomery. These scholarships will cover the cost of tuition, fees, room, and board for up to eight undergraduate semesters. Applicants must also have a minimum ACT score of 29 (SAT score of 1280), distinguished academic achievement, and leadership abilities (to include Montgomery Presidential Endowed Scholarships).
J.D. Moss and Mary Katherine Moss Endowed Scholarship - established by Dr. Jimmy D. Moss III in honor of his parents. Applicants must have graduated from a high school in Grenada and must be full-time undergraduate students. Students must have demonstrated academic achievement, leadership ability, financial need, and be of good moral character.

National Merit Scholarships - National Merit Program Finalists who name Mississippi State as their first choice may be awarded an additional $2,000 which is distributed over the four year period.

Neshoba County Alumni Scholarship - established by the Neshoba County Alumni Chapter for entering freshman from Neshoba County.

New Orleans, Louisiana MSU Alumni Chapter Scholarship - established by the members of the New Orleans, Louisiana MSU Alumni Chapter. Candidates must be full-time students enrolled at Mississippi State University. Must be residents of the New Orleans, Louisiana alumni district. In the event there are no eligible students, currently enrolled students from the New Orleans, Louisiana alumni district will be considered. Must have demonstrated academic achievement, maintaining a 3.0 GPA on a 4.0 scale. Must have demonstrated leadership ability and/or community involvement.

Optimist Club of Starkville R. Clay Simmons Memorial Scholarship - established by the Optimist Club of Starkville in memory of Mr. Simmons. This award is available to full time students with a minimum high school GPA of 3.0 or minimum ACT of 25 who are residents of Oktibbeha County. Recipient must maintain a 3.0 GPA.

Hal and Linda Parker Presidential Endowed Scholarship - established by Hal and Linda Parker. These scholarships will cover the cost of tuition, fees, room, and board for up to eight undergraduate semesters. Full-time entering students may apply. Applicants must also have a minimum ACT score of 29 (SAT score of 1280), distinguished academic achievement, and leadership ability.

Pearl River County Alumni Chapter Annual Scholarship - established by the Pearl River County Alumni Chapter of MSU. Must be residents of Pearl River County. Must be full-time entering freshmen who graduated from Pearl River County schools. In the event there are no eligible candidates, currently enrolled MSU students who graduated from Pearl River County high schools will be considered. Must have demonstrated academic achievement, a minimum of 3.0 GPA based on a 4.0 scale. Must have demonstrated leadership skills and financial need.

Mary Margaretee Peebles Memorial Endowed Scholarship - established by the Estate of Mary Margaretee Peebles. Candidates must be disabled and registered with the Department of Student Support Services, having submitted documentation that verifies the existence of the disability. Must have demonstrated academic achievement, maintaining a 2.5 or better GPA on a 4.0 scale.

Phi Kappa Phi Scholarship - This award is made each year by the Honor Society of Phi Kappa Phi, Mississippi State University Chapter. A. C. Pilgreen Memorial Scholarship - established by Mrs. A.C. Pilgreen. Candidates must be full-time students enrolled at Mississippi State University. Must be residents of Calhoun County, Mississippi. Must have demonstrated academic achievement, maintaining a 3.0 GPA on a 4.0 scale. Must have demonstrated leadership ability and financial need.

Barbara Burgin Pilkinton Memorial Endowed Scholarship – established by Henry C. Pilkinton, III. Candidates must be full-time students enrolled at Mississippi State University. Must have demonstrated academic achievement, maintaining a 4.0 GPA. Must have demonstrated leadership skills and financial need.

Emily Jones Pointer Memorial Scholarship - established from the Emily Jones Pointer Charitable Trust. This award is available to full time students with demonstrated academic achievement with first consideration given to Panola County residents.

Mississippi State University Rhodes Scholarship Fund - donated by Mr. and Mrs. William S. Montgomery in memory of his grandparents, Captain William Payne and Mrs. Genevieve W. Payne. To be awarded to highly qualified students by the MSU Rhodes Scholarship Committee, University Honors Program.

Thomas Mitchell Robinson Memorial Scholarship - established by the MSU class of 1937 in memory of the late T. Mitchell Robinson. The scholarship is available to students in all classes based on financial need and academic record.

Rotary Mentor Scholarship - established by the Starkville Rotary Club. Applicants should be graduating seniors from an Oktibbeha County school who demonstrate quality high school performance and financial need.

J.E. **“Red”** Ruffin Scholarship - established to memorialize and honor Mr. Ruffin who served as the first Director of Annual Giving at Mississippi State. This award is available to provide financial support of students with extraordinary need.

Ottie Schillig Leadership Scholarship - established through the Ottie Schillig Trust in Port Gibson. These scholarships cover the costs of tuition, fees, room and board, and books for four years. Recipients will be expected to participate in the University Honors Program. A minimum ACT score of 29 (SAT score of 1280) is required for consideration.

Dr. Thomas R. Shaw Memorial Endowed Scholarship - established by members of the George-Greene County Alumni Chapter of MSU. Must be residents of George-Greene County. Must be full-time students in any discipline who graduated from George or Green County high schools or whose parents are alumni of Mississippi State University. Must have demonstrated academic achievement, maintaining a 4.0 GPA. Must have demonstrated leadership skills and financial need.

Shelby S. Shows Scholarship - established by the Covington County Alumni Chapter in honor of Mr. Shows. This award is available to full-time students from Covington County based on minimum GPA of 3.0, moral character, leadership qualities, and financial need.

Alexander T. Sidorik Memorial Scholarship - established by Mrs. Jennie H. Sidorik in memory of her husband. This award is available to full-time students with a minimum GPA of 3.0 based on academic achievement, leadership ability and financial need.

Adeline and Percy Simpson Memorial Scholarship - established in 1959 through the generosity of the late Mr. Percy F. Simpson in memory of his wife, Mrs. Percy (Adeline) Simpson. The award is based on financial need and academic record. The recipient must be a resident of Hinds, Madison, or Yazoo County.

Southeast Mississippi Alumni Chapter Scholarship - established in honor of K. Ramsey O'Neal. Applicants must be admitted or enrolled students at MSU and residents of the tri-county area.

T. A. Spain Scholarship - donated by the late Mr. Thomas Spain. This award is given to upperclass students based on academic record, with preference given to black students.

Duff Walker Sudduth Memorial Scholarship - established from an endowment set up by Mrs. William F. Damon in memory of her late husband, Duff Walker Sudduth. This award is available to upperclass students based on academic record.

Summers Scholarship - established by Mr. and Mrs. E. H. Summers. Students from Attala, Carroll, Choctaw, Montgomery, and Webster counties are eligible to apply for the Summers Scholarship. Current residency in one of these counties is a requirement of eligibility for this scholarship.

James M. Thomas Memorial Annual and Endowed Scholarships - established by the James M. Thomas and Lucie C. Thomas Foundation. Candidates must be full-time students enrolled at Mississippi State University. Preference will be given to students from Leake County, Mississippi. If no student from Leake County is eligible, other Mississippi residents may be considered. Must have demonstrated academic achievement, leadership ability and be of good moral character. Financial need will be a consideration but not a determining factor.

Jesse I. and Lillian B. Timms Scholarship - established by the Timms estate. This award is available to entering freshmen with a minimum composite ACT score of 28 or a high school grade point average of 90 percent or greater.

Charles S. Tingle Scholarship - established by the Sharkey-Issaquena County Alumni Chapter to be awarded to residents of Sharkey-Issaquena County, be full-time entering freshmen who graduated from Sharkey-Issaquena Academy or South Delta High School and have demonstrated academic achievement, need and merit.
Tippah County Endowed Scholarship - established by the Tippah County Alumni Chapter to be awarded to residents of Tippah County and a graduate of Tippah County High School, full-time student of MSU, have demonstrated academic achievement, need, and merit.

William B. Turner Trust Scholarship - donated by the William B. Turner Trust in memory of William B. Turner. This award is available to upperclass students based on financial need and academic record.

Stuart Vance Scholarship - donated by Stuart Vance. This award is available to students of all academic classes based on academic record.

Warren County Alumni Chapter Endowed Scholarship - established by the Warren County Alumni Chapter. Applicants must be full-time students at MSU engaged in undergraduate studies or be entering freshmen from a high school in Warren County.

Murry and Laura Weaver Annual Scholarship - established by Murry and Laura Weaver. Applicants should be deserving and needy students who have not otherwise have the financial resources to meet the needs of the college expenses. It is the desire of the donors that the scholarships be used primarily for recruiting students from high schools in the state of Mississippi who have acceptable grades for admission. Those students must have an identified and legitimate financial need along with a documented record of extracurricular school, community, civic, work and leadership activities.

Wes Smythe Memorial Scholarship - Applicants must be national merit or national achievement semi-finalists and 90%/+ high school grade point average and have demonstrated leadership ability through positions held during the high school years.

Robert Whitehead Endowment For BSU Scholarship Fund - established by Robert Whitehead. This award is available to juniors and seniors with a minimum of a 2.2 QPA and must be a resident of Mississippi.

Melissa Winfield Memorial Scholarship - established by Starkville Discount Drugs in memory of Melissa Winfield, daughter of Keith and Carol Winfield. Applicants from Oktibbeha County who have some type of physical handicap with demonstrated leadership and financial need are eligible.

Turner and Dean Wingo Endowed Scholarship - established by Turner A. Wingo and Dean K. Wingo. Candidates must be full-time students at MSU with a minimum of 3.0 GPA, have demonstrated academic achievements and financial need.

Yazoo County Alumni Scholarship - established by the Yazoo County Alumni Chapter. This award is available to entering freshmen from Yazoo County based on moral character, leadership qualities, and scholarship abilities.

**COLLEGE OF AGRICULTURE and LIFE SCIENCES SCHOLARSHIPS and MEMORIALS**

(Unless otherwise indicated, inquiries should be addressed to Dean, College of Agriculture and Life Sciences, Box 9760, Mississippi State, MS 39762.)

Scholarships are available to undergraduates enrolled in the College of Agriculture and Life Sciences (CALS). Scholarships are awarded on an annual basis for both the fall and spring semesters. Applications for scholarships can be made via the CALS Web site - http://www.cals.msstate.edu. The deadline for submitting the form for the upcoming academic year (fall/spring semester) is April 1. Students selected to receive a CALS scholarship are notified in the summer.

William A. and Gretchen Adams Scholarship Fund - established by Mr. W.A. Adams; awarded to students on the basis of financial need, character and scholarship.

Agricultural 100 Club Scholarships - established by alumni and friends of the College of Agriculture and Life Sciences. Awarded to students on the basis of scholarship and financial need.

Alderman Memorial Scholarship - established by Mrs. Frances Alderman Smith as a memorial to her father, William Henry Alderman, and her uncles, Augustus Decatur Alderman and Elbert Martin Alderman.

Turner and Sybil Arant Endowed Scholarship – established by Mr. and Mrs. Turner Arant. Awarded on the basis of academic achievement and leadership ability.

Charlie Rabb Ashford Endowed Scholarship in Agriculture and Life Sciences - established by family in memory of Mr. Charlie Rabb Ashford (B.S., 1927; M.S., 1949); awarded to undergraduate or graduate students on the basis of academic achievement and leadership characteristics; may be awarded on a 2-year basis.

Bryan Baker and Bill G. Diggs Endowed Scholarship - established by Dr. and Mrs. James W. Shannon to honor former professors of Dr. Shannon; based on academic achievement, leadership, character, and need.

Robert S. Barker Endowed Scholarship – established by Robert B. Barker, Ann B. Sheppard, family and friends of Robert S. Barker. Preference to a Mississippi high school graduate with Mississippi residency. Awarded on the basis of academic achievement, character, leadership ability and financial need.

Brasfield Scholarship - established by Mr. and Mrs. Robert G. Brasfield; awarded to deserving students.

Nathan Isaac Brown and Mary Buescher Brown Memorial Endowed Scholarship - established by Mrs. Mary Buescher Brown; awarded to students on the basis of academic achievement, leadership skills, and need; preference to students from Jones County, MS or transfer students from Jones County Community College.

C. V. Bruce, Jr. Memorial Scholarship - established by the friends and family of Mr. C. V. Bruce.

Maxie Bruce Endowed Scholarship - established by family, former students, and friends to honor Mr. Bruce, a former Vocational Agriculture teacher in Mississippi; awarded to student majoring in Agricultural Information Science and Education; based on academic achievement, leadership, and need.

Frank T. and Virginia Brumfield and Harris S. and Margaret M. Swayze Endowed Scholarship - established by Bruce J. and Shannon M. Brumfield, Jr., Harris C. and Terry M. Brumfield, Frank S. and Mary Frances B. Brumfield, and Hardy T. and Amy W. Brumfield as a memorial to the Brumfield brothers’ grandparents; awarded to undergraduate students based on academic achievement, moral character, leadership abilities and financial need; given to students from Tippah and Sunflower counties.

Carolyn and Joe Bryan Endowed Scholarship - established by Mr. and Mrs. Joe Bryan; awarded to freshmen students based on academic achievement, moral character, leadership abilities and financial need. Preference given to valedictorians of the high school graduating class who scored less than 26 on the ACT.

Butler-York Endowed Scholarship - established by Mr. Eugene Butler in honor of his sister, Mrs. Cordra York: awarded to students on the basis of academic record, demonstrated leadership and financial need.

Will D. Carpenter Endowed Scholarship in Agriculture and Life Sciences - established in honor of members of the Carpenter family, including: Dr. Will Carpenter’s parents, Mr. Horace Aubrey Carpenter (Class of 1908) and Mrs. Celeste Brian Carpenter, and his four sisters, Mrs. Mary Ella Carpenter Greenway, Mrs. Alma Carpenter Abdo, Mrs. Celeste Carpenter Sullivan, and Mrs. Anice Carpenter Powell; students must be juniors or seniors who have transferred from Mississippi Delta Community College and have been referred to the College of Agriculture and Life Sciences Scholarship Committee by the Community College; awarded on the basis of academic achievement, character, leadership ability, and need.

A. Wayne Cole Endowed Scholarship in Agriculture and Life Sciences - established by Dr. James E. Smith to honor Dr. Cole, his former professor; awarded to students of any classification whose major relates to the field of Weed Science.

Owen Cooper Endowed Scholarship - established by family of Owen Cooper; awarded to students based on academic achievement, moral character, leadership abilities and financial need.

Ferrell O. Cork Memorial Scholarship - established by Mrs. Vera Cork Eubanks in memory of her brother, Mr. Ferrell Ovona Cork. Awarded to a Choctaw County resident on the basis of financial need, merit and academic record.
The Si Corley Memorial Scholarship in Agriculture - established by the family of Mr. Corley in his honor; awarded to Mississippi residents who are juniors or seniors.

Phillip C. Cunningham Endowed Scholarship - established through the estate of Mr. Phillip C. Cunningham, a master gardener, who recognized the importance of a college education; awarded to students majoring in a field related to lawn care, landscaping, horticulture, home gardening, etc. on the basis of academic achievement, character, leadership ability, and financial need.

A.P. Fatherree Endowed Scholarship - established by family and friends in honor of A.P. Fatherree. Preference to students who were members of 4-H, FFA or the bull program sponsored by Mississippi Rural Rehabilitation Corporation. Awarded on the basis of character, leadership ability and financial need.

Sterling H. Floore, Sr. Academic Excellence Endowment - established by the Noxubee County Chapter of the of the Mississippi State University Alumni Association to honor Mr. Sterling H. Floore; awarded to students from Noxubee County or with ties to that county.

M. D. L. and Sophronia Alice Gholston Memorial Scholarship - established by Mr. and Mrs. L. E. Gholston.

Girod Scholarships - established by Mrs. Fred (Lora Mae) Girod; awarded to Mississippi residents who complete pre-veterinary requirements at Mississippi State University and who have been accepted into the College of Veterinary Medicine for the following fall semester.

Golightly Foundation Scholarship - established by Mrs. Wilma G. Person and Miss Annie L. Golightly as a memorial to their parents and brothers; awarded to students on the basis of scholarship and financial need.

Minor S. and Helen D. Gray Scholarship Fund - established by Mr. Calvin H. Gray in honor of his father and mother, Minor S. Gray and Helen D. Gray.

Perrin H. and Lela Grissom Scholarship in Agriculture and Home Economics - established by Mr. Perrin H. Grissom (B.S., 1939; M.S., 1940) and Mrs. Lela Grissom; awarded to students in all classifications; based on academic achievement, character, leadership ability, and financial need.

James Hand, Jr. Memorial Scholarship - established by James Hand, III and Kathleen Hand Carter in memory of their father, James Hand, Jr.; awarded to students from Sharkey County, with students from south Delta having second preference and students from the Delta at large, third preference on the basis of need and merit.

Wyatt B. Hodges-George D. Perry Memorial Scholarship in Golf - established by Mr. and Mrs. Alfred M. “Skip” Sears, Jr. (B.S., 1971) and their two daughters, Maggi and Katherine, in memory of Mr. Sears’ grandfather, Mr. Wyatt B. Hodges, and Mr. George D. Perry (B.S., 1919); awarded to undergraduate students in Turfgrass Management and Professional Golf Management; based on academic achievement, involvement in extra-curricular activities, character, leadership ability, and financial need.

Kirby Wesley Holloway Memorial Scholarship - established by Mrs. Roberta Thompson Holloway in memory of her husband, Kirby Wesley Holloway; awarded to juniors and seniors on the basis of academic record and proven need for financial assistance.

L.L. Jones Memorial Scholarship - awarded to undergraduate students, first preference to juniors and seniors; based on merit and financial need.

Mark Keenum Endowed Scholarship in Agriculture and Life Sciences - established by friends to honor Mark Keenum; awarded to students on the basis of academic achievement and leadership skills.

Joseph S. Latham Memorial Scholarship – established by Samuel B. and Rita K. Latham, along with family and friends as a memorial to the Lathams’ son, Joseph S. Latham. Preference to handicapped students. Awarded on the basis of academic achievement.

Charles E. Lindley Leadership Award - established by Mr. James A. Bedenbaugh in the memory of his father, Mr. Poston Gore Bedenbaugh and his mother, Mrs. Parkie Childress Bedenbaugh to honor Dr. Charles E. Lindley; awarded to a senior on the basis of academic achievement, leadership skills and financial need.

Troy V. Majure, Sr. Memorial Endowed Scholarship - established by Mrs. Anna Majure Royston, Dr. Troy V. Majure, Jr., and family of Troy V. Majure; awarded to junior or senior level undergraduate students on the basis of academic achievement and leadership abilities.

Art and Mary Massey Endowed Scholarship in Agriculture and Life Sciences - established by Mr. James A. (Art) Massey (B.S., 1954) and Mrs. Mary Carmichael Massey; based on academic achievement, character, leadership ability, and financial need.

Robert H. McCarty Memorial Scholarship - established by family, friends, and associates to memorialize Robert H. McCarty; awarded to hard-working students committed to an agriculture-related career; preference to Mississippi residents with majors related to production agriculture.

Mississippi Agriculture Industry Council Scholarship - established by the Mississippi Agricultural Industry Council; awarded on the basis of academic achievement, character, leadership, and need.

Mississippi Rural Rehabilitation Corporation Endowed Scholarship - established by Mississippi Rural Rehabilitation Corporation; awarded to sophomores, juniors, or seniors from Mississippi, preferably rural areas, on the basis of academic achievement.

Mississippi Seedsmen’s Association Scholarships - established by Mississippi Seedsmen’s Association; awarded each year on the basis of academic record.

T. G. Owen and Son Memorial Scholarships - established by The Herman and Hazel Owen Foundation; awarded to juniors and seniors majoring in Horticulture and Landscape Architecture on the basis of need, academic proficiency, extracurricular activities, and expressed intention of remaining in Mississippi after graduation.

Raynor C. and Sophie E. Paige Endowed Scholarship - established by family of Raynor C. and Sophie E. Paige; awarded to students based on academic achievement, moral character, leadership abilities and financial need. Preference given to students who are, or have been, active participants in 4-H.

Dr. Hiram D. Palmertree Endowed Scholarship - established by friends and family of Dr. Hiram D. Palmertree; awarded to students based on academic achievement, moral character, leadership abilities and financial need.

Rick Parsons Endowed Scholarship - established by Scott Parsons, Carlisle Parsons, and other friends and family of Rick Parsons; awarded to students based on academic achievement, moral character, leadership abilities and financial need.

Judy Berentz Reinschmidt Endowed Scholarship - established by Dr. Lynn Reinschmidt and Fay Berentz, along with friends and family, as a memorial to Judy Berentz Reinschmidt. Awarded to undergraduate students based on academic achievement, moral character, leadership abilities and financial need.

Jim Buck Ross Endowed Fund – established by Jim Buck Ross, his friends and associates. Awarded to one student majoring in Animal and Dairy Sciences with additional scholarships to students in any major in the College of Agriculture and Life Sciences. Awarded on the basis of academic achievement, character, leadership ability and financial need.

Jimmy Sanders Scholarship - established by Mr. Jimmy Sanders; awarded to students on the basis of financial need, character, and scholarship.

Simmons Scholarship - established by Drs. Cecil and Sue Simmons in honor of his parents; awarded to students enrolled in the College of Agriculture and Life Sciences or the School of Forest Resources.

Boswell Stevens Scholarship - established by friends of Mr. Boswell Stevens in his honor; awarded to a deserving son or daughter of a Farm Bureau family.

Quentin and Maud H. Stringer Endowed Scholarship - established by Mr. and Mrs. Quentin Stringer, awarded to students based on academic achievement, moral character, leadership abilities and financial need.

Fred P. Sullivan Endowment Fund - awarded to students on the basis of academic achievement, leadership skills and financial need.

George Rea Walker, Sr. Memorial Scholarship - established by Stoneville Pedigreed Seed Company in memory of George Rea Walker, Sr.
W. Winston Walker Memorial Scholarship Fund - awarded to students on the basis of financial need and merit.

Will C. Wansley Memorial Scholarship - established by family and friends to memorialize Will C. Wansley; awarded to students on the basis of academic achievement, leadership skills, and financial need; preference to Agricultural Economics, Agribusiness, or Agronomy students from the South Delta area.

Watson Endowed Scholarship Fund – established by Vance and Jo Ann Watson and Lester and Myra Myers. Awarded to Mississippi State University students who are the son or daughter of a Mississippi Agricultural and Forestry Experiment Station (MAFES) Support Staff Employee (one-half time or more). Awarded on the basis of academic achievement, character, leadership ability and financial need.

Ernest Homer White Memorial Scholarship - established by Kathryn White Smith and William Robert Smith in memory of her father, Ernest Homer White; awarded to students from Scott County or surrounding counties.

DEPARTMENT of AGRICULTURAL and BIOLOGICAL ENGINEERING
Direct inquiries to Department of Agricultural and Biological Engineering, Box 9632, Mississippi State, MS 39762-9632.

Hugh M. Arant, Sr. Memorial Scholarship - established by family, friends and associates of Mr. Hugh M. Arant, Sr.; awarded to students majoring in Agricultural Engineering Technology and Business on the basis of leadership ability, financial need and merit. A GPA of 3.0 or higher is required.

Drs. Lung-Hua and Liza M Chen Endowed Scholarship - awarded to students majoring in Agricultural Engineering Technology and Business. Based on academic achievement, moral character, leadership abilities and financial need.

Theo H. Dinkins, II Family Scholarship - established in memory of his father and brother, Claude Cameron Dinkins, Sr., (1916) and Claude Cameron Dinkins, Jr. (1956); awarded to a junior or senior undergraduate majoring in Agricultural Engineering Technology and Business. Based on merit and academic record with a GPA of 2.75 or above.

Robert DeSha Hines Endowed Scholarship - established by Ms. Sara R. Hines as a memorial to her husband, Robert DeSha Hines; awarded to undergraduate students based on academic achievement, moral character, leadership abilities and financial need. Preference given to students enrolled in Gin Management and Technology.

Kenneth B. Hood Scholarship in Cotton Gin Management and Technology - established by Kenneth Hood; awarded to students in the Gin Management and Technology emphasis of the Agricultural Engineering Technology and Business curriculum. It is awarded on the basis of leadership ability, financial need and interest in a career in cotton ginning to students with a GPA of 2.5 of higher.

Mississippi Section, American Society of Agricultural Engineers Scholarship - awarded to any student majoring in Agricultural Engineering Technology and Business or Biological Engineering with an agricultural emphasis on the basis of need, merit, academic record, or any combination of these.

George B. Nutt Scholarship - donated by George B. Nutt; awarded to students majoring in Agricultural Engineering Technology and Business or Biological Engineering on the basis of merit, academic record, financial need, or any combination of these. A GPA of 3.0 or greater is required. Preference is given to Mississippi residents and those from Clarke County.

T. H. Scott Memorial Scholarship - established by the American Dairy Association of Mississippi in honor of Mr. Walter Moore, Jr.; awarded to undergraduate or graduate students in Agricultural Economics on the basis of need, merit, academic record, or any combination of these.

Smith Tractor Company and M.R. Smith Memorial Scholarship - established by Mrs. M. Ross Smith; awarded to any student majoring in Agricultural Engineering Technology and Business or Biological Engineering on the basis of financial need, merit, academic record, or any combination of these.

DEPARTMENT of AGRICULTURAL ECONOMICS
Direct inquiries to Department of Agricultural Economics, Box 5187, Mississippi State, MS 39762-5187.

Paul T. Blair Memorial Scholarship - established by friends and colleagues to honor Dr. Paul T. Blair; awarded to junior or senior level undergraduates majoring in Agricultural Economics with an interest in Cooperative Marketing, on the basis of both need and merit.

William Edwin Christian Endowed Scholarship in Agricultural Economics - established by family and friends of Mr. William Edwin Christian, Jr. (B.S., 1942), a former faculty member; awarded to students in the Department of Agricultural Economics; based on academic achievement, character, leadership ability, and financial need.

Farmers Grain Terminal Scholarship - established by the Farmers Grain Terminal of Greenville, Mississippi; awarded to junior and senior level students enrolled in Agricultural Economics with preference given to students specializing in Grain Marketing, on the basis of need, merit, and above-average scholastic record.

Warren and Dorothy Garrard Endowed Scholarship - awarded to students majoring in Agricultural Economics. Based on academic achievement, moral character, leadership abilities and financial need. Preference given to students from Carroll County.

Rupert Johnston Scholarship - established by friends and family to honor Dr. Rupert Johnston; awarded to undergraduate students majoring in Agricultural Economics or Agribusiness.

Bryce D. and Jean Jordan Endowed Scholarship - established by Mrs. Jean Jordan in memory of her husband, Bryce D. Jordan. Awarded to a junior or senior level student enrolled in the Department of Agricultural Economics. Based on academic achievement, moral character, leadership ability and financial need. Preference given to Junior College transfer students and students from Jones, Forrest, Sharkey and Issaquena counties.

Mark and Rhonda Keenum Annual Scholarship in Agricultural Economics - established by Dr. Mark Keenum (B.S., 1983; M.A., 1984; Ph.D., 1988) for academic achievement, character, leadership ability, and financial need.

Dr. Ying-Nan Lin Memorial Scholarship in Agricultural Economics - established by family, friends, and associates in memory of Dr. Ying-Nan Lin, a former faculty member; awarded to students in the Department of Agricultural Economics; based on academic achievement, character, leadership ability, and financial need.

The G. Wayne Malone Endowed Scholarship in Agricultural Economics - established by Mrs. G. Wayne Malone to honor Dr. G. Wayne Malone; awarded to undergraduate students in Department of Agricultural Economics on the basis of demonstrated academic achievement, involvement in extracurricular activities, character, leadership ability, and financial need.

Walter Moore, Jr., Scholarship - established by the American Dairy Association of Mississippi in honor of Mr. Walter Moore, Jr.; awarded to undergraduate or graduate students in Agricultural Economics on the basis of merit with preference given to students with an interest in Dairy Production or Dairy Marketing on the basis of both need and merit.

Phillip L. Oxner III Memorial Endowed Scholarship - established by friends and family of the late Phillip L. Oxner, III; awarded to students majoring in Agricultural Economics. Based on academic achievement, moral character, leadership abilities and financial need. Preference given to students from South Delta area in Mississippi.

Pace Scholarship - established by Mr. & Mrs. J. V. Pace; awarded to any undergraduate student majoring in Agricultural Economics with an interest in Marketing and Farm Management.

David W. Parvin, Sr. Memorial Scholarship - established by friends and family to honor Dr. David W. Parvin, Sr.; awarded to undergraduate or graduate students in Agricultural Economics on the basis of merit.
Travis Denton Phillips, Sr. Endowed Scholarship - established by Carolyn Malone-Phillips; awarded to undergraduate students on basis of academic achievement, moral character, leadership abilities and financial need.

Charles F. Reynolds Scholarship - donated by Charles F. Reynolds, Jr. and Mrs. Frances Reynolds Simmons; awarded to the outstanding senior in the Department of Agricultural Economics on basis of three years’ academic achievement.

David L. Trammell, Jr. Scholarship in Agricultural Economics - established by Mrs. David L. Trammell and the Trammell children, David L. Trammell, III, Diane Barnett and Lynn Trammell, to honor Dr. David Trammell; awarded to undergraduate or graduate students in the Department of Agricultural Economics on the basis of merit.

Dr. John E. Waldrop, Jr. Scholarship - established in memory of and to honor Dr. John E. Waldrop, Jr.(B.S., 1954; M.S., 1961), and a former faculty member; awarded to students in the Department of Agricultural Economics; based on academic achievement, involvement in extracurricular activities, character, leadership ability, and financial need; priority to students with catfish industry interests.

DEPARTMENT of AGRICULTURAL INFORMATION SCIENCE and EDUCATION

Direct inquiries to Department of Agricultural Information Science and Education, Box 9731, Mississippi State, MS 39762-9731.

Emmie Williams Memorial Scholarship - established in memory of Emmie Williams; awarded to undergraduate students majoring in Agricultural and Extension Education; on the basis of need, merit or any combination of these with a GPA of 3.0 or better.

Maxey Bruce Scholarship - established in recognition of the contributions made by Mr. Maxey Bruce to Agricultural Education; awarded to undergraduate students pursuing a major in Agricultural Information Science.

DEPARTMENT of ANIMAL and DAIRY SCIENCES

Direct inquiries to Department of Animal and Dairy Sciences, Box 9815, Mississippi State, MS 39762-9815.

Bryan and Nona Baker Endowed Scholarship in Animal and Dairy Sciences - established by Dr. Bryan Baker (B.S., 1947; M.S., 1952), a former faculty member, and his wife Mrs. Nona Baker; awarded to students, sophomore or above, in the Department of Animal and Dairy Sciences; based on academic achievement, leadership ability, and character.

Bedenbaugh Scholarship Fund - established by James A. Bedenbaugh for scholarships in Animal Science in memory of Poston Gore Bedenbaugh.

Reverend and Mrs. William Page Brown Memorial Scholarship - established by Dr. and Mrs. Paul B. Brown in memory of his parents; awarded to students majoring in Animal Science.

Billy Gene Diggs Memorial Scholarship - established by friends and colleagues to honor Dr. Billy Gene Diggs; awarded to junior or senior level undergraduates and either majoring in Animal Science or an active member of the Block & Bridle Club on the basis of need and merit.

Dixie National Scholarship - donated by the Dixie National Association; two scholarships, awarded on the basis of financial need, merit, academic record or any combination of these. The recipients must be majoring in Animal Science.

Werner and Alice Essig Endowed Graduate Student Scholarship in Nutrition - established by Dr. Werner Essig, a former faculty member, and his wife Mrs. Alice Essig; awarded to graduate students pursuing either a M.S. degree or Ph.D. degree in Ruminant Nutrition in Animal and Dairy Sciences or in Human Sciences; based on academic achievement, leadership ability, character, and financial need.

Fuquay Endowed Scholarship in Animal and Dairy Sciences - established by Dr. John W. Fuquay, a former faculty member and his wife, Mrs. Charlotte Fuquay, with support from former students and associates; awarded annually to support the education of students with dairy interest in the Department of Animal and Dairy Sciences.

Higgins Memorial Scholarship(s) - donated by the Mississippi Jersey Cattle Club in memory of Mr. L. A. Higgins, Extension Dairyman; awarded to Dairy Science majors (Dairy Production option) who are residents of Mississippi. Students with Jersey cattle experience are given preference. Three or four scholarships are awarded annually.

Henry H. Leveck Memorial Scholarship - donated by Mrs. Hortense Leveck. Candidates must be full time students, junior or senior classification and be majoring in Animal Science. Awarded on the basis of leadership, academic achievement, financial need, or any combination of these.

Janice McCool Durff and Alma McCool Liles Endowment and Scholarship Fund - established by Barney and Inez McCool to honor their daughters. Candidates must be full time students majoring in Animal Science; awarded on the basis of financial need, merit, academic achievement, or any combination of these.

Glenn Lee McCullough Endowed Scholarship - donated by Glenn L. McCullough, Sr.; awarded to undergraduate students based on academic achievement, moral character, leadership abilities and financial need. Preference given to students enrolled in the dairy program.

W. L. “Buddy” Richmond Scholarship - donated by the Mississippi Pork Producers Association in honor of W. L. “Buddy” Richmond, retired Extension Swine Specialist; awarded on the basis of financial need, merit, academic record or any combination of these. The student must be majoring in Animal Science.

O. W. Scott Memorial Scholarship - donated by Delta Santa Gertrudis Association in memory of O. W. Scott, a pioneer breeder of Santa Gertrudis cattle in Mississippi; awarded on the basis of financial need, merit, academic record or any combination of these. The recipient must be majoring in Animal Science.

DEPARTMENT of BIOCHEMISTRY and MOLECULAR BIOLOGY

Barrentine Endowed Scholarship in Biochemistry and Molecular Biology - established by the Barrentine family and the Department of Biochemistry and Molecular Biology in memory of Dr. Benjamin F. Barrentine, the first head of the Department, and Mrs. Melle Ward Barrentine; based on record of academic achievement and demonstrated leadership skills; priority will be given to transfer students.

Dr. Will D. Carpenter Endowed Scholarship - established by Dr. Will Carpenter, distinguished friend of the department; awarded to a junior or senior based on academic achievement, leadership and financial need.

Watson Ray Moorehead Endowed Scholarship - established by Dr. and Mrs. Wells Moorehead; awarded to undergraduate students based on academic achievement, leadership and financial need.

DEPARTMENT of ENTOLOGY and PLANT PATHOLOGY

J. Frank Killebrew Memorial Graduate Student Scholarship - established by individuals honoring the late Dr. J. Frank Killebrew; awarded to graduate students majoring in plant pathology, nematology or pest management. Selection made by Mississippi Association of Plant Pathologists and Nematologists. Direct inquiries to MAPPAN Fellowship Scholarship, c/o Department of Entomology and Plant Pathology, Box 9775, Mississippi State, MS 39762.

Mississippi Agricultural Consultants Association Scholarship - established in 1992 by the Association; awarded to a student majoring in Agricultural Pest Management; Applications and inquiries should be directed to: Marianna Hayes, Mississippi Agricultural Consultants Association, P.O. Box 38, Lexington, MS 39095; phone: 662-834-9938.

The following awards are presented each year during the Mississippi Entomological Association Meeting in early November. Direct inquiries to the Department of Entomology and Plant Pathology, Box 9775, Mississippi State, MS 39762-9775; phone: 662-325-2085; fax: 662-325-8837.

Pat and Linda Harris Endowed Scholarships - established by individuals and companies honoring Dr. Joseph P. “Pat” Harris (B.S., 1962; M.S., 1964; Ph.D., 1971) and his wife Mrs. Linda Harris (B.S., 1978; M.Ed., 1983); awarded to undergraduate and graduate students enrolled in the majors of Entomology and Agricultural Pest Management; based on academic achievement, character, residence, and financial need.
Mississippi Entomological Association Scholarship - established in 1960 by the Association; awarded to a student working toward a degree in Biological Sciences with emphasis in Entomology (minimum of 6 hours) or Agricultural Pest Management. Available at all Mississippi 4-year colleges.

H. C. Mitchell Entomological Memorial Scholarship - established in 1980 in memory of Dr. H. C. Mitchell by friends and colleagues; awarded to a student majoring in Entomology or Agricultural Pest Management at Mississippi State University.

Redd Pest Control Scholarship - established in the 1950's by J. C. Redd, founder of Redd Pest Control Company; awarded to a student working toward an advanced degree in entomology. Direct inquiries to Head, Department of Entomology and Plant Pathology, Box 9775, Mississippi State, MS 39762-9775.

Arlie and Ethel Wilson Entomological Endowed Scholarship Fund - established in 1993 by Dr. Arlie Wilson, Professor Emeritus, and his wife, Ethel Wilson. Awarded to full-time graduate (entomology) or undergraduate (agricultural pest management) students at Mississippi State University.

DEPARTMENT OF FOOD SCIENCE, NUTRITION AND HEALTH PROMOTION

Direct inquiries to Department of Food Science and Technology, Box 9805, Mississippi State, MS 39762-9805.

G. R. Ammerman Food Technology Scholarship - established by the Food Science Club and friends of Gale Ammerman; awarded to undergraduate Food Technology students on the basis of academics, need and citizenship.

Bedenbaugh Scholarship Fund - established by James A. Bedenbaugh for scholarships in Food Science in honor of Parkie Childress Bedenbaugh.

Dr. Joe T. Cardwell Endowed Scholarship - established by family and friends; awarded to students majoring in Food Science and Technology; based on academic achievement, moral character, leadership abilities and financial need.

Joe and Leota Cardwell Scholarship Fund - donated by Dr. and Mrs. Joe Cardwell for Food Science and Technology students demonstrating academic achievement, leadership ability and financial need.

Lorena White Cobb and A.B. Cobb Endowed Scholarship - established by relatives in memory of Mrs. Lorena White Cobb and Mr. A.B. Cobb by a bequest from the estate of Mrs. Cobb; awarded to students in the Department of Food Science and Technology, based on academic achievement, character, leadership ability, and financial need.

Werner and Alice Essig Endowed Graduate Student Scholarship in Nutrition - established by Dr. Werner Essig and his wife, Mrs. Alice Essig; awarded to graduate students pursuing either a M.S. Degree or Ph.D. Degree in Human Nutrition in the Department of Food Science, Nutrition and Health Promotion or Ruminant Nutrition in Animal and Dairy Sciences; based on academic achievement, leadership ability, character, and financial need.

Food Industry Endowed Scholarship - established by members of the food industry; awarded to students in Food Science and Technology major; based on academic achievement, character, and leadership ability.

James E. Garrison Dairy Foods Scholarship - awarded to a Food Science and Technology major with an interest in dairy foods processing.

James E. Garrison Scholarship - donated by James E. Garrison; awarded to a Food Science and Technology major.

James O. Hearsberger Scholarship Fund - established by family, friends and the Tennessee Chapter Brotherhood of the Knights of the Vine for Food Science and Technology students demonstrating academic achievement and leadership ability and financial need. Recipient must be an active member of the Food Science Club.

Dr. G. Wayne and Carolyn Malone Endowed Scholarship in Food and Nutrition - established by Mrs. Carolyn Malone; awarded to students majoring in Food Nutrition and Dietsetics. Based on academic achievement, moral character, leadership ability, and financial need.

L.Q. Patton Memorial Scholarship - established by Mr. and Mrs. Donald Patton for undergraduates majoring in Food Science and Technology who have an expressed interest in working with the Dairy Products area of the food industry.

R.J. Reed Endowed and Annual Scholarship - established by R.J. Reed; awarded to students majoring in Food Science and Technology. Based on academic achievement, moral character, leadership abilities and financial need. Preference given to U.S. citizens.

Charles H. White Endowed Scholarship - established by friends and family of Dr. Charles H. White. Awarded to undergraduate students majoring in Food Science, Nutrition and Health Promotion. Based on academic achievement, moral character, leadership abilities and financial need.

SCHOOL of HUMAN SCIENCES

Direct inquiries to School of Human Sciences, Box 9745, Mississippi State, MS 39762-9745.

Bodenbaugh Scholarship Fund - established by James A. Bedenbaugh for scholarships in Human Sciences in honor of Parkie Childress Bedenbaugh.

Burris-Key Endowed Scholarship - established by Mrs. Ouida Burris. Mrs. Burris was a Home Demonstration Agent in Lowndes County and Clothing Specialist with the Mississippi Cooperative Extension Service between 1927 and 1947. The scholarship is named for a longtime friend and colleague, Mrs. Ida Morgan Key. The scholarship is awarded on the basis of scholarship and financial need.

Cardwell Scholarship - donated by Dr. and Mrs. Joe Cardwell; awarded to a Human Sciences major on the basis of leadership activities and scholastic record. Preference is given to a student who is in food, nutrition, and dietics.

Dorothy Dickins Memorial Scholarship - established by friends in memory of Miss Dickins; awarded to several upperclass Human Sciences majors on the basis of scholarship and financial need.

Ms. Lucille G. Gullidge Endowed Scholarship - established by Mr. W.M. “Morgan” Gullidge, Jr.; awarded to students majoring in Human Development and Family Studies with Child Life Option. Based on academic achievement, moral character, leadership abilities and financial aid. Preference given to students from Leflore and Washington Counties.

Helen Sawyer Endowed Scholarship - established by Ms. Helen Sawyer in 2003. Awarded to full-time undergraduate Human Science majors who demonstrate good academic standing, moral character, leadership skills and financial need.

Kappa Omicron Nu - members of the Human Sciences honorary are awarded on basis of scholarship, leadership, and service.

Coy Hines Stennis Scholarship - established by the Home Economists in Homemaking of Starkville in memory of Mrs. John Stennis; awarded to Mississippi residents who are Human Sciences juniors or seniors with outstanding academic record and evidence of leadership.

DEPARTMENT of LANDSCAPE ARCHITECTURE

Direct inquiries to Department of Landscape Architecture, Box 9725, Mississippi State, MS 39762-9725.

James A. Bedenbaugh Landscape Design Fund - established by James A. Bedenbaugh; awarded on the basis of need and cumulative GPA.

Thomas W. Bobbitt Endowed Scholarship - established by Thomas W. Bobbitt; awarded to undergraduate students based on academic achievement, moral character, leadership abilities and financial need.

Burris-Pittman Endowed Scholarship - donated by Mrs. Ouida Midkiff Burris in honor of Mrs. Myrtis Gill Pittman; awarded on the basis of need and cumulative GPA.

Robert A. Callaway Endowed Scholarship - established in memory of Robert A. Callaway; awarded to a Landscape Contracting and Management major on the basis of need and cumulative GPA.
Freda Wallace Harrison Scholarships - donated by Mr. Robert V.M. Harrison, in honor of Mrs. Harrison; awarded to Horticulture and Landscape Architecture students on the basis of need and cumulative GPA.

Edward C. Martin, Jr. Scholarship - funded by the Garden Clubs of Mississippi; awarded to a Mississippi native majoring in Landscape Architecture. Must be upperclassman with a minimum GPA of 3.0.

Charles E. Parks Memorial Fund in Landscape Design - established by family and friends in memory of Mr. Charles E. Parks, first department head of Landscape Architecture; awarded to undergraduates enrolled in the Department of Landscape Architecture, based on academic achievement, character, leadership ability, financial need.

R.W. Distributors, insurance Scholarship in Landscape Contracting - established by R.W. Distributors, Inc. to be awarded to a landscape contracting student; must be resident of Mississippi and have a minimum cumulative GPA of 3.0.

Robert Whitehead Scholarship in Landscape Contracting - established by Robert Whitehead; to be awarded to a landscape contracting student; must be a resident of Mississippi and have a minimum cumulative GPA of 3.0.

DEPARTMENT OF PLANT AND SOIL SCIENCES

Direct inquiries to Department of Plant and Soil Sciences, Box 9555, Mississippi State, MS 39762-9555.

Dr. Kelton Anderson Endowed Scholarship - established by Dr. James E. Smith; awarded to undergraduate students majoring in Plant and Soil Sciences. Based on academic achievement, moral character, leadership abilities and financial need.

Nan Watts Anderson Memorial Scholarship in Floriculture - donated by Mr. W. S. Anderson, in honor of Miss Nan Watts Anderson; awarded to students specializing in Floriculture and Ornamental Horticulture on the basis of academic achievement.

Ashley-Girling Scholarship - donated by Reverend Martha A. Girling, in honor of Mr. Thomas E. Ashley. Awarded to students specializing in Floriculture and Ornamental Horticulture, Vegetable Crop Production and Fruit Science on the basis of academic achievement, leadership qualities and financial need.

Walter E. Davis Scholarship Fund - donated by the Mississippi Nurserymen's Association, Inc. in honor of Dr. Walter E. Davis; awarded to a junior specializing in Floriculture and Ornamental Horticulture on the basis of academic achievement, leadership qualities and financial need.

Daylily Scholarship - donated by the Jackson Hemerocallis Society; awarded to upper class students (Mississippi residents) majoring in Floriculture and Ornamental Horticulture on the basis of academic achievement and leadership qualities.

Robert H. Dunlap Horticulture Scholarship - established by Mr. Robert H. Dunlap; awarded to students specializing in Floriculture and Ornamental Horticulture, Ornamental Horticulture, Fruit Science or Retail Floristry on the basis of academic achievement, leadership qualities and financial need.

Dr. Joseph B. Edmond Horticulture Scholarship Fund - established by Dr. J. B. Edmond, former Professor of Horticulture at Mississippi State University; awarded to students specializing in Floriculture and Ornamental Horticulture, Ornamental Horticulture or Fruit Science on the basis of academic achievement (minimum 3.0 GPA) and leadership qualities.

Garden Clubs of Mississippi Scholarship - funded by the Garden Clubs of Mississippi; awarded to upperclass students (Mississippi residents) majoring in Floriculture and Ornamental Horticulture on the basis of academic achievement and financial need.

Freda Wallace Harrison Scholarship - donated by Mr. Robert V. M. Harrison, in honor of Mrs. Harrison; awarded to upperclass students (Mississippi residents) majoring in Floriculture and Ornamental Horticulture on the basis of academic achievement and financial need.

C. D. Hoover Scholarship Fund - donated by Dr. Jack Hoover, Donald Hoover and Darrel Hoover, in honor of C. D. Hoover; awarded to students specializing in Integrated Crop Management, Seed Science and Technology and Soil and Environmental Sciences.

Jackson Council of Garden Clubs Scholarship - donated by the Jackson Council of Garden Clubs; awarded to students specializing in Floriculture and Ornamental Horticulture on the basis of academic achievement and financial need.

Mississippi Chapter of the American Society of Agronomy Scholarship - established by the MS Chapter of the American Society of Agronomy; awarded to junior and senior students majoring in agronomy at Mississippi State University demonstrating academic achievement and financial need.

Mississippi Florist Association Scholarship - established in memory of Dr. Coy O. Box. Applicants must be full-time undergraduate students who demonstrate academic achievement and leadership potential. Priority will be given to students in the Retail Floristry Program and children/grandchildren of members of the MS Florist Association.

Mississippi Nurserymen's Association Denny Phillips Endowed Scholarship - established in memory of Mr. Travis D. “Denny” Phillips, Jr. (BLA, 1982) by the Mississippi Nurserymen's Association, Inc.; awarded to juniors or above majoring in Floriculture or Ornamental Horticulture; based on academic achievement, character, leadership ability, and financial need.

Mississippi Senior Golf Association Scholarship - Funding is provided by members of the Mississippi Senior Golf Association; awarded to students majoring in Golf and Sports Turf Management.

Ralph Null Scholarship in Retail Floristry Management - donated by Geni Fulcher in honor of Ralph Null, Professor Emeritus of Floral Design at Mississippi State University; awarded to students enrolled in Retail Floristry Management demonstrating academic achievement, leadership ability and financial need.

Overcash Horticulture Undergraduate Student Scholarship - donated by Dr. J. P. Overcash, Emeritus Professor, and Mrs. J. P. Overcash; awarded to upperclass students specializing in Floriculture and Ornamental Horticulture, Vegetable Crop Production and Fruit Science on the basis of academic achievement (minimum 3.3 G.P.A.) and leadership qualities.

Dr. William Andrew Raney Endowed Scholarship - established by Ms. Jane Raney, in memory of Dr. William A. Raney. Awarded to undergraduate students in Agronomy or Turfgrass Management in the Department of Plant and Soil Sciences. Based on academic achievement and financial need.

Harold and Robbie Snell Endowed Fund for Excellence in Turfgrass Management - established by Ms. Robbie Snell; awarded to students in the Turfgrass Management Program in the Department of Plant and Soil Sciences.

Imogene C. Tripplett Endowed Scholarship in Ornamental Horticulture and Retail Floristry Management - established by Dr. Glover B. and Imogene C. Tripplett. Awarded to students enrolled in Ornamental Horticulture and Retail Floristry Management demonstrating academic achievement, leadership ability and financial need.

H. B. Vanderford Soil Scholarships - donated by Dr. and Mrs. H. B. Vanderford, in honor of the Vanderford family; awarded to undergraduate and graduate students specializing in Soil and Environmental Sciences.

DEPARTMENT OF POULTRY SCIENCE

Direct inquiries to Scholarship Committee, Department of Poultry Science, Box 9665, Mississippi State, MS 39762-9665.

Jason Armstrong Annual Scholarship in Poultry Science - established by Mr. Richard Armstrong and Mrs. Charlotte Armstrong in honor of their son, Jason (B.S., 1997); awarded annually to an undergraduate student in the Department of Poultry Science; based on academic achievement, character, leadership ability, and financial need.

Central Industries, Inc., Ltd. Scholarship(s) - donated by Central Industries, to support poultry science majors; awarded to undergraduates who are making satisfactory progress toward graduation. Direct inquiries to the Scholarship Committee, Poultry Science Department, P.O. Box 9665, Mississippi State, MS 39762.
James E. Hill Poultry Science Scholarship For Poultry Science Major - established by Alumni and friends of James E. Hill. The “James E. Hill Poultry Science Scholarship for Poultry Science Majors” will be awarded to a Poultry Science major who is making satisfactory progress toward his/her degree.

Hubbard Farms Scholarships(s) - donated by Hubbard Farms, Walpole, New Hampshire, to support Poultry Science majors; awarded to an undergraduate who is in the top 10% of his/her class.

H. F. McCarty, Jr. Family Scholarship - donated by H. F. McCarty, Jr. family to support Poultry Science majors; awarded to undergraduates who are making satisfactory progress toward graduation.

Poultry Science Club Scholarship(s) - donated by the Poultry Science Club at Mississippi State University, to support the Poultry Science majors; awarded to undergraduates who are making satisfactory progress toward graduation.

C.T. and Earline F. Ramzy Memorial Scholarship - donated by C.T. and Earline Ramzy Estate; awarded to Poultry Science majors who are residents of Mississippi. Priority will be given to residents of Leake County, Mississippi. Entering freshman must have a “B” average in high school and upperclassmen must have a minimum 2.5 GPA to qualify for the Scholarship.

Chip Rauch Memorial Scholarship - established by Mr. and Mrs. Ray Rauch and children in honor of their late son and brother; awarded to a Poultry Science major who distinguishes himself/herself by overcoming adversity and demonstrating outstanding academic achievement.

COLLEGE OF ARCHITECTURE, ART, and DESIGN SCHOLARSHIPS

SCHOOL of ARCHITECTURE SCHOLARSHIPS

Outstanding entering in-state as well as out-of-state freshmen are eligible for University academic scholarships. The School makes a special effort each year to recognize student achievement through numerous competitions and annual awards made possible by industry and building suppliers. These awards are made on the basis of demonstrated design excellence. All inquiries for scholarships, which are selected by the Architecture Scholarship Committee, should be directed to P.O. Box AQ, Mississippi State, MS 39762-5541.

AIA/AAF Minority/Disadvantaged Scholarship - Only students entering an accredited professional degree program leading to a Bachelor or Master of Architecture are eligible for this scholarship. Nominees should currently be high school seniors or college freshmen. Eligibility is also extended to students attending a community college or a technical school who plan to transfer to an NAAB-accredited program. Students who have completed one or more years of a standard university curriculum are not eligible to apply.

AIA/AAF Scholarship Program for Professional Degree Candidates - This program assists students in one of the final two years of a professional degree program in architecture. Students must be either in the third- or fourth-year of a five-year program leading to a bachelor or architecture equivalent, or in the second- or third-year of a three-to-four year program leading to a master of architecture and whose undergraduate degree is in a discipline other than architecture.

Fred Carl, Sr. Memorial Scholarship - Applicants must be full-time students at Mississippi State University, entering students in the first-year design studio in the School of Architecture; residents of Mississippi; have achieved a minimum composite ACT score of 28 (or SAT equivalent), and can demonstrate financial need.

T. Steven Davis Annual Scholarship - Applicants must be full-time students at Mississippi State University, entering students in the first-year design studio in the School of Architecture; residents of Mississippi; African-American; and can demonstrate financial need.

Charles H. Dean Jr. Annual Scholarship - Students in their third- through fifth-year of design studio may apply. Applicants must be full-time students at Mississippi State University; have completed their second-year of design studio in the School of Architecture; residents of Mississippi; and can demonstrate financial need.

Ferretti/Karnstedt Annual Scholarship - Applicants must be enrolled as full-time students in the School of Architecture at Mississippi State University; have a minimum 3.00 overall grade point average; be of good moral character; and have demonstrated leadership ability.

Fulcher-Bailey Annual Scholarship - Applicants must be entering the first-year design studio in the College of Architecture; residents of Mississippi; and can demonstrate financial need.

Hollomon Architects Scholarship - Students must be entering their fifth year of academic work in the School of Architecture; residents of Mississippi; and can demonstrate financial need.

Creig B Hoskins-Giattina Fisher Aycock Architects Scholarship - Applicants must be entering the first-year design studio in the School of Architecture; be a resident of one of the following Mississippi counties: Bolivar, Calhoun, Carroll, Coahoma, Grenada, Humphreys, Leflore, Montgomery, Panola, Quitman, Sunflower, Tallahatchie, Washington, Yalobusha; and can demonstrate financial need.

Stephanie Mihovejich Pizzetta Memorial Scholarship - Candidates must be full-time students at Mississippi State University; have completed their second year of design studio in the School of Architecture; have a minimum GPA of 3.0; and can demonstrate financial need.

Mockbee Hall & Drake Scholarship - Applicants must be entering the fifth-year design studio in the School of Architecture; have a minimum grade point average of 3.0; be of good moral character; and have demonstrated leadership ability.

National Organization of Minority Architecture Students Scholarship - Applicants must be enrolled as full-time students in the School of Architecture at MSU; entering the second year of the design studio in the School of Architecture; have a minimum overall GPA of 2.0; be of good moral character; can demonstrate financial need; and be of a social group underrepresented in the field of architecture.

Pryor & Morrow Annual Scholarship - Students in their second- through fifth-year of design studio may apply. Applicants must be full-time students at Mississippi State University; have completed their first-year design studio in the School of Architecture; are residents of Mississippi; and can demonstrate financial need.

Studio South Architects Annual Scholarship - Candidates must be enrolled as a full-time student at Mississippi State University; will be a student in the fifth-year design studio in the School of Architecture; residents of Mississippi; a minority student; and can demonstrate financial need.

Matt L. Virden, III Memorial Scholarship - Established to honor the distinguished career of architect Matt L. Virden, III. Students must be entering the third-year (or higher) of design studio in the School of Architecture; have a minimum 2.80 overall grade point average; be of good moral character; have demonstrated leadership; can demonstrate financial need; and be a resident of one of the following Mississippi Delta counties: Bolivar, Carroll, Coahoma, Desoto, Holmes, Humphreys, Issaquena, Leflore, Panola, Quitman, Sharkey, Sunflower, Tallahatchie, Tate, Tunica, Warren, Washington, Yazoo.

Johnson-McAdams Design Discovery Camp Scholarships - Eligible high school students should contact the School of Architecture to request a scholarship application. Applicants must be from Leflore County, Mississippi; be 16 years of age or older; and be genuinely interested in a career in architecture and related disciplines. This scholarship funds four students to attend this eight-day summer workshop. Each scholarship will pay for all costs (except for one meal) of the selected participants’ meals, lodging, and supplies.

DEPARTMENT OF ART

Inquiries should be directed to: Head, Department of Art, P.O. Box 5182, Mississippi State, MS 39762.

Ferretti/Karnstedt Sophomore Portfolio Scholarship in Art – donated by Mr. and Mrs. John Ferretti; awarded to an Art student with the best portfolio presented at the second year Foundation Portfolio Review. The portfolio review is in December after students pass Design I & II, Drawing I & II, 3-D Design, and Intro to Computing for Artists and Designers.
Beverly B. Gulmon Scholarship in Art – endowed by Norman G. Germany in honor of Beverly B. Gulmon; awarded annually to entering freshmen on the basis of portfolio competition. High school seniors present a portfolio to the Art Department during the Spring Discovery Day competions.

L. Donovan Dodd Memorial Endowment for Ceramic Art - endowed by Jimmy and Sarah Dodd in memory of their son Donovan, who was a ceramics student at Mississippi State. An award is given annually to a student for excellence in ceramic art.

INTERIOR DESIGN PROGRAM
Inquiries should be directed to: Interior Design Program Head, PO Box 6227, Mississippi State, MS 39762.

Linda M. Clark Memorial Scholarship - Candidates must be a full-time undergraduate student enrolled in the College of Architecture, Art, and Design, majoring in Interior Design; have a record of academic achievement; and have demonstrated leadership skills.

Business Interiors, Inc. Annual Scholarship - Candidates must be a full-time undergraduate student enrolled in the College of Architecture, Art, and Design, majoring in Interior Design; have a record of academic achievement; and have demonstrated leadership skills.

COLLEGE OF ARTS and SCIENCES SCHOLARSHIPS and MEMORIALS

COLLEGE SCHOLARSHIPS
Inquiries and applications should be directed to: Associate Dean, College of Arts and Sciences, P. O. Box AS, Mississippi State, MS 39762. The deadline for applications is March 8.

H. Dean Andrews Endowed Scholarship – awarded to pre-medical and pre-nursing (Arts & Sciences) students; instructional (e.g., laboratory) equipment for above students. Special consideration given to residents of Warren County, Mississippi. The scholarship is for one year. Awardees are eligible for renewal of the scholarship but must compete with the new pool of applicants.

Robert B. “Bobby” Boykin Leadership Scholarship - awarded annually to a full-time freshman enrolled in one of the major fields of study offered in the College of Arts & Sciences; must have a minimum ACT score of 25 and high school GPA of at least 3.0; demonstrated record of achievements in citizenship and leadership and/or outstanding achievements in Boy Scouting or Girl Scouting.

Chickasaw County Students' Scholarship Fund – endowed scholarship for full-time students with demonstrated academic achievement with a 3.0 GPA or higher, good moral character, demonstrated leadership, and financial need.

Jerry D. Dickerson, Jr. Memorial Scholarship - awarded annually to a full-time student majoring in any Arts & Sciences discipline that has completed 60 credit hours at a Mississippi community college and a cumulative GPA of 3.5; be of good moral character with demonstrated leadership ability and traits of good citizenship.

The John Elliott Family Endowed Scholarship - awarded to a full-time undergraduate student in Arts & Sciences; GPA equal to or greater than 3.0 at end of every academic year, good character, demonstrated leadership, willingness to work hard, financial need.

Drs. Karen and William Hulett Endowed Scholarship – awarded annually to a sophomore science student majoring in biology, chemistry, mathematics, or physics with GPA of at least 3.0 in science courses, and must be enrolled in at least eight semester hours of science courses at the time of application.

George and Gale Kappler Endowed Scholarship - awarded annually to a full-time undergraduate student enrolled in one of the major fields of study offered in the College of Arts & Sciences, have achieved a score of 25 or higher on the ACT (or equivalent SAT) and a high school GRP not lower than 3.0.

Kerry D. Kimbrough Memorial Scholarship – endowed scholarship awarded yearly to a junior or senior majoring in any Arts & Sciences discipline, have demonstrated financial need, be of good moral character, and have a minimum GPA of 2.75. Recipients must be residents of the state of Mississippi.

Hugh and Pequita Latimer Endowed Fund for Excellence - this fund may be used to promote excellence in the College of Arts & Sciences. As such, it may be used to support various supplemental activities that complement, enhance, or expand the mission of the College, including the awarding of scholarships.

DEPARTMENT SCHOLARSHIPS

DEPARTMENT OF AEROSPACE STUDIES (U.S. Air Force ROTC)
Inquiries should be directed to: Department Head, Department of Aerospace Studies, P. O. Box AF, Mississippi State, MS 39762.

Air Force ROTC Scholarships
High school seniors - any major, must have 3.0 GPA and 24 ACT to apply. Must apply by December 1 of their senior year. Four year scholarships available; full tuition, books, and monthly stipend.

In-college Scholarship - any major, must have a 2.5 Cum GPA to apply. Must be enrolled in the Air Force ROTC program to apply for January deadline. Students not currently enrolled in Air Force ROTC must submit application by June 30. Must pass Air Force Officer Qualifying Test (AFOQT). Must pass the physical fitness test and the medical evaluation. Two and three-year scholarships available; full tuition, books, and monthly stipend.

Express Scholarship - eligible sophomores, juniors, seniors, or graduate students only; for specific technical major with 2.5 GPA may apply; must be enrolled in Air Force ROTC. Must pass Air Force Officer Qualifying Test (AFOQT). Must pass the physical fitness test and medical evaluation. One, two, and three year scholarships available; tuition, books, and monthly stipend.

DEPARTMENT OF MILITARY SCIENCE (U.S. Army ROTC)
Inquiries should be directed to: Head, Department of Military Science, P.O. Box 5447, Mississippi State, MS 39762.

Army ROTC Alumni Fund – offset room and board expenses for a three- or four-year Army ROTC scholarship recipient with good moral character and leadership ability.

Msgt. George Arthur Nowlin Endowed Scholarship/Leadership Award – junior- or senior-level student in the U.S. Army ROTC program.

Retired Officers’ Association (TROA) Leadership Award – award alternates between Army and Air Force ROTC units each year. Full-time third-year cadet with at least 75 credit hours toward the degree and with demonstrated leadership qualities and potential for exemplary military service.

DEPARTMENT OF BIOLOGICAL SCIENCES
Inquiries should be directed to: Head, Department of Biological Sciences, P.O. Box GY, Mississippi State, MS 39762.

J. Scott Ferguson, M.D., Endowed Memorial Scholarship – awarded to full-time student planning to attend medical school in sciences (e.g., physics, chemistry, engineering).

Dr. William E. Gardiner Memorial Award – awarded to full-time student in plant sciences and/or genetics (e.g., biological sciences, biochemistry, agronomy, horticulture).

H. H. Harned, Sr. Endowment in Microbiology - endowed by the Harned family; awarded to a microbiology major on the basis of merit.
Louvenia Henderson Memorial Pre-Med Scholarship - donated by friends in memory of Louvenia Henderson; awarded on the basis of merit to a pre-med or pre-dental student by the Pre-Med Advisory Committee.

John C. Longest Pre-Med Scholarship – donated by friends to honor the physician’s years of service to MSU; awarded on the basis of merit.

Mabry-Clark Memorial Scholarship in Biological Sciences – awarded to full-time female students in biological sciences (pre-medicine, pre-veterinary medicine, and medical technology majors).

Ramsay and Elaine O’Neal Scholarship – endowed by MSU medical alumni for freshmen pre-med majors; awarded and renewable for four years on the basis of merit and academic accomplishment.

Dr. Coy E. Patton Memorial Fund – awarded to full-time pre-dentistry students.

Mildred Watkins Brand Pre-Med Scholarship – established by Mrs. Brand in memory of her parents, Dr. and Mrs. Charles A. Watkins; awarded annually to a pre-med student by the University Scholarship Committee from the recommendations received from the Pre-Med Advisory Committee; awarded on the basis of financial need and merit.

DEPARTMENT OF CHEMISTRY

Inquiries should be directed to: Scholarship Chair, Department of Chemistry, Box 9573, Mississippi State, MS 39762.

Alumni Scholarship - awarded to incoming freshman, offered at Spring Discovery Day to the winner of the Chemistry Competition. Distributed in increments per semester for a maximum of 8 semesters and is contingent upon maintaining an overall 3.0 QPA or better and remaining a full-time student majoring in chemistry.

The Behr Scholarship – awarded to a junior or senior chemistry major in the ACS curriculum. Distributed in increments for two semesters. Student must maintain a 3.0 or better QPA. Funds provided by children of Dr. Lyle Behr.

Chemistry Book Scholarship – awarded to second semester freshmen through first semester seniors. Distributed each semester according to QPA for previous semester. Student must maintain at least a 3.2 semester average and be a full-time student, chemistry major. Funds provided by donations from friends and alumni, and are disbursed as long as funds allow.

Hunter Henry Scholarship – awarded to incoming freshman. Distributed in increments each semester for 8 semesters. Student must maintain at least a 3.0 QPA and remain a full-time student majoring in chemistry.

Peeples Endowed Scholarship – awarded to a sophomore student who must have achieved a minimum of 3.0 QPA and is a full-time student, chemistry major. Show financial need. The scholarship will be awarded on a year to year basis. A student who is the recipient one year is eligible for consideration in any other year; however, they must again comply with the selection criteria.

Sheely Scholarship – awarded to a full-time freshmen or an incoming freshman. Distributed in increments for 2 semesters. Student must maintain at least a 3.25 QPA; incoming freshman must have 90 or better average. The scholarship will be awarded on a year to year basis. A student who is the recipient one year is eligible for consideration in any other year; however, they must again comply with the selection criteria.

Mary Virginia Simrall Endowed Scholarship – awarded to a full-time chemistry major engaged in an original research project with a member of the chemistry faculty. The student must maintain a minimum of 2.5 QPA on a 4.0 scale.

Don G. Wright Memorial Scholarship – awarded to entering freshman and sophomore or junior college transfer students. Student must maintain a 3.0 or better QPA, be a full-time student and a chemistry major. The scholarship will be awarded on a year to year basis. A student who is the recipient one year is eligible for consideration in any other year; however, they must again comply with the selection criteria.

All Chemistry majors are automatically considered for all departmental scholarships for which they are eligible. Notifications of scholarship recipients are made at various times throughout the year.

It is possible that the Chemistry Department may employ undergraduate majors to work in the laboratories. Interested students should check with their academic advisor. Likewise, stipends are often available for undergraduates who wish to perform research. Please discuss this with your advisor.

DEPARTMENT OF COMMUNICATION

Inquiries should be directed to: Scholarship Chair, Department of Communication, P.O. Box PF, Mississippi State, MS 39762.

Turner Catledge Scholarship – endowed by the New York Times and friends of the Catledge family in memory of Mr. Catledge, Managing Editor, Executive Editor, and Vice-President of the New York Times; awarded to Communication majors on the basis of need and professional promise.

Founders Scholarships – endowed by faculty, alumni, and friends of the department in honor of four emeritus faculty who were instrumental in the creation of MSU’s Communication programs: Robert G. Anderson, Dominic J. Cunetto, E. Samuel Dudley, and Henry F. Meyer. Awarded on the basis of academic achievement and professional talent.

Earl Love Guyton Scholarships – endowed by the Guyton family in honor of a former student who served as editor of the Reflector; awarded annually to juniors and/or seniors majoring in communication; based on demonstrated merit, need, and community service/involvement.

Paula Mabry Scholarship - funded by Don and Paula Mabry; awarded annually to theatre students, based on contributions and promise in theatre.

Helen and Joe Phillips Scholarships – endowed by their sons Norvell Williams and Joe Phillips; awarded annually to a junior and senior communication students, with priority given to broadcasting students; based on academic record and leadership ability.

Aggie G. Weems Scholarship in Journalism – endowed by Mrs. A. G. Weems; awarded to junior and senior communication students, with priority given to journalism students; based on academic record.

DEPARTMENT OF ENGLISH

Inquiries should be directed to: Head, Department of English, P.O. Box E, Mississippi State, MS 39762.

The Eugene Butler Scholarships for Creative Writing – endowed by Mr. Eugene Butler; awarded annually to support effective writers selected in competition.

The Daze/Brashier Scholarship

Howell H. Gwin Scholarships in English – endowed by Mrs. H. H. Gwin, the MSU faculty in English, and the friends of Howell H. Gwin; upper-division and graduate scholarships awarded annually on the basis of applicants’ academic abilities and needs.

The William H. Magruder Memorial Scholarship – endowed by Mrs. Samuel Kelsall in honor of her great grandfather, Dr. William H. Magruder, one of the first professors of English at Mississippi State; awarded annually to upper-division and graduate student English majors from Mississippi.

George B. Nutt Scholarship – established by Mr. George B. Nutt in memory of a former member of the department, Thomas F. Brackin; awarded annually to undergraduate English majors, first preference to lower-division students and to applicants from Clarke County, MS, when available.

The Helen W. Skelton Scholarship - endowed by Mr. Emory Skelton; awarded annually to undergraduate English majors with high academic achievement, good moral character, demonstrated leadership abilities, and financial need.

Creative Writing Scholarship

Lewis and Betty Nolan Endowed Book Fund
DEPARTMENT OF FOREIGN LANGUAGES
Inquiries should be directed to: Head, Department of Foreign Languages, P.O. Box FL, Mississippi State, MS 39762.

James R. Chatham Scholarship – awarded to full-time students majoring in foreign languages who are residents of the state.

H. Stennis “Judge” Little, Sr. Scholarship – awarded to full-time students majoring in foreign languages who are residents of the state.

James H. Williams Scholarship – awarded to full-time students majoring in foreign languages who are residents of the state.

DEPARTMENT OF HISTORY
Inquiries should be directed to: Head, Department of History, P.O. Box H, Mississippi State, MS 39762.

A.W. Garner Endowed Scholarship – awarded annually to full-time history majors.

A.W. Garner Undergraduate Scholarship – awarded annually to full-time history majors.

James W. Garner Undergraduate Scholarship – awarded annually to full-time history majors.

James Wilford Garner Graduate Fellowship - awards three fellowship annually to incoming masters students based on scholarly excellence.

John F. Marszalek Family Scholarship – awarded to full-time students majoring in history.

John C. Whittaker Endowed Scholarship - awarded to full-time African-American students majoring in history.

DEPARTMENT OF MATHEMATICS AND STATISTICS
Inquiries should be directed to: Head, Department of Mathematics and Statistics, P.O. Box MA, Mississippi State, MS 39762.

Frank L. Culley Memorial Scholarship – endowed by Colonel Frank L. Culley; awarded to one or more students majoring in mathematics.

A.W. Garner Scholarship – awarded to full-time students majoring in mathematics.

A.W. Garner Scholarship – awarded to full-time students majoring in mathematics.

Christopher Randolph Stark Memorial Scholarship in Mathematics – donated by Miss Betsy Stark and the Stark family; awarded to one or more students majoring in mathematics.

Dolores M. and John L. Tilley Scholarship – endowed by Dolores M. and John L. Tilley; awarded to students majoring in mathematics.

Quay Webb Camp Scholarship – awarded to full-time students majoring in mathematics.

DEPARTMENT OF PHYSICS AND ASTRONOMY
Inquiries should be directed to: Head, Department of Physics and Astronomy, P.O. Box 5167, Mississippi State, MS 39762.

Terry T. Crow Scholarship – awarded to full-time students majoring in physics.

Edward Fulton Scott Memorial Scholarship – awarded to students majoring in physics.

Larry and Judy Grillot Endowed Scholarship - awarded to students majoring in physics.

E. Irl Howell Scholarship in Physics – awarded to students majoring in physics.

Hunter Henry Scholarship – awarded to students majoring in physics.

Physics Scholarship Fund – awarded to students majoring in physics.

M. Stanley Rundel Memorial Scholarship – awarded to students majoring in physics.

DEPARTMENT OF GEO SCIENCES
Inquiries should be directed to: Head, Department of Geosciences, P.O. Box 5448, Mississippi State, MS 39762.

Bahamian Field Studies Program Endowed Fund – established through the efforts of Bill Liebman, a friend of the Department who had participated in the Department’s Bahamian Field Program, and who wanted more students to be able to benefit from the Bahamian field experience. Undergraduate and graduate students apply for financial assistance to the Bahamian Scholarship Committee, and awards are made depending on the student’s need and academic record. The program is open to all students, but department majors are given first consideration. Award amounts vary from case to case.

Paul H. Dunn Memorial Scholarship – donated by Mr. Frederic Mellen, alumni, and friends of the Department of Geosciences in memory of Paul Dunn; awarded to one or more geology majors on the basis of the following criteria: must have completed at least one semester at Mississippi State University with a GPA of no less than 3.0/4.0 in all college work, and in all work in earth sciences; must demonstrate promise as a future professional geologist (as determined by faculty in the department).

Gordon Gulmon Memorial Scholarship – endowed by the late Gordon W. Gulmon; awarded by the faculty of the department on the basis of scholarship to the junior or senior majors with the best overall scholastic records. The overall records in earth science courses may be used in cases of multiple persons with identical overall records. It is possible for a student to receive this award two times - once as a junior, once as a senior. The student must have an overall GPA of 3.0/4.0.

Frederic F. Mellen Scholarship – in memory of Mr. Frederic Mellen; awarded to one or more geology majors who schedule the Summer Field Geology course for that specific summer. The scholarship is awarded based on grades, promise as a future professional geologist, and needs of the student. Interested students should file an application with the department.

DEPARTMENT OF MATHEMATICS AND STATISTICS
Inquiries should be directed to: Head, Department of Mathematics and Statistics, P.O. Box MA, Mississippi State, MS 39762.

Christopher Randolph Stark Memorial Scholarship in Mathematics – donated by Miss Betsy Stark and the Stark family; awarded to one or more students majoring in mathematics.

Paul H. Dunn Memorial Scholarship – donated by Mr. Frederic Mellen, alumni, and friends of the Department of Geosciences in memory of Paul Dunn; awarded to one or more geology majors on the basis of the following criteria: must have completed at least one semester at Mississippi State University with a GPA of no less than 3.0/4.0 in all college work, and in all work in earth sciences; must demonstrate promise as a future professional geologist (as determined by faculty in the department).

Dolores M. and John L. Tilley Scholarship – endowed by Dolores M. and John L. Tilley; awarded to students majoring in mathematics.

Quay Webb Camp Scholarship – awarded to full-time students majoring in mathematics.

DEPARTMENT OF PHYSICS AND ASTRONOMY
Inquiries should be directed to: Head, Department of Physics and Astronomy, P.O. Box 5167, Mississippi State, MS 39762.

Terry T. Crow Scholarship – awarded to students majoring in physics.

Edward Fulton Scott Memorial Scholarship – awarded to students majoring in physics.

Larry and Judy Grillot Endowed Scholarship - awarded to students majoring in physics.

E. Irl Howell Scholarship in Physics – awarded to students majoring in physics.

Hunter Henry Scholarship – awarded to students majoring in physics.

Physics Scholarship Fund – awarded to students majoring in physics.

M. Stanley Rundel Memorial Scholarship – awarded to students majoring in physics.

DEPARTMENT OF GEOSCIENCES
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Gordon Gulmon Memorial Scholarship – endowed by the late Gordon W. Gulmon; awarded by the faculty of the department on the basis of scholarship to the junior or senior majors with the best overall scholastic records. The overall records in earth science courses may be used in cases of multiple persons with identical overall records. It is possible for a student to receive this award two times - once as a junior, once as a senior. The student must have an overall GPA of 3.0/4.0.

Frederic F. Mellen Scholarship – in memory of Mr. Frederic Mellen; awarded to one or more geology majors who schedule the Summer Field Geology course for that specific summer. The scholarship is awarded based on grades, promise as a future professional geologist, and needs of the student. Interested students should file an application with the department.

DEPARTMENT OF HISTORY
Inquiries should be directed to: Head, Department of History, P.O. Box H, Mississippi State, MS 39762.

A.W. Garner Endowed Scholarship – awarded annually to a graduate student in good standing in the History program. Has demonstrated outstanding academic achievement. Awarded on a year to year basis. Recipient may re-apply.

A.W. Garner Scholarship – awarded annually to one or more full-time history majors with sophomore or higher class standing. Superior performance in college level history courses. Financial need not a requirement but may be considered.

James W. Garner Undergraduate Scholarship – awarded annually to one or more undergraduate students. Awards made on basis of scholarly excellence.

James Wilford Garner Graduate Fellowship - awards three fellowship annually to incoming masters students based on scholarly excellence.

John F. Marszalek Family Scholarship – awarded to students with high ACT scores.

John C. Whittaker Endowed Scholarship - awarded to full-time African-American students majoring in history.

DEPARTMENT OF MATHEMATICS AND STATISTICS
Inquiries should be directed to: Head, Department of Mathematics and Statistics, P.O. Box MA, Mississippi State, MS 39762.

Frank L. Culley Memorial Scholarship – endowed by Colonel Frank L. Culley; awarded to a junior or senior level student majoring in mathematics.

A.W. Garner Scholarship – awarded to students majoring in mathematics.

A.W. Garner Scholarship – awarded to students majoring in mathematics.

Christopher Randolph Stark Memorial Scholarship in Mathematics – donated by Miss Betsy Stark and the Stark family; awarded to one or more students majoring in mathematics.

Dolores M. and John L. Tilley Endowed Scholarship – endowed by Dolores M. and John L. Tilley; awarded on an annual basis to two mathematics majors, one junior-level and one senior-level, on the basis of academic achievement in the mathematics courses required of the mathematics major. Must have completed all required freshman and sophomore mathematics courses with a minimum 3.2 GPA with overall minimum of 3.0.

Quay Webb Camp Scholarship – awarded to full-time students majoring in mathematics.

DEPARTMENT OF PHYSICS AND ASTRONOMY
Inquiries should be directed to: Head, Department of Physics and Astronomy, P.O. Box 5167, Mississippi State, MS 39762.

Terry T. Crow Scholarship – awarded to students majoring in physics.

Edward Fulton Scott Memorial Scholarship – awarded to students majoring in physics.

Larry and Judy Grillot Endowed Scholarship - awarded to students majoring in physics.

E. Irl Howell Scholarship in Physics – awarded to students majoring in physics.

Hunter Henry Scholarship – for freshman residents of Mississippi majoring in chemistry or physics, with a minimum composite ACT score of 25 and demonstrated academic achievement and financial need.

Physics Scholarship Fund

Clifford A. Rose Scholarship – donated by family, former students and friends of the former physics professor; awarded on the basis of merit to a freshman physics major.

M. Stanley Rundel Memorial Scholarship – donated by Dr. Robert D. Rundel and family in memory of his father; awarded on the basis of merit to a freshman physics major.
COLLEGE SCHOLARSHIPS

Inquiries should be addressed to: Sara Freedman, Dean, College of Business and Industry, P.O. Box 5288, Mississippi State, MS 39762.

The Richard and Charlotte Armstrong Annual Scholarship - established by Richard and Charlotte Armstrong in memory of Margaret Weems Armstrong. Full time COBI students who have demonstrated academic achievement. Must be of good moral character and have demonstrated leadership ability and financial need. Preference given to students who graduate high school in Lauderdale County.

James K. Ashford Business Honors Program - established by James and Jacque Ashford for graduates of Mississippi high schools with good moral character, financial need; academic and leadership achievement.

Tommy and Peggy Brooked Endowed Scholarship - established by Tommy and Peggy Brooks. Full time COBI students with a minimum of a 3.0 GPA based on a 4.0 scale.

Albert C. Clark Scholarship - established by Albert and Glenda Clark. No guidelines set.

William and Jo Ann Clark Endowed Scholarship - established by Tony Clark in honor of his parents. This scholarship is for full-time students majoring in Finance, Accounting, Business Administration or Marketing. Student must have financial need, demonstrate leadership skills, and show involvement in community activities.

Ferrill D. & Elsa M. Battley Endowed Scholarship - donated by Ferrill and Elsa Battley of Madison, Miss., in honor of their three children; for juniors and seniors in Business; guidelines to be established.

Marjorie M. Clark Scholarship - established by Walt Newsom for full-time junior or senior female students enrolled in the College of Business and Industry with a minimum of 3.0 GPA, good moral character, and financial need.

Craft Scholarship - donated by Mr. and Mrs. William T. Wise in memory of their daughter Cathy Denise Craft; awarded each fall and spring semesters; available to all classes on the basis of need and merit. Awarded on a year-to-year basis. A student who is a recipient one year is eligible for consideration in any other year.

Clifford Dewitt Dalton Endowed Scholarship - established by Bill, Becky, and Will Dalton and AmFed Companies in memory of Cliff Dalton. Cliff was a 2001 graduate in General Business Administration. This scholarship is available to full-time students majoring in General Business Administration, Insurance, or Financial Services who maintain a 2.0 GPA; have shown financial need; are a natural born citizen of the United States; and have graduated from high school in the United States.

Clifford Dewitt Dalton Memorial Scholarship - established by Clifford and Mildred Worsham in memory of their grandson, Cliff Dalton. This scholarship has the same guidelines as the Clifford Dewitt Dalton Endowed Scholarship.

Betty Scales Bernard Douglas Memorial Scholarship - established by friends in memory of Betty Douglas, a 1942 graduate of the College of Business who served as Executive Secretary to Presidents of Mississippi State University from 1952 to 1984. This scholarship is awarded each fall and spring semesters; available to a junior or senior whose major is in the College of Business and has a minimum GP of 3.2 and who has demonstrated a financial need. Awarded on a year-to-year basis. A student who is a recipient as a junior is eligible for consideration as a senior.

John N. Dowdle Endowed Scholarship Fund - established by John N. Dowdle for students enrolled in the College of Business and Industry with good moral character, leadership ability, civic interest, and financial need.

Walter J. “Duke” Endowed Scholarship - established by Dr. Shirley F. Olson. Undergrad student or incoming freshmen enrolled in COBI with financial need and good work ethic and leadership skills. Must maintain a 3.0 GPA on a 4.0 scale. Preference will be given to students who are the first generation in their family to attend college.

Durward B. Dunn, Jr. Memorial Fund - established for a junior student in the College of Business & Industry with a minimum 3.0 GPA and financial need.

Bester M. Files Memorial Endowment - no established guidelines for students.

A.W. Garner Scholarship - in memory of A.W. Garner; awarded to a deserving student in the College of Business and Industry.

Charles H. Griffin Memorial Scholarship - established for a student in the College of Business & Industry with at least 60 earned credit hours; must have a minimum 3.0 GPA and good moral character with demonstrated leadership ability, civic interest, and financial need; junior college transfer students are eligible.

John Grisham Scholarship for Excellence - established for undergraduate students in the College of Business & Industry; must be at least a junior at the beginning of the relevant fall semester with a minimum of 30 hours in residence at MSU; must have a minimum 3.0 GPA.

Elizabeth Harrington Scholarship - established by Miss Harrington’s major commitment of support. Scholarship will be awarded each fall and spring semesters to a College of Business student with financial need, good character, active in college activities, and in good academic standing.
Henry Family Scholarship in Business and Industry - established by Hunter W. Henry for an entering freshman who is a full-time student majoring in finance; must have demonstrated financial need, be a resident of Mississippi, have a minimum ACT score of 26, and have displayed academic achievement and involvement in extracurricular activities.

Roland H. Hough, Jr. Endowed Scholarship - established by Roland H. Hough, Sr. and Bobbye Hough for their love and affection for their son, Roland H. Hough, Jr.; awarded to graduates of Mississippi high schools with high academic and leadership achievement, a financial need and good moral character.

L.A. Hurst, Jr. Endowment Fund - established by Louis A Hurst, Jr., a 1949 graduate of the College of Business. This scholarship is available to students majoring in the College of Business and Industry with a GPA of 3.0 or higher, strong moral and ethical character, and financial need. Students in all undergraduate classifications are eligible to apply.

Larry and Pam Jones Endowed Scholarship - established by Larry and Pam Jones for a full-time student enrolled in the College of Business and Industry with a minimum 3.0 GPA.

Dr. S. Roland Jones Memorial Scholarship - established for a full-time student in the Professional Golf Management (PGM) Program in the College of Business & Industry; student must have earned at least 60 credit hours, be PGM students in “good standing” (minimum 2.5 GPA with no grade below a C in co-op work experience and no PGM probation); must be of good moral character and have demonstrated leadership ability and financial need.

Kerry D. Kimbrough Memorial Scholarship - set up by his parents, Floyd and Bea Kimbrough and his brother, Rick Kimbrough for Mississippi residents only in junior year for fall and spring semester on the basis of need, merit, and a minimum GP 2.75.

H. Stennis “Judge” Little Scholarship - established for a student with a 3.0 minimum GPA, good moral character, leadership, and financial need. Selected by International Business Program faculty members and Director of International Business Program.

W. W. Littlejohn Scholarship - donated by alumni and friends of W. W. Littlejohn, Associate Dean Emeritus; awarded to juniors and seniors enrolled in the College of Business with a minimum of 30 hours in residence at Mississippi State University. Minimum GP 3.0 and consideration given to financial need.

Jack Locke Memorial Endowed Scholarship - established in memory of Jack Locke, a 1940 College of Business and Industry graduate. This scholarship is for full-time students enrolled in the College of Business and Industry. Students must be in good standing.

Lewis and Pie Mallory Endowed Scholarship - established by Lewis and Pie Mallory for full-time students with a minimum of 3.2 GPA in business courses; preference given to students demonstrating a financial need.

Don E. Mason/Mississippi Power Company Endowed Scholarship in Business - established by Don E. Mason for full-time undergraduate students enrolled in the College of Business and Industry; must be majoring in finance, business administration, marketing, or accounting; must be residents of Mississippi with preference given to residents of Mississippi Power Company’s 23-county service area; must have academic achievement and leadership skills.

The Garland J. McCool Scholarship Endowment - established by Ron J. and Carol McCool Ponder in memory of Garland J. McCool; awarded each fall and spring semesters; available to a junior or senior on the basis of need, merit, academic record of any combination. A student who is the recipient as a junior is eligible for consideration as a senior.

John G. and Karen J. McCord Endowed Scholarship - established by John and Karen McCord for graduates of Mississippi high schools majoring in Accounting or Finance. Applicants must have good moral character, financial need and a 3.0 GPA.

Merchants and Farmers Bank Endowed Scholarship - income from this endowment scholarship provided by Merchants and Farmers Bank is to be awarded for the fall and spring semesters of each year on the basis of academic performance, need, and demonstrated leadership potential. The scholarship is to be available to undergraduate majors only. The recipient will be from counties in Mississippi which have Merchants and Farmers banks; and who must express a desire to work in Mississippi following graduation. A student who is the recipient one year is eligible for consideration in any other year.

Harry G. Mock Memorial Scholarship - established for a full-time student in the College of Business & Industry (must have earned at least 60 credit hours toward degree); must have a minimum 3.0 GPA and be of good moral character with demonstrated leadership ability, civic interest, and financial need; must also be working towards a degree with a career in outside sales; community college transfer students are eligible.

Davis and Ann Mortensen Endowed Scholarship - donated by Davis and Ann Mortensen; established for full-time undergraduate or graduate students enrolled in the College of Business and Industry who have composite ACT score of 26 or greater; records of academic achievement; and demonstrated leadership skills.

MS Export Railroad Co. Endowed Scholarship - established by Mississippi Export Railroad Company. Full time students enrolled in the field of Transportation in Department of Marketing with good leadership ability and a minimum of a 3.0 GPA on a 4.0 scale.

Munro Petroleum Endowed Scholarship - established by Munro Petroleum and Terminal Corporation. Full time COBI student with minimum of 3.0 GPA on a 4.0 scale and be from a Mississippi Gulf Coast County.

Heard and J.J. Murphy Endowed Scholarship - established by Heard and J.J. Murphy. Full time COBI students of good moral character that have demonstrated academic achievement, leadership ability and financial need.

National Bank of Commerce of Mississippi Scholarship Fund - established for minority junior or senior students in the College of Business. Scholarship will be awarded fall and spring semesters on the basis of financial need, academic performance and demonstrated leadership potential and be from counties in MS which National Bank of Commerce of Mississippi serves.

Dr. Shirley F. Olson Endowed Scholarship - established by Walter J. Olson, III. Undergrad student or incoming freshmen enrolled in COBI with financial need and good work ethic and leadership skills. Must maintain a 3.0 GPA on a 4.0 scale. Preference will be given to students who are the first generation in their family to attend college.

Verdis Ramsay Memorial Scholarship - established by Ruth S. Ramsay for full-time students enrolled in the College of Business and Industry who have demonstrated academic achievement, leadership ability and financial need.

Wyleth T. Ramsey Memorial Scholarship - donated by Mrs. Wyleth T. (Lysbeth) Ramsey of Yazoo City, Miss.; for juniors and seniors in Business with a 3.0 or above GPA; must be a graduate of a public high school in Yazoo, MS.

Rothchild Endowed Scholarship - established by W. Rothchild Jr. Full time COBI students with a minimum of a 3.0 GPA on a 4.0 scale or a score of 23 or higher on the ACT. Have shown leadership skills, strong moral character and financial need.

Dr. J. William Rush Annual Scholarship Fund - donated by Kenneth M. Burns and Frederick Conner Burns, Jr. in honor of Dr. Bill rush for 35 years of unselfish dedication to students; awarded to full-time juniors and seniors enrolled in the College of Business & Industry with at least 60 hours credit towards degree; must have a minimum 2.5 GPA; must be of good moral character and have demonstrated leadership ability and financial need.

Southeastern Home Furnishings Association Annual Scholarship - established by the Southeastern Home Furnishings Association in memory of Michael Gilchrist. Be a full time junior or senior majoring in furniture management and have maintained a 2.5 GPA on a 4.0 scale. Be from the Southeastern region of the United States with preference given to students from Alabama, Mississippi, Louisiana or NorthWest Florida. Plan on starting a career in the furniture industry after completion of the Furniture Management program at MSU.

J.B. Stroud Human Resource Management Scholarship - established by Roberta Stroud in memory of her late husband J.B. Stroud for full-time College of Business and Industry students who have completed 60 hours toward the degree (Community and Junior College transfer students are eligible), demonstrated academic achievement by having a minimum of 3.0 GPA, be of good moral character and demonstrated leadership ability, civic interest and financial need. Open to students working toward a B.B.A degree in Management with emphasis in Human Resource Management.
Sunburst Endowed Scholarship Fund - established for graduates of Mississippi and Louisiana high schools and any other state in which Sunburst may operate: students must have proven academic achievement; leadership achievement, and must have a financial need; must be of good moral character.

Mary Alice and R. Glenn Taylor Scholarship - donated by Mary Alice and R. Glenn Taylor of Memphis; established for full-time College of Business and Industry students who have earned at least 60 credit hours toward their degree; demonstrated academic achievement by having a minimum 3.0 GPA; of good moral character; and have demonstrated leadership ability, civic interest and financial need. Community and junior college transfer students are eligible and are encouraged to apply.

Anthony Thomas Annual Scholarship - established by Anthony and Sheryl Thomas. Full time undergraduate COBI student with good moral character and leadership skills from Jackson, MS or the immediate surrounding area. Have a 3.0 GPA or higher on a 4.0 scale and a score between 20 and 27 on the ACT for incoming freshmen. Students with financial need will be given preference.

Bud and Sue Thompson Endowed Scholarship - established by Mr. and Mrs. J.F. Thompson, Jr. for full-time students enrolled in the College of Business and Industry who have demonstrated academic achievement by maintaining a minimum of 3.0 GPA.

Russell A. Weathersby Endowed Scholarship - donated by Russell A. Weathersby of Germantown, TN; established for full-time College of Business and Industry students who have earned at least 60 credit hours toward their degree; demonstrated academic achievement by having minimum 3.0 GPA; be of good moral character; and have demonstrated leadership ability, civic interest and financial need.

Norma Jean Whiteside Scholarship - established by Joseph B. Whiteside as a tribute to Norma Jean Whiteside; must be a College of Business & Industry student with a minimum of 30 hours towards degree (Community and junior college transfers students are eligible); must be a full-time student in the semester Scholarship is to be received; must have a minimum 3.00 GPA and be of good moral character; must demonstrate leadership ability, civic interest, and financial need.

SCHOOL/DEPARTMENTAL SCHOLARSHIPS

Some academic units in the College of Business and Industry award scholarships which have been established by gifts to these units. Students who have declared majors in these units may apply by writing to the addresses indicated.

SCHOOL OF ACCOUNTANCY

Inquiries should be addressed to Dan Hollingsworth, Director, School of Accountancy, P.O. Box EF, Mississippi State, MS 39762.

The Troy Baldwin Memorial Accounting Scholarship - donated by Mr. and Mrs. Fred Baldwin in memory of Troy Baldwin; awarded to a junior or senior.

Mark David Brasfield Memorial Accounting Scholarship - donated by Mr. and Mrs. Lee Brasfield and Arthur Anderson & Company in memory of Mark David Brasfield; presented to a junior.

Cellular South Endowed Scholarship - in accounting for entering freshmen.

Eubank and Betts Graduate Assistantship - donated by Eubank & Betts, Certified Public Accountants, Jackson, Miss; awarded to a graduate student residing in the Jackson area.

W. M. Gulledge, Sr., Memorial Scholarship for Senior - donated by Mrs. W. M. Gulledge, Sr. and Morgan Gulledge in memory of Mr. W. M. Gulledge, Sr.; presented to a senior residing in the Leflore and Washington county area.

W. M. Gulledge, Sr., Memorial Scholarship for Junior - donated by Mrs. W. M. Gulledge Sr. and Morgan Gulledge in memory of Mr. W. M. Gulledge, Sr.; presented to a junior residing in the Leflore and Washington county area.

All inquiries should be addressed to Dr. Paul Grimes, Head, P.O. Box 9580, Mississippi State, MS 39762.

Theo H. Dinkins, II Family Scholarship - awarded to juniors and seniors majoring in Real Estate and Mortgage Finance and who are pursuing a career in real estate upon graduation.

Lonnie S. and Ida Mae Dyess Scholarship - donated by Lonnie S. Dyess, Jr. family in honor of his parents; awarded in alternate years to a junior or senior pre-medical student or economics majors with a minimum QP of 2.5. Need will be considered.

George B. Pickett/James A. Wheeler Insurance Scholarship - applicant must be a junior or senior majoring in insurance with an overall GPA of 3.0.

The Orrin Swayze Scholarship - donated by Young Bankers Section of the Mississippi Bankers Association in honor of Arrin Swayze; awarded to banking and finance majors in competition with banking and finance majors at other universities in Mississippi.

Richard G. (Dick) Wiggers Scholarship - established by Jimmy Galloway in honor of Dick Wiggers. This scholarship is for juniors and seniors majoring in Insurance and Risk Management. Students must maintain a 2.8 GPA or higher.

DEPARTMENT OF MARKETING, QUANTITATIVE ANALYSIS & BUSINESS LAW

All inquiries should be addressed to Dr. Brian Engelland, Head, Box 9582 Mississippi State, MS 39762.

Klumb Lumber Company Scholarship - donated by Klumb Lumber Company; awarded to a freshman marketing major with at least a 3.25 GPA, preferably from the Mississippi Gulf Coast.

PROFESSIONAL GOLF MANAGEMENT

All inquiries should be addressed to Jeff Adkerson, Coordinator, PGM, Box 6217, Mississippi State, MS 39762.

Gary Chitton Memorial Scholarship - established by friends of Gary Chitton in his memory. This scholarship is available every three years starting in 2003 to full-time students majoring in Professional Golf Management. Students must show financial need and have at least a 3.0 GPA on a 4.0 scale.

Golf Manufacturer’s and Distributors Association Scholarship - established by the GMDS which represents U. S. and International companies who manufacture and distribute golf related items for a student majoring in Professional Golf Management. Minimum requirements are: MSU cumulative GPA of 2.50, eight months of completed coop with grade of B or better, and no PGM probation. Active participation in the PGM Club and other campus and community activities are considered.

Wyatt B. Hodges–George D. Perry Memorial Scholarship in Golf - Enrolled in academic area at MSU which supports the golf industry, with plans to possibly be employed in golf industry; demonstrated academic achievement and good moral character.
PGA Gulf States Section Mississippi Scholarship - established by the Gulf States Section of the Professional Golfers’ Association of America for a Mississipi resident majoring in Professional Golf Management. Minimum requirements are: MSU cumulative GPA of 2.50, eight months of completed cooper with grade of B or better, and no PGM probation. Active participation in the PGM Club and other campus and community activities are considered.

PGA Gulf States Section Louisiana Scholarship - established by the Gulf States Section of the Professional Golfers’ Association of America for a Louisiana resident majoring in Professional Golf Management. Minimum requirements are: MSU cumulative GPA of 2.50, eight months of completed coop with grade of B or better, and no PGM probation. Active participation in the PGM Club and other campus and community activities are considered.

PGA Minority Scholarship - established by the Professional Golfer’s Association of America. The purpose of these scholarships is to provide financial assistance to deserving PGM minority students, and/or PGM minority applicants planning to enroll in the Professional Golf Management Programs at universities having PGM programs endorsed by the PGA of America.

### COLLEGE OF EDUCATION SCHOLARSHIPS and MEMORIALS

**Clara Adele Self Andrews Music Scholarship** - established in her memory by her son, Dr. Lester Andrews. Applicants should be full-time students in the music department who have earned at least 60 credit hours. Applicants should demonstrate musical and academic ability and promise.

**Jack L. Beall Scholarship** - donated by Mr. Jack L. Beall, a 1953 College of Education graduate. This award is available to students majoring in a Math/Science field who plan to remain in Mississippi and teach for a minimum of two years after graduation. The award is based on a minimum GPA of 3.0 and demonstrated academic achievement.

**President George Bush Scholarship** - established by MSU in honor of President Bush’s commitment to education: to be awarded to an outstanding senior education major.

**Barry F. Box Memorial Scholarship** - established by the College of Education Alumni Association in memory of Barry F. Box; awarded to a College of Education undergraduate student on the basis of Scholarship.

**Nan Carpenter Cain Endowed Scholarship** - established by Wilmot, Brian, and Mark Cain in memory of Nan Carpenter Cain, a 1950 Industrial Arts Education graduate, who was named “Miss Industrial Education.” The scholarship is to be given annually to a full-time student majoring in Technology and Education. Awarded on the basis of academic achievement (a minimum GPA of 3.0) and financial need.

**Julia Higgins Carskadon Early Childhood Education Fund** - established by the Morningstar Foundation in memory of Julia Carskadon; awarded to a full-time doctoral student in Curriculum and Instruction with an emphasis in early childhood education. Minimum 3.5 GPA on a 4.0 system.

**Choral Ensemble Annual Scholarship** - established by Walter and Ellen Newsom to be given annually to a student who is a resident of the state of Mississippi. Awarded on the basis of academic achievement (a minimum GPA of 3.0) and participation in the Choral Ensemble.

**Durward Dunn Physical Education Scholarship** - donated by Paul Dunn in memory of his father, Mr. Durward Dunn. Awarded to student majoring in Physical Education.

**Education Services Foundation Annual Scholarship** - established by the Education Services Foundation to be given annually to a student majoring in School Counselor Education. Awarded on the basis of academic achievement (a minimum GPA of 3.5).

**Lois C. Kaufman Endowment for Music Education** - established in the memory of Dr. Harold F. Kaufman. Applicants should be full time Music Education majors, rising seniors, with demonstrated musical and academic achievement.

**Herbert M. Handle Scholarship** - donated by faculty, family and friends in memory of former Distinguished Professor Herbert M. Handle.

**Merrill and Carrie Hawkins Scholarship** - established by the family of Dr. and Mrs. Merrill M. Hawkins for deserving juniors enrolled in the College of Education. Awarded on the basis of good moral character and demonstrated leadership ability.

**Leveck Freshman Piano Scholarship** - donated by Mr. and Mrs. Henry Leveck; awarded to the outstanding freshman piano major on the basis of competitive performance and first-semester grade-point average.

**Annie Laurie Lyle Piano Scholarship** - donated by the Starkville Nocturne Music Club in memory of Mrs. Annie Laurie Lyle, Charter music club member and prominent Starkville piano teacher; awarded annually to an undergraduate piano major on the basis of the most progress in piano study and performance.

**Ellen Ricci Special Education Scholarship** - donated by Mr. and Mrs. Armando Ricci in support of a student who is preparing to become a special education teacher. The Scholarship is awarded on the basis of merit.

**Francis N. Matthews Memorial Scholarship** - donated by Mrs. Louise M. Davis, in memory of Francis N. Matthews; awarded to students with desire to enter the teaching profession in Technology Education, on the basis of Scholarship and financial need.

**Deway and Marie Malouf Scholarship** - donated by Martha and Watts Ueltschey and George and Kathy Malouf in honor of their parents Deway and Marie Malouf. Awarded to students majoring in education. Priority given to students residing in Leflore County.

**Nancy Kubin Wallner Martin Scholarship** - established by Dr. Eugene F. Martin to be given annually to a full-time student majoring in Elementary, Secondary or Special Education. Awarded to an outstanding student in the College of Education.

**McClendon Scholarship-Special Education** - donated by Katherine McClendon Holliman in honor of her parents, Mr. and Mrs. H. T. McClendon; awarded on the basis of scholastic ability and need, by a Special Education Scholarship Committee.

**Merchants and Farmer Bank Endowed Scholarship** - income from this endowment Scholarship provided by Merchants and Farmers Bank is to be awarded for the fall and spring semesters of each school year on the basis of academic performance, need and demonstrated leadership potential. The Scholarship is to be available to undergraduate majors only. The recipient will be from counties in Mississippi which have Merchants and Farmers banks; and who express a desire to work in Mississippi following graduation. A student who is the recipient one year is eligible for consideration in any other year. Direct inquiries on the above scholarships to the Assistant to the Dean for Student Services, Box 9710, Mississippi State, MS 39762.

**Daniel R. Merrit Annual Scholarship** - established by Patsy Merrit in memory of Daniel R Merrit, a lifetime educator and a 1961 College of Education graduate; to be awarded to a full-time undergraduate student majoring in Secondary Education. Minimum 2.5 GPA with financial need.

**Hal and Joyce Polk Music Education Scholarship** - established by Hal and Joyce Polk to be given annually to a full-time student in the Department of Music Education. Awarded on the basis of academic achievement (a minimum GPA of 3.0) and musical ability (as evidence by an audition).

**Cheryl Prewitt Christian Voice and Music Scholarship** - donated by Mr. and Mrs. James W. Tennyson and Bill, and friends, in honor of Mr. and Mrs. John Tennyson, grandparents of Cheryl Prewitt, Miss America 1980; three scholarships, given annually to an entering freshman, a transfer student, and a resident student majoring in vocal music education. Awarded on the basis of character references and vocal competition.

**Rehabilitation Inc. Endowed and Annual Scholarship** - established by Sam Cox, Pete Mills, and Lance Robinson to help graduate students who are majoring in vocational rehabilitation or similar majors in the counselor education department. Awarded on the basis of academic achievement (maintaining a GPA of 3.0) and financial need.

**Lucinda H. Rose Scholarship** - donated by Dr. Vincent McGrath in memory of his wife and faculty member, Dr. Lucinda H. Rose. Awarded to eligible seniors majoring in elementary education.

**Royer/Scarborough Brass Scholarship** - established by Michael and Karen Brown to be given annually to a full-time returning music education major (incoming freshmen are not eligible). Awarded to an outstanding brass performer on the basis of academic achievement (maintaining a GPA of 3.0) and financial need.
Harold Smith-Baldwin Piano & Organ Company Fund - donated by Baldwin Piano & Organ Company in honor of Harold Smith, retiring President of Baldwin Piano & Organ Company; awarded to students enrolled in Industrial Technology, on the basis of Scholarship and financial need.

Wilburn P. Sudduth Physical Education Scholarship - donated by Etoyle Sudduth and family in memory of Mr. Wilburn P. Sudduth. Awarded to students majoring in the Teaching/Coaching concentration in Physical Education.

Katherine Gardner Thomas Memorial Piano Scholarship - donated by Mr. Garnett J. Thomas in memory of his wife; two scholarships awarded annually to freshman, sophomore, or junior piano majors, and one or two scholarships awarded to entering freshman or transfer students, all on competitive performance auditions. When an organ program becomes available at Mississippi State University, upperclass students enrolled in this program shall be eligible for the scholarships.

Cletora Tullos Piano Scholarship - donated by Mr. George Tullos in memory of his mother; awarded annually to an incoming freshman piano student majoring in music. Awarded on basis of candidate’s musical ability (as evidenced by an audition), Scholarship, and need. Direct inquiries on the above scholarships to the Assistant to the Dean for Student Services, Box 9710, Mississippi State, MS 39762.

Henry Wamsley Famous 40 Band Scholarship - donated anonymously to honor Mr. Henry E. Wamsley and the Famous 40 Band.

JAMES WORTH BAGLEY COLLEGE OF ENGINEERING SCHOLARSHIPS and MEMORIALS

JAMES WORTH BAGLEY COLLEGE OF ENGINEERING SCHOLARSHIPS and MEMORIALS

Most freshman and community college scholarships require that you submit a written application to the Department of Financial Aid and Scholarships and are based on potential as indicated by prior school performance and/or ACT/SAT scores. On the other hand, most College of Engineering upperclass and departmental scholarships are awarded to students based on performance in engineering curriculum.

Outstanding entering freshman are eligible to apply for the Engineering and Computer Science Excellence Scholarships. The Henry scholarships are limited to freshman who enroll in Chemical Engineering or Mechanical Engineering.

Hearin Foundation Scholarships - donated by Baldwin Piano & Organ Company in honor of Harold Smith, retiring President of Baldwin Piano & Organ Company; awarded to students enrolled in Industrial Technology, on the basis of Scholarship and financial need.

Katherine Gardner Thomas Memorial Piano Scholarship - donated by Mr. Garnett J. Thomas in memory of his wife; two scholarships awarded annually to freshman, sophomore, or junior piano majors, and one or two scholarships awarded to entering freshman or transfer students, all on competitive performance auditions. When an organ program becomes available at Mississippi State University, upperclass students enrolled in this program shall be eligible for the scholarships.

Cletora Tullos Piano Scholarship - donated by Mr. George Tullos in memory of his mother; awarded annually to an incoming freshman piano student majoring in music. Awarded on basis of candidate’s musical ability (as evidenced by an audition), Scholarship, and need. Direct inquiries on the above scholarships to the Assistant to the Dean for Student Services, Box 9710, Mississippi State, MS 39762.

Henry Wamsley Famous 40 Band Scholarship - donated anonymously to honor Mr. Henry E. Wamsley and the Famous 40 Band.
Lindamood Scholarship - guidelines in process
William T. Karnastadt Memorial Scholarship - guidelines in process.
Kerr McGee Scholarship - awarded to qualified engineering students.
Sam H. & Sandra K. Lee Scholarship - awarded to a qualified freshman engineering student; preferably a student from Forest or Pearl River County.
Donald E. Meiners/Entergy Scholarship - established to provide scholarships to qualified engineering students.
Mississippi Manufacturer's Association Scholarship - awarded to qualified Mississippi residents students majoring in Civil Engineering.
Mississippi Power Company Scholarship - established to award scholarships to qualified engineering students.
B.C. and Patricia Moore Scholarship - guidelines being established.
Frank T., Sr., and Gaines W. Moore Scholarships - established by the Moore family in memory of Frank T. Moore, Sr. '33, and in honor of Gaines W. Moore, '34. Awarded to a junior or senior in any engineering major on the basis of academic record with need also being a consideration.
MOTIVA Scholarship - established to provide scholarships to students enrolled in Chemical, Electrical, or Mechanical Engineering, or Computer Science on the basis of academic or other achievements and at the same time have a recognizable need for financial assistance.
Alton C. & Roberta R. Morris Scholarship - established to enable students with great financial need to pursue careers in engineering.
Frank E. Munn Memorial Scholarship - donated by Mrs. Frank E. Munn. Awarded to a junior or senior in Civil, Electrical, or Mechanical Engineering on the basis of merit and financial need.
H. P. Neal Memorial Scholarship - awarded to qualified engineering students.
J. Robert Newsom Memorial - donated by Newsom Brothers of Columbia, Mississippi. Awarded to qualified engineering students. The recipient must be a Mississippi resident.
Nissan Technical Center North America Diversity Scholarship - awarded to qualified minority juniors or seniors enrolled in Electrical or Mechanical Engineering. Based on academic record.
O'Neill Family Endowed Scholarship - awarded to qualified engineering students with preference to U.S. Citizens and Aerospace Engineering students.
John E. Pearson Memorial Engineering Scholarship - donated by John E. Pearson; restricted to a senior.
William Peterhansens, Jr. Memorial Scholarship - awarded to qualified engineering students
Petroleum Engineering Alumni Scholarship - established through the efforts of Petroleum Engineering alumni for full-time engineering students having demonstrated academic achievement, leadership ability and financial need. Disabled students will be given special consideration.
Crymes Pittman Scholarship - awarded to a qualified freshman engineering student. Preferably to a student from Smith County.
Rockwell International Scholarship - established as a Scholarship award to female or minority students enrolled in Aerospace, Electrical or Mechanical Engineering.
Ralph E. Powe Scholarship - established in 1997 to provide assistance to a full-time entering freshman enrolling in the College of Engineering. (Preference is given to students in Mechanical Engineering).
William Douglass Rooker Memorial Scholarship - established as a Scholarship award to full-time engineering students at Mississippi State who have completed the freshman year. Candidates must be from Mississippi with first preference given to students from Pike County.
Bobby Shackouls-Burlington Resources Scholarship - awarded to qualified engineering students.
Clyde Q. & Katherine B. Sheely Scholarship - established to award assistance to students who have completed 30 credit hours. Available in alternate years to a student in engineering.
Shields Memorial Scholarships - awarded to qualified engineering students.
Simrall Scholarship in Engineering - donated by The Mississippi Engineering Society and the MSU Engineering Alumni Association in honor of Dean Emeritus Harry C. Simrall.
SECMΕ University Scholarship (Southeastern Consortium for Minorities in Engineering) - established to provide Scholarship assistance to a Mississippi student who meets SECME eligibility requirements and is admitted to the College of Engineering.
Hartwell F. Stallings Memorial Endowed Scholarship - awarded to qualified engineering students.
ST Environmental Services Scholarship - established to award Scholarship assistance to qualified Engineering students.
Structural Steel Services Endowed Scholarship - awarded to qualified transfer students. Based on leadership and financial need.
Jim Henry Swain Scholarship - awarded to a qualified Civil Engineering student.
TVA Engineering Scholarship - established in 1999 to provide assistance to full-time engineering students. Candidates must be from a TVA serviced region.
Amelia Halbert Thaxton Scholarship - awarded to Mississippi residents, with preference given to juniors and seniors.
3M Scholarship - established to provide scholarships for students studying in the fields of Chemical, Electrical, or Mechanical Engineering and who are U.S. citizens in the North Alabama area.
Ziff Energy/Hank Kelly Scholarship - awarded to qualified students majoring in Mechanical or Electrical Engineering with an interest in pursuing a career in the energy field.

AEROSPACE ENGINEERING
Inquiries should be directed to the Department of Aerospace Engineering, Box A, Mississippi State, MS 39762. Scholarships include:
Charles B. Cliett Scholarship - awarded to freshman based on academic record.
Charles P. Downer, Jr. Memorial Scholarships - awarded to juniors and seniors, based on academic record.
Henry W. Shurlds, Jr. Scholarship - awarded to juniors on the basis of merit and financial need.

AGRICULTURAL and BIOLOGICAL ENGINEERING
Inquiries should be directed to the Department of Agricultural and Biological Engineering, Box 9632, Mississippi State, MS 39762. Scholarships include:
ASAE Scholarship (McWhorter/Williamson)
T. H. Scott Scholarship
Marvin Ross Smith Scholarship

CHEMICAL ENGINEERING
Inquiries should be directed to the Dave C. Swalm School of Chemical Engineering, Swalm Building, Box 9595, Mississippi State, MS 39762-9595. Scholarships have been made available through the generosity of the following individuals:
C. Glendon Bradley Scholarship
Dave C. Swalm
David and Jean Bradford
David Purvis
E. Clarence Oden (for entering freshmen only)

In addition, one or more outstanding senior students may be awarded the George R. Lightsey Memorial Scholarship for outstanding professional leadership and academic achievement.

All Scholarship awards are made by the faculty of the Dave C. Swalm School of Chemical Engineering in accordance with existing policies of the university.

CIVIL ENGINEERING

Inquiries should be directed to the Department of Civil Engineering, Box 9546, Mississippi State, MS 39762. Scholarship awards are restricted to junior and senior level students and are based on class standing. All students are considered for scholarships at the conclusion of the academic year in May. Students must have been enrolled in the department for one year to be considered for an award. Scholarships include:

- Michael J. Baker, Jr. Scholarship
- Carolyn and G. B. “Red” Beard Scholarship
- Josephine Kellis Bounds Memorial Scholarship
- Webb M. Bruce Scholarship
- Chevron Oil Company Scholarship
- Choctaw, Inc. Scholarship
- Cook, Coggins, Engineers, Inc. Scholarship
- John W. Duff Endowed Scholarship
- Helen Joe Memorial Scholarship
- William M Parker Memorial Scholarship
- C. R. Patton Scholarship
- Howard K. Williford Memorial Scholarship
- Robert H. Wood Scholarship
- Worthington Construction Company Scholarships

COMPUTER SCIENCE

Inquiries should be directed to the Department of Computer Science, Box 9637, Mississippi State, MS 39762. Scholarships include:

- Cellular South Scholarship - awarded to qualified Mississippi residents.
- Hilton Scholarship

ELECTRICAL and COMPUTER ENGINEERING

Inquiries should be directed to the Department of Electrical and Computer Engineering, Box 9571, Mississippi State, MS 39762. Scholarships include:

- Electric Power Association Scholarship
- Ollie Hughes Graduate Fellowship
- Lucius Lamar Patterson Memorial Scholarship in Electrical Engineering
- E. Grady Perkins Memorial Scholarship
- Robert Luckett Shuler Scholarship
- A.T. Snider Memorial Scholarship

INDUSTRIAL ENGINEERING

Inquiries should be directed to the Department of Industrial Engineering, Box 9542, Mississippi State, MS 39762. Scholarships include:

- Bunker Annual Scholarship
- Durward B. Dunn, Jr. Scholarship
- George Crow Dunn Scholarship
- L.E. Gibens Family Scholarship
- Prentice McKibben Scholarship
- MSU I.E. Alumni Eastman Chemical Company Scholarship
- Jesse H. Oswalt Industrial Engineering Scholarship

MECHANICAL ENGINEERING

Inquiries should be directed to the Department of Mechanical Engineering, Drawer ME, Mississippi State, MS 39762. Scholarships include:

- Litton Industries Scholarship
- Richard Eron Green Memorial Scholarship - awarded to juniors or seniors
- Holmes-Neal Mechanical Engineering Scholarship

COLLEGE OF FOREST RESOURCES SCHOLARSHIPS and MEMORIALS

Inquiries should be directed to the College of Forest Resources, Box 9680, Mississippi State, MS 39762, unless otherwise noted.

The Polly Anderson-Newsom Memorial Scholarship - established in memory of Polly Anderson Newsom by her children, Fred, Polly, Petty and David, her husband Roy, and many friends. Students from Amite and Pike County are given priority. Priority is also given to students in the Wildlife and Fisheries Department. It is awarded based on scholastic achievement, character, leadership and financial need.

The Dale Arner Endowed Scholarship in the Department of Wildlife and Fisheries - funded by the interest from gifts donated by friends, former students, and professional associates in honor of Dr. Dale Arner - professor emeritus. This scholarship supports exceptional wildlife and fisheries students who demonstrate high academic achievement, are active in student wildlife and fisheries’ organizations, research, and have demonstrated leadership ability in the field.

The Larry B. Aycock Memorial Endowed Scholarship - established in memory of Larry B. Aycock II, this scholarship is awarded to a full-time junior or senior enrolled in forestry. Selection is based on academic achievement, character, and leadership ability.

The Boyd Burrow Greater Jackson Chapter of the National Wild Turkey Federation Annual Scholarship - established in memory of Boyd Burrow. Awarded to a full-time sophomore, junior or senior CFR student who demonstrates acceptable academic achievement.
The Robert Lee “Mr. Bob” Carlton Memorial Endowed Scholarship - established by the family of Robert Lee “Mr. Bob” Carlton. An annual award is given to a Wildlife or Fisheries Science major in their junior or senior year of study and is based on academic achievement and promise of an outstanding career in the wildlife and fisheries profession.

The Columbia Forest Products Annual Scholarship - funded by Columbia Forest Products of Trumann, Arkansas. This scholarship is awarded to students in the Forest Products major with interest in Lumber, composite or related areas. Offers students an opportunity to perform a summer internship. Candidates should have a GPA of 2.8 or higher.

The Durward B. and Georgene Dunn Endowed Scholarship - established in memory of their grandchild, Georgene Elizabeth Grand, the scholarships are awarded on an annual basis.

The Forest Products Endowment Fund Scholarship - supported by income from invested funds donated by friends and supporters of the Forest Products Laboratory; awarded to a student in Wood Science and Technology on the basis of academic record and merit.

The Forestry Suppliers, Inc. Endowed Scholarship - originally established as an annual scholarship by the company founder, James W. (Jim) Craig in the early 1960’s, this award is given to students who show promise of success in the profession of forestry. Candidates must be full-time students in their junior or senior year of study, enrolled in the forestry major, and demonstrate academic achievement.

The Garden Clubs of Mississippi Scholarship - donated by The Garden Clubs of Mississippi to a student majoring in forestry. Selection is based on both need and academic achievement.

The Ernest A. Gluesing Memorial Award - established in memory of Ernest A. Gluesing, Associate Professor of Wildlife, it is awarded to the most outstanding graduate student in Wildlife and Fisheries each year.

The Larry E. Homan Scholarship in Forest Resources - Funded by the interest from an endowment established by the Larry E. Homan family, this Scholarship is awarded on the basis of academic merit and leadership potential. Preference is given to Fisheries students.

The Warren and Elsie Hood Endowed Scholarship in Forest Resources - funded by interest from a gift donated by Warren and Elsie Hood. Candidates must be full-time students at Mississippi State University enrolled in a major of the College of Forest Resources who have demonstrated academic achievement, leadership ability and financial need.

The Colonel Kenneth (K.D.) Johnson and Catherine B. Johnson Endowed Scholarship Fund - funded by the interest from a gift donated by Colonel (K.D.) Johnson and Catherine B. Johnson, this scholarship is awarded to a student in the Forestry Major who has demonstrated acceptable academic achievement and shows promise of an outstanding career in the forestry area. Applicants with demonstrated financial need will be considered over other qualified students even though their grade point average might be below other applicants.

The Susan Jordan Endowed Scholarship - established by family and friends in memory of Susan Jordan for her dedication and long service to the students in the College of Forest Resources. This scholarship is awarded to students enrolled in the forestry major who demonstrate involvement and leadership in student organizations within the College of Forest Resources, while maintaining a high level of academic achievement.

The Howard McDuffie Memorial Endowed Scholarship - Established in memory of Howard McDuffie. The scholarship is awarded to a student majoring in Wildlife and Fisheries Science. Candidates must be in good standing. Preference is given to students who choose electives is water quality, resources, and forest control.

The Bynum L. Meeks Endowed Scholarship - established through generous contributions from family, friends, and professional associates in memory of Bynum L. Meeks. Candidates must be full-time students enrolled in the College of Forest Resources in the Forestry Management Option within the Department of Forestry or one of the following options with the Department of Forest Products: Wood Industry Management or Wood Material Science. Eligible students must have completed summer, can and be in their junior or senior year of study, and be a resident from one of the following counties: Adams, Amite, Claiborne, Copiah, Franklin, Hinds, Jefferson, Lawrence, Lincoln, Madison, Pike, Walthall, Warren and Wilkinson.

The Mississippi Lumber Manufacturers’ Association (MLMA) John L. Mabry Memorial Annual Scholarships - Mississippi Lumber Manufacturers’ Association (MLMA) currently provides two annual scholarships in the College of Forest Resources in memory of John L. Mabry. These scholarships are awarded to one forestry management major and one Forest Products major with an emphasis on the forest products industry each year. Candidates must be full-time students, have demonstrated academic achievement, be of good moral character and have demonstrated leadership ability and financial need.

The Mississippi Wildlife Federation Scholarship - awarded to a graduate student in the Department of Wildlife and Fisheries on the basis of academic achievement, research proposal, and financial need.

The David M. Moehring Memorial Award - established in memory of David M. Moehring, Professor of Forestry. It is awarded to the most outstanding graduate student in Forestry each year.

The Davis and Ann Mortensen Endowed Scholarship in Forest Resources - established in December of 1999 by a generous contribution from Mr. and Mrs. Davis K. Mortensen. Candidates must have a composite ACT score of 26, have records of academic achievement and demonstrated leadership skills.

The David H. Nabi Memorial Award - established in memory of David Nabi, who was killed while a graduate student in Wildlife. The award honors graduate students in the Department of Wildlife and Fisheries for outstanding achievement and contributions to their fellow graduate students as exemplified by Mr. Nabi.

The Kevin Nolan Summer Field Session (Summer Camp) Annual Scholarship - established by Kevin Nolan to assist a full-time student majoring in Forestry who must attend summer camp. Candidates must have demonstrated academic achievement, show promise in an outstanding career in Forestry, and must have demonstrated financial need.

The Anne and Terry Ozier Endowed Scholarship - established by contributions from the Mississippi Forestry Association and the Ozier Family. This scholarship, in memory of Anne Ozier and in honor of Dr. Terry Ozier, was established to recognize their commitment to forestry in the state of Mississippi. Candidates must be full-time students in their sophomore year, enrolled in the Department of Forestry, and demonstrate academic achievement, leadership ability, and financial need.

The Roy L. Pugh Memorial Scholarship - supported by income from an endowment from Mr. and Mrs. Eugene R. Andrzejewski. Awarded to a student majoring in Forestry.

The Ham Sanders Forestry Scholarship - sponsored by Mrs. Ham Sanders in honor of her husband. The award is based on need, character, and academic achievement or any combination of these. Preference is given to students studying Wood Science and Technology.

The Mark A. Schmoll Memorial Endowed Scholarship - established by family and friends in memory of Mark A. Schmoll, for his passion for wildlife and dedication to the wildlife profession, who died in a drowning accident while an undergraduate student in Wildlife and Fisheries. Candidates must be an undergraduate student in wildlife science/management who show promise of an outstanding career in the wildlife profession.

The Leo W. Seal Memorial Forestry Scholarship - in memory of Leo W. Seal, the Hancock Bank annually donates a scholarship for a student residing in Hancock, Harrison, Pearl River, or Stone County, Mississippi. The award is to a sophomore, junior or senior in the College of Forest Resources. Academic achievement, financial need, and personal character are factors considered in the selecting of recipients.

The Sharp Academic Scholarship - established through an endowment by the Kate Sharp family of Tishomingo County. Entering freshman with a composite ACT score of at least 27 or a minimum combined SAT score of 1310 are invited to apply for these scholarships. Awarded are up to $12,000 for a four-year program of study. The scholarships are limited to students enrolled in the College of Forest Resources.

The Ike Shoemake Memorial Scholarship - funded by funds from family and friends of Mr. Hilton H. “Ike” Shoemake. Awarded to a junior or senior student enrolled in the Forestry major with wildlife management option or in the Fisheries option.

The Ike Shoemake Memorial Scholarship - funded by funds from family and friends of Mr. Hilton H. “Ike” Shoemake. Awarded to a junior or senior student enrolled in the Forestry major with wildlife management option or in the Fisheries option.

The Ike Shoemake Memorial Scholarship - funded by funds from family and friends of Mr. Hilton H. “Ike” Shoemake. Awarded to a junior or senior student enrolled in the Forestry major with wildlife management option or in the Fisheries option.
The South Mississippi Forest Products Annual Scholarship - established by the company owners, Skip and Julie McCollough of Hattiesburg, Mississippi. Candidates for the South Mississippi Forest Products Annual Scholarship must be in their junior or senior year, demonstrate acceptable academic achievement and show promise of an outstanding career in Forestry, Wildlife and Fisheries, or Forest Products. Applicants who demonstrate financial need will be considered over other qualified students though their grade point average may be below other applicants.

The John W. Starr, Sr. and Caroline B. Starr Memorial Scholarship in Forest Management - established in memory of John W. and Caroline B. Starr, the scholarships are awarded to junior and senior students enrolled in Forest Management on the basis of merit and academic record.

The Tenneco Packaging Company Forestry Scholarship - supported by income from a gift of stock from the Tenneco Packaging Company; awarded to a student enrolled in Forestry. Selection criteria include academic achievements and personal characteristics which indicate promise of success in the profession of forestry.

The J. S. Therrell Scholarship in Forest Resources - supported by income from funds donated by J. S. Therrell; awarded to a student in the College of Forest Resources on the basis of potential for leadership and academic excellence, with consideration given to potential to reflect favorably on the University in his or her professional career.

The Three Rivers Chapter of Quail Unlimited Annual Scholarship - established to support students who through education hope to advance and protect the tradition and sport of quail hunting. Candidates must be enrolled in the Wildlife and Fisheries major in any year of study and resident of Leflore, Perry, Lee, Pontotoc, Itawamba, Grenada, Montgomery, or Holmes County. In the event a qualified student in the wildlife and fisheries major is not available, a forestry major with a concentration in wildlife management may be considered.

The Frank Troskey Annual Scholarship in Forestry - established by Philip A. Troskey and his wife Elizabeth in honor of his father Frank Troskey. Candidates must be full-time students in their sophomore, junior, or senior year, be enrolled in the forestry major, and demonstrate acceptable academic achievement, and show promise of an outstanding career in forestry.

The Hugo Wahlstab Scholarship in College of Forest Resources - established in memory of Hugo Wahlstab. Candidates must be full-time students enrolled in the College of Forest Resources in the Department of Forestry. Applicants must have demonstrated academic achievement and leadership ability and financial need.

The Washington County Conservation League Scholarship - funded by the Washington County Conservation League of Greenville, Mississippi; awarded to an outstanding junior or senior majoring in forestry with a wildlife minor or in fishery management. Selection criteria include academic standing, student citizenship, professional promise, and financial need.

The Wildlife and Fisheries Scholarship - awarded to undergraduates or graduate students majoring in Wildlife Management, Marine Resources Management, and/or related degrees in the College of Forest Resources.

The Wood Component Manufacturers Association Annual Scholarship - established with a gift donated by the Wood Component Manufacturers Association to support deserving students in the College of Forest Resources with strong preference given to a student who plans a career in secondary wood products manufacturing management.

**COLLEGE OF VETERINARY MEDICINE SCHOLARSHIPS AND MEMORIALS**

The American Kennel Club Scholarships - Each College of Veterinary Medicine in the U.S. can submit up to four (4) candidate applications. Criteria for awarding scholarships can include: financial need; academic achievement and potential; and perceived or demonstrated interests in canine biology or purebred dogs.

The American Veterinary Medical Foundation Scholarship - An applicant must: be a current freshman, sophomore, or junior student at MSU-CVM; and have demonstrated significant financial need. Awarded as fund distribution permits. Funds are distributed cyclically among U.S. Colleges of Veterinary Medicine.

The Hugh M. Arant, Sr. Memorial Scholarship in Veterinary Medicine - An applicant must: be a member in good standing of the sophomore class of the MSU-CVM; have demonstrated exceptional overall academic performance, and made significant contributions to his/her class as well as to the MSU-CVM; and be of good moral character and have demonstrated leadership ability and financial need.

The Arkansas Veterinary Medical Foundation Scholarship - An applicant must: be an Arkansas high school graduate; be a current freshman, sophomore, or junior student at the MSU-CVM; and have an overall 2.5 or better (based on 4.0 scale).

The Charles E. and Viola G. Bardyles Scholarship - A graduating senior will be selected based upon overall GPA for four years of the professional program.

The Bedenbaugh Scholarship in Veterinary Medicine - An applicant must: be a student in good standing at the MSU-CVM; or be an accepted incoming student to the MSU-CVM; and have a minimum GPA of 3.00/4.00 in his/her current program; and have exhibited leadership skills during his/her tenure as veterinary medical (or pre-vet, where applicable) students. Financial need may be used as a selection criterion.

The James D. & Kay B. Bryan Scholarship - An applicant must: have declared a career interest in food animal medicine; have met and maintained scholarly requirements set forth by the MSU-CVM; be a current freshman, sophomore, or junior student or a senior student enrolled in the Production Medicine Masters program (PMM program students given preference); and be of good moral character and have demonstrated leadership ability and financial need. As many as five scholarships may be awarded each year.

The Clio Annual Scholarship in Veterinary Medicine - An applicant must: be a current junior at the MSU-CVM; have demonstrated interest in small animal medicine and have shown genuine compassion and empathy for clients and patients during small animal rotations; and have demonstrated acceptable academic achievement and have shown promise for an outstanding career in veterinary medicine. Financial need may be considered over and above academic qualifications.

The Flo K. Scholarship - An applicant must: be a current junior in good standing at the MSU-CVM; have demonstrated interest in small animal medicine and have shown genuine compassion and empathy for clients and patients during small animal rotations; and have demonstrated acceptable academic achievement and have shown promise for an outstanding career in veterinary medicine; financial need may be considered over and above academic qualifications.

The Morgan Freeman Endowment for Veterinary Medicine - An applicant must: be a freshman, sophomore, or junior student at the MSU-CVM; demonstrate effective leadership abilities, integrity, motivation, and potential as a representative of the veterinary medical profession. The scholarship will be awarded annually. As fund distribution permits, more than one scholarship may be awarded.

The Greeneville Kennel Club Scholarship - An applicant must: be a resident of the Arkansas/Mississippi Delta; have met and maintained above-average scholarly requirements set forth by the MSU-CVM; be of good moral character and have demonstrated leadership ability and financial need. First priority is given to current freshmen, sophomore, junior, and senior students. Second priority is given to entering freshmen.

The Allan H. Hart/IDEXX Scholarship - An applicant must: be a current junior student at the MSU-CVM; and have a strong understanding of clinical pathology and its practical application to clinical cases.

The Hill's Pet Nutrition Scholarship - An applicant must: be a current junior or senior student in good standing at the MSU-CVM; meet and have maintained above-average scholarly requirements set forth by the MSU-CVM; and have demonstrated an in-depth knowledge of nutritional needs of patients and an ability to apply nutritional principles to patients under his/her care.

The Clarice C. Jackson Memorial Scholarship - An applicant must: be a freshman, sophomore, or junior student at the MSU-CVM; and be of good moral character.
The James C. and Linda B. Johnson Scholarship - An applicant must: be enrolled as a student in good standing at the MSU-CVM; have demonstrated good moral character and be a person of integrity and honesty; be generally perceived as having a caring and compassionate attitude toward animals and individuals; and have demonstrated acceptable academic achievement and promise for an outstanding vet med career. Financial need may be considered over other qualified applicants with higher GPAs.

The Dempsey and Ruby Lazar Scholarship - An applicant must: be enrolled as a student in good standing at the MSU-CVM; have demonstrated good moral character and be a person of integrity and honesty; be generally perceived as having a caring and compassionate attitude toward animals and individuals; and have demonstrated leadership ability and financial need. The Greta Somerville Scholarship is awarded annually. As fund distribution permits, more than one scholarship may be awarded.

The Dr. Betsy Lipscomb Scholarship in Veterinary Medicine - An applicant must: be in the junior year of study at the MSU-CVM; have demonstrated interest in small animal medicine; and have met and maintained above-average scholarly requirements set forth by the MSU-CVM. The Dr. Betsy Lipscomb Scholarship is awarded annually. As fund distribution permits, more than one scholarship may be awarded.

The Mississippi State Kennel Club Scholarship - An applicant must be enrolled in the MSU-CVM, and be in the freshman year of study. Priority is given to residents of Hinds, Madison, and Rankin counties of Mississippi.

The MSU-CVM Alumni Society Scholarship Fund - An applicant must: be a student in good standing at MSU-CVM; be of good moral character and have demonstrated leadership ability; and have demonstrated financial need. MSU College of Veterinary Medicine Minority Assistance Scholarship - An applicant must: be an incoming freshman or current freshman, sophomore, or junior student enrolled at MSU-CVM; be an African American resident of Mississippi; and have a 2.50/4.00 grade point average and meet or exceed all established standards for entering the academic year for which the student is applying.

The Mississippi Veterinary Medical Association Scholarship - An applicant must: have completed the fall semester of his/her sophomore year (current junior); have five years of residence in Mississippi; and be of good moral character, have demonstrated leadership ability, and financial need.

The Pfizer Animal Health Scholarship - An applicant must: be a current junior at MSU-CVM; have demonstrated academic achievement and financial need.

The Nestle Purina Scholarship - An applicant must: be a current sophomore or junior student at the MSU-CVM; have met and maintained above-average scholarly requirements set forth by the MSU-CVM; have demonstrated leadership ability; and have demonstrated financial need.

The Thomas C. Randolph, Jr. Memorial Scholarship - An applicant must: be an upcoming senior (current junior) student at the MSU-CVM; and have demonstrated a career interest in food animal medicine during his/her first three years.

The Jean and Walter W. Rotchild Endowed Scholarship - An applicant must: be a student in good standing at the MSU-CVM; have met and maintained above-average scholarly requirements set forth by the MSU-CVM; and have demonstrated interest in small animal medicine.

The Schering Plough Animal Health Scholarship - An applicant must: be a current freshman, sophomore or junior student at MSU-CVM; have demonstrated academic achievement by realizing at least a 3.00 GPA; be of good moral character and have demonstrated leadership ability; be involved in student professional organizations; and have demonstrated financial need.

The Tupelo Small Animal Scholarship - An applicant must: be a student in good standing at the MSU-CVM; have demonstrated leadership ability and financial need.

The Veterinary Christian Mission Endowed Scholarship - An applicant must: be a student in good standing at the MSU-CVM; be of good moral character and have demonstrated leadership ability and financial need; be interested in veterinary Christian mission work in underdeveloped countries.

The Vicksburg Kennel Clubs of Mississippi Scholarship - An applicant must: be enrolled as a student in good standing at the MSU-CVM; have demonstrated interest in small animal medicine; have earned a 3.0 GPA in veterinary school; academics will be a primary consideration for this award; have graduated from an accredited Mississippi high school; and be a permanent resident of residents of Hinds, Claiborne, Copiah, Issaquena, Jefferson, Madison, Rankin, Sharkey, Warren or Yazoo counties in Mississippi.

OFFICE of DISTINGUISHED SCHOLARSHIPS

Mississippi State University provides the Office of Distinguished Scholarships to identify and assist well-qualified undergraduate students in becoming candidates for national and international awards such as the Rhodes Scholarship, the Goldwater Scholarship, the Marshall Scholarship, and the Truman Scholarship. The unit also assists students who are nominated for recognition in programs such as those sponsored by USA TODAY and the Rotary International.

Prospective students are encouraged to investigate the Web sites of the major scholarship programs. For information on the opportunities:
Nancy McCarley, Director
Office of Distinguished Scholarships
45 Magnruder Street
Mississippi State, MS 39762
662-325-2522

e-mail: nmccarley@honors.msstate.edu
Web: www.msstate.edu/dept/uhp

EMERGENCY SHORT-TERM LOANS

Bass Memorial Loan Fund - donated by Mr. and Mrs. I. H. Bass in memory of Isaac Houston Bass, Jr. and Levi Gaston Bass, their son and his brother.

Maurice D. and Pearl S. Blumberg Memorial Student Loan Fund - donated by Maurice D. Blumberg for loans to deserving students.

William Max Coggin Memorial Loan Fund - donated by Mrs. Grady Coggin in memory of her son, William M. Coggin.

Jill Sadler Memorial Loan Fund - donated by friends and family in memory of Jill Sadler. The recipient must be a junior or senior in Home Economics. Loans must be repaid one year from date of graduation.

Sidney Tonner and Dorothy Osborn Memorial Loan Fund - donated to provide loans to deserving students.
John Sharp Williams Memorial Loan Fund - donated by Mississippi Chemical Corporation for loans to deserving students.

L. C. Winterton Memorial Loan Fund - donated by Mr. Lester C. Winterton for low interest loans to deserving students.

GRADUATE ASSISTANTSHIPS

Research, teaching, and service assistantships are available on an annual or nine-month basis. Individual academic and nonacademic departments/units are responsible for award decisions, the duties and responsibilities, stipend rate, and work schedule. The minimum stipend rate is $600 per month.

Application for an assistantship appointment must be submitted to the college, department, school, support unit, etc. where a position is available. A generic “Application for Graduate Assistantship” is provided on the Web by Office of Graduate Studies, location: http://www.msstate.edu/dept/grad-forms.htm; however, any work area has the option to require application submission on a form specific to that area. Departments are responsible for establishment of application deadlines and review procedures pertinent to the assigned work area.

Individuals interested in any other form of financial aid (grant, loan, or scholarship) should contact the Department of Student Financial Aid and Scholarships, Box AB, Mississippi State, MS 39762-5507. That office also has information available on the MSU Web at http://www.msstate.edu/dept/sfa/.

A Graduate Assistant Handbook containing more detail about requirements and procedures applicable to these awards is available in the Office of Graduate Studies, 116 Allen Hall. This handbook is available electronically, by accessing the following Web site: http://www.msstate.edu/dept/grad-publications.htm.

Required Course Load. Each student employed as a graduate assistant must maintain a full-time student status during enrollment periods throughout the employment duration.

Academic Performance. Students must demonstrate satisfactory progress in their specified program to retain an assistantship.

Matriculation Fee. When enrollment periods parallel an assistantship employment period, a graduate assistant will receive a student account credit of approximately 71 percent of assessed tuition and required fees plus 100 percent of assessed nonresident tuition fees. Student account charges in excess of the applied tuition exemption are the student’s personal responsibility.

Graduate Research Assistantships. Graduate Research Assistants (GRAs) are employed by many of the University’s academic, research, and administrative offices. This is an excellent opportunity to learn new techniques and methods, as well as expand knowledge by association with the research-oriented responsibilities.

Graduate Service Assistantships. Students who are employed to aid faculty and staff members with administration and operations within an office are classified as Graduate Service Assistants (GSAs). Many academic and nonacademic units offer these assignments with duties and work time variances depending on office needs.

Graduate Teaching Assistantships. Most academic areas offer teaching assistantships. Graduate Teaching Assistants (GTAs) normally serve in an instructional capacity and are selected on the basis of a student’s past teaching experience or academic promise. All first time teaching assistants are required to attend the Teaching Assistant Workshop that is held annually by the Office of Graduate Studies prior to the beginning of the fall semester.

Teaching Assistant Workshop

All first time graduate teaching assistants are required to attend the Teaching Assistant Workshop which is held annually prior to the beginning of the fall semester. The Workshop consists of two (2) segments.

Segment one - Required of all teaching assistants. This segment focuses on the role of a classroom instructor. Presentations may include topics such as the role of a GTA, syllabus development, effective teaching techniques, understanding sexual harassment, the impact of cultural diversity, ethics in the classroom, assessing academic achievement, and academic support services.

Segment two - Required of all teaching assistants whose native language is not English. This segment focuses on communication skills, cultural adjustment, and University orientation. It concludes with an English language proficiency test. The test consists of a five-minute student presentation to a panel of three judges. After each presentation, the judges engage the student in a dialog related to some aspect of the presentation in order to evaluate the student’s language proficiency.

Students who are not successful in the language proficiency examination are invited to attend a special semester long class at no cost to them. This class further assists the students with their language deficiencies as diagnosed in the fall workshop. At the end of the semester, the students are again tested on their language skills.

Failure to complete segment one will render a student, international or domestic, ineligible for a teaching assistantship. Students whose native language is not English must satisfactorily complete both segments to be eligible for classroom instruction.

Minority Assistance Program. Some special funds usually exist to assist individuals who represent groups traditionally under-represented in a field of graduate study. An individual who represents such a group may make inquiry to the Office of Graduate Studies, P.O. Box G, Mississippi State, MS 39762-5507.

X. CONDUCT AND DISCIPLINE; TRAFFIC AND PARKING

A. STUDENT CONDUCT

Two objectives of higher education are to develop self-reliance and to form desirable and acceptable habits of conduct among students.

Instead of designing numerous regulations to cover in detail matters of student conduct, Mississippi State University recognizes students as adults who are expected to obey the law, rules and regulations of the University, to take personal responsibility for their conduct, to respect the rights of others, and to have regard for the preservation of State and University property as well as the private property of others. Mississippi State University will not police the personal lives of students on or off campus or invade their privacy by spying or intrusive searches; however, students whose conduct threatens to cause disorder, public disturbances, danger to themselves and others, or property damage will be disciplined.

A listing of acts of misconduct which are unacceptable and may require disciplinary action is provided online at http://www.msstate.edu/web/security.htm together with a detailed explanation of disciplinary processes for students in the University. Those apprehended and proven guilty of violating the law or rules and regulations of the University may receive a maximum penalty of expulsion from the University.

B. PARKING, VEHICLE REGISTRATION, AND TRAFFIC REGULATIONS

Possession and use of motor vehicles on the campus are controlled under regulations approved by the Board of Trustees of Institutions of Higher Learning. These regulations require that any person who regularly or occasionally operates or parks a motor vehicle on the campus and streets of the University must register the vehicle at the beginning of each school year or as soon as it is brought on the campus, and must display on it, as instructed, a numbered identifying decal or hang tag.

Parking areas are designated and clearly marked for staff, residence-hall students, and commuter students.

The rules governing parking and traffic on campus may be viewed at www.msstate.edu/dept/audit/91307.html. For questions regarding parking, please contact the Parking Services unit at 662-325-2665 or 662-325-2661. Parking Services is located in the Roberts Building.
XI. ASSOCIATED AGENCIES

THE MISSISSIPPI STATE UNIVERSITY ALUMNI ASSOCIATION INC.

The Mississippi State University Alumni Association was founded June 17, 1885. The mission of the Alumni Association is to generate support for Mississippi State University through the development and implementation of programs, activities and events for its alumni and friends.

The alumni of Mississippi State University have their permanent headquarters in the Hunter Henry Center on the campus. Housed there are over 130,000 address records of alumni and friends of Mississippi State University. In addition, the Center is used frequently by faculty, students and alumni for meetings, conferences and other events.

Some of the services rendered by the Association annually in the promotion of the University are: maintaining and updating biographic and demographic information of all alumni; mailing over 350,000 pieces of mail, including the Alumnus magazine and Mississippi State University Connection; planning and organizing numerous alumni meetings and special events; supporting various fund-raising programs for the University through the MSU Foundation’s Fund for Excellence Program and the Bulldog Club; providing support for alumni chapter scholarship programs; supporting the University’s appropriation requests from the Mississippi Legislature; assisting in the recruitment of prospective students to Mississippi State University, including the Scholars’ Recognition Program; sponsoring the Alumni Delegates, student leaders preparing to be alumni leaders; partnering with the University’s Career Center to assist students and alumni with employment opportunities; supporting excellence in teaching, research, and service through the annual Faculty Recognition Program; and assisting in the annual Staff Appreciation Day.

Sixty-four alumni chapters are chartered in Mississippi and 21 in other states. In addition to a 43-member National Board of Directors and two standing committees, most chapters and societies have officers, committees, and boards of directors. This totals more than 1,800 volunteer workers on all levels and provides for wide participation of former students and friends in the promotion of their alma mater each year.

For more information, visit the Association’s Web page at www.msubulldogs.msstate.edu.

THE MISSISSIPPI STATE UNIVERSITY FOUNDATION, INC.

Since 1962, the Mississippi State University Foundation, Inc., has served as a nonprofit corporation offering a comprehensive program of giving opportunities for alumni and friends of Mississippi State University. The foundation’s purpose is fourfold:

• to provide the university a way to recruit and draw on the expertise of a network of dedicated volunteers who can assist in soliciting gifts from alumni and friends;

• to provide a mechanism to keep private gifts clearly separate from public funds and to provide flexibility in the use of private funds;

• to assist the university in the investment of endowed funds (the foundation has greater flexibility than the public university to seek the most favorable return on investments); and

• to ensure that funds designated for a particular purpose are used in the manner intended by the donors, and to ensure that funds unrestricted by the donors as to their use are appropriately distributed.

Since the incorporation of the foundation, alumni and friends have invested nearly $500 million in Mississippi State University through the foundation. In the past five years, more than $260 million of this money has been contributed. Also during the same period, the endowment has grown from $154 million to over $180 million.

XII. EQUAL OPPORTUNITY STATEMENT

Mississippi State University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation or group affiliation, age, disability, or veteran status. This nondiscriminational policy applies to all programs administered by the University. However, this policy should not be construed to infringe upon the free exchange of ideas essential to the academic environment.

To the extent allowed by law, all employment decisions, including those affecting hiring, promotion, demotion or transfer; advertisement of vacancies; layoff and termination; compensation and benefits; or selection for training will be made consistent with the policy articulated above.

Responsibility for communicating, interpreting and monitoring the University’s equal opportunity policy has been assigned to the Office of Diversity and Equity Programs, 106 McArthur Hall, P.O. Box 6199, Mississippi State, MS 39762. 662-323-2493. Campus mailstop 9609.
General Information

The College of Agriculture and Life Sciences (CALS) at Mississippi State University is one of the leading colleges of agriculture, life sciences, and human ecology in the southeast. Student enrollment, degree offerings, and student placement have increased over the past nine years.

As a land-grant institution, Mississippi State University’s College of Agriculture and Life Sciences offers excellent academic programs related to basic life sciences, environmental issues, agricultural production, food and fiber processing, agribusiness, agricultural information science, and the conservative and sustainable use of natural resources. With the recent establishment of MSU’s Life Sciences and Biotechnology Institute, the College will continue to enhance the study of the life sciences, including biotechnological applications that will have a tremendous impact on education, agriculture production, food, fibers, human and animal health, the environment and bio-based industrial products.

Students may select from 15 undergraduate curricula in the College of Agriculture and Life Sciences. Each degree program will prepare students for career opportunities in the multi-billion dollar agricultural and life sciences’ industry. These programs will also prepare students for graduate and/or professional school study. The College of Agriculture and Life Sciences has degree programs that prepare students for medicine, veterinary medicine, and law. The College currently has an enrollment of 1,240 undergraduate and 250 graduate students.

Organization. The College of Agriculture and Life Sciences is one of five major units of the Division of Agriculture, Forestry and Veterinary Medicine. The others are the Mississippi Agric. Trial and Forestry Experiment Station (MAFES), Mississippi State University Extension Service (MSU-ES), the College of Forest Resources, and the College of Veterinary Medicine (CVM).

The College of Agriculture and Life Sciences offers undergraduate curricula leading to the Bachelor of Science degree, with the exception of Landscape Architecture which leads to the Bachelor of Landscape Architecture degree. All departments within the College of Agriculture and Life Sciences offer graduate courses leading to the Master of Science, Master of Agriculture, Master of Agribusiness Management degree, or Master of Landscape Architecture degree.

Faculty and Facilities. The level of education of the faculty of the College of Agriculture and Life Sciences, as measured by advanced degrees and by the diversity of the institutions from which these degrees were earned, is exceptionally high. The teaching faculty include resident staff of the MAFES and MSU-ES, which offer valuable opportunities for students on the undergraduate and graduate (see MSU Graduate Bulletin) levels. The sharing of faculty and facilities between the College of Agriculture and Life Sciences, MAFES and MSU-ES keeps the instructional program current and meaningful to the students.

Policies

The minimum requirements for graduation with a Bachelor of Science degree in the College of Agriculture and Life Sciences in any of the four-year curricula are 124 semester hours with an average grade of C (2.0 GPA on a 4.0 scale). Some curricula require more than this minimum.

Agriculture and Life Sciences majors are encouraged to take courses on the Mississippi State University campus when possible. If the desired courses are not offered, or if special circumstances exist, students may receive permission from the Dean, upon recommendation from the Department, to take courses through Independent Study.

The College of Agriculture and Life Sciences requires all entering freshman and transfer students to own or lease a personal computer. This College-wide requirement is a proactive measure to insure that students will develop the computer skills necessary for success in agriculture and life sciences professions. The CALS will identify the minimum computer specifications, which is important to the overall university computing system, the University’s Information Technology Services, and classroom and laboratory computer accommodations. This information will be posted on the College of Agriculture and Life Sciences’s Web site (http://www.cals.msstate.edu) by July 1 of each year. Additional information on computer specifications, software, purchasing and/or lease information (if available), and additional department requirements, will also be included on the CALS Web site.

The College of Agriculture and Life Sciences offers 15 Bachelor of Science degree programs and 36 concentration areas. Students may choose from the following degree programs and concentrations:

* Agricultural Engineering Technology and Business
  - Aquacultural Systems
  - Enterprise Management
  - Gin Management and Technology
  - Land Surveying
  - Natural Resource and Environmental Management
  - Precision Agriculture/Ag Systems
* Agribusiness
  - Agricultural, Food and Resource Economics
    - Food and Fiber Production Management
    - Food Marketing
    - Agricultural Policy and Law
    - Environmental and Resource Economics
* Agricultural Information Science
* Agricultural Science
* Animal and Dairy Sciences
  - Science
  - Pre-Veterinary Medicine
  - Production/Business Management
* Biochemistry and Molecular Biology
  - Pre-Dentistry
  - Pre-Medical
  - Pre-Veterinary Medicine
* Agricultural Pest Management
* Food Science, Nutrition and Health Promotion
  - Nutrition
  - Food Safety/Pre-Veterinary Medicine
  - Food Processing/Business
  - Food Science
* Human Sciences
  - Apparel, Textiles and Merchandising
  - Human Development and Family Studies
  - Gerontology Certificate
* Landscape Architecture
* Landscape Contracting and Management
* Agronomy
  - Crop Science
  - Golf and Sports Turf Management
  - Integrated Crop Management
  - Seed Technology
  - Soil Conservation
  - Soil Science
* Horticulture
  - Floriculture and Ornamental Horticulture
  - Retail Floristry Management
* Poultry Science
  - Business
  - Management
  - Manufacturing
  - Pre-Veterinary Medicine
**Emphasis in INTERNATIONAL AGRICULTURE**

An emphasis in International Agriculture is available to students majoring in any curriculum in the College of Agriculture and Life Sciences. This emphasis is intended to prepare students for possible careers in agricultural production or marketing on an international scale.

Students interested in this emphasis will take the following in addition to requirements for their majors. The specific courses included will be determined by the department involved and the student’s interest, but will include the following minimums.

<table>
<thead>
<tr>
<th>SUBJECT MATTER</th>
<th>REQUIRED SEMESTER HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Agriculture</td>
<td>6-9</td>
</tr>
<tr>
<td>(outside student’s major)</td>
<td></td>
</tr>
<tr>
<td>Agricultural Economics</td>
<td>6-9</td>
</tr>
<tr>
<td>World Geography/PoliticalScience</td>
<td>6-9</td>
</tr>
<tr>
<td>and/or Sociology</td>
<td>3-6</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>6-9</td>
</tr>
</tbody>
</table>

**FIVE-YEAR, TWO-DEGREE CURRICULA in AGRICULTURE and BUSINESS and in AGRICULTURE and LIBERAL ARTS**

Five-year, two-degree curricula leading to Bachelor of Science degrees in both Agriculture and Business and Agriculture and Liberal Arts are available. Such curricula may be designed with a major in any field of agriculture or human sciences combined with a major in any field of business or liberal arts. These programs must meet the minimum requirements of 124 semester hours with a C average or better for a degree in Agriculture including (1) a minimum of 54 semester hours with a C average or better in business approved by the College of Business and Industry, or (2) a minimum of 48 hours with a C average or better in the liberal arts field approved by the College of Arts and Sciences.

Students desiring to follow a five-year, two-degree curriculum will develop a detailed program by consultation with advisors in the College of Agriculture and Life Sciences and the College of Business and Industry or the College of Arts and Sciences. The two degrees are conferred simultaneously at the end of the fifth year. Students should declare their intentions of pursuing the two-degree program as early as possible, generally not later than the end of the sophomore year.

**SHORT COURSES in AGRICULTURE and LIFE SCIENCES**

Short courses ranging from three days to two weeks in duration are given when the need arises. The nature of the educational program and its length are determined by the needs of the particular groups served. Information regarding short-course programs may be secured from the dean or the head of the department offering the course.

**PRE-VETERINARY MEDICINE**

The College of Agriculture and Life Sciences does not offer a degree in Pre-Veterinary Medicine; therefore, students should select a major that includes Pre-Veterinary courses. These requirements are included in the following degree programs: Animal and Dairy Sciences, Poultry Science, Food Science, Nutrition and Health Promotion, Biochemistry and Molecular Biology, Microbiology and Biological Sciences (the latter two degree programs are located in the College of Agriculture and Life Sciences). Each of the four degree programs within the College of Agriculture and Life Sciences (CALS) allows the student to complete the necessary requirements for entry to the College of Veterinary Medicine and a Bachelor of Science simultaneously.

To receive a Bachelor of Science degree, each student must meet the curriculum requirements set forth by the respective department provided through the Pre-Veterinary Medicine Concentration (Example: See Animal and Dairy Sciences). Upon the successful completion of the undergraduate degree program through the junior year and the pre-veterinary medicine course requirements, a student may apply to the College of Veterinary Medicine (CVM). Upon the successful completion of the first year of CVM courses (approximately 28-32 hrs.), a student may apply these hours toward the bachelor’s degree. This course work can serve as the senior year of the undergraduate curriculum. This “three plus one” program is offered by the College of Agriculture and Life Sciences for Pre-veterinary students.

Address inquiries concerning the Pre-Veterinary medicine concentrations available in the CALS to desired degree program and advisor listed below:

For general information or undecided on degree concentration:

College of Agriculture and Life Sciences  
Office of the Dean  
Dr. J. Byron Williams, Pre-Veterinary Advisor  
105 Lloyd Ricks Building  
Box 9760  
Mississippi State, MS 39762  
Phone: 662-325-2110

For specific degree information:

Animal and Dairy Sciences Pre-Veterinary Medicine Program  
Department of Animal and Dairy Sciences  
Dr. Thomas Althen, Pre-Veterinary Advisor  
4025 Wise Center  
Box 9815  
Mississippi State, MS 39762  
Phone: 662-325-2802

Biochemistry and Molecular Biology  
Pre-Veterinary Medicine Program  
Department of Biochemistry and Molecular Biology  
Dr. John Boyle, Pre-Veterinary Advisor  
402 Dorman Hall  
Box 9540  
Mississippi State, MS 39762  
Phone: 662-325-2640

Food Science Pre-Veterinary Medicine Program  
Department of Food Science and Technology  
Dr. Wes Schilling, Pre-Veterinary Advisor  
105 Herzer Dairy Science Building  
Box 9805  
Mississippi State, MS 39762  
Phone: 662-325-3200

Poultry Science Pre-Veterinary Medicine Program  
Department of Poultry Science  
Dr. Tim Chamblee, Pre-Veterinary Advisor  
114 Hill Poultry Science Building  
Box 9665  
Mississippi State, MS 39762  
Phone: 662-325-3416

**Pre-Veterinary Requirements for entry into The College of Veterinary Medicine**

BCH 3613 Elem. Biochemistry  
BIO 1504 Prin. of Zoology  
BIO 3304 General Microbiology  
BIO 4403 Immunology  
CH 1211 Invest in Chemistry I  
CH 1213 Chemistry I  
CH 1221 Invest in Chemistry II  
CH 1223 Chemistry II  
CH 4511 Organic Chemistry Lab  
CH 4513 Organic Chemistry  
CO 1003 Fund of Public Speaking  
EN 1103 English Composition  
EN 1113 English Composition  
Fine Arts Elective  
Humaneities (6 hrs)  
MA 1313 College Algebra  
Mathematics Requirement (3 hrs)  
NTR 4115 Nutrition  
PH 1113 General Physics I  
PO 3103 Genetics  
Social/Behavioral Science (6 hrs)  

**Total Credit Hours: 67**

Electives will be needed from requirements toward the student’s alternate major to complete the minimum 124 hour degree. Those students with an alternate major in agriculture will choose electives from the following courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADS 1114</td>
<td>Animal Science</td>
</tr>
<tr>
<td>AEC 2713</td>
<td>Intro to Food and Resource Econ</td>
</tr>
<tr>
<td>PSS 3303</td>
<td>Soils</td>
</tr>
</tbody>
</table>
Department of AGRICULTURAL ECONOMICS (AEC)

Major Advisor: Randy Little
Office: 313-B Lloyd-Ricks

Agriculture and related businesses create more employment than does any other industry. The agribusiness industry accounts for nearly one-fifth of the U.S. gross national product and employs close to one-fourth of the U.S. labor force. To formulate successful business policies, farm managers and agribusiness firm managers must fully comprehend the nature and influence of economic forces on prices, costs, product demand and production plans. The entire business complex surrounding the food and fiber sector must be managed in a manner consistent with reasonable returns to the factors of production and respond to consumer demands. Two majors, Agricultural, Food and Resource Economics and Agribusiness, are offered to provide an understanding of economic forces and business management principles as well as general knowledge of technical agriculture and related sciences. Students completing either curriculum would also be prepared to pursue additional training at the graduate level.

Students who plan to attend a community college before transferring to Mississippi State are strongly encouraged to contact the Department’s major advisor regarding their proposed community college course schedule and transfer requirements.

Students in both majors are required to earn a “C” or better in all required (non-elective) agricultural economics (AEC), economics (EC), English (EN), and mathematics (MA) courses.

AGRICULTURAL, FOOD AND RESOURCE ECONOMICS

The Agricultural, Food and Resource Economics (AFRE) major is designed to provide students flexibility in preparing for a wide variety of careers in the agricultural and natural resource-based industries. The major provides all students excellent functional training in applied economics and business while offering the flexibility for a student to specialize in specific areas. Potential career fields include, but are not limited to, agricultural and environmental law; natural resource and environmental policy analysis; economic consulting; agricultural production management; commodity and equities marketing; and food chain supply management to include processing, sales, and distribution. Also, students desiring postgraduate training will have a solid academic foundation for pursuing graduate degrees.

University Core

English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Mathematics (9 hours)
MA 1313 College Algebra or higher level Mathematics
MA 1613 Calculus for Business and Life Sciences I OR
an equivalent or higher level calculus
ST 2113 Introduction to Statistics or an equivalent statistics course taught as a mathematics or statistics course

Science (7 hours)
CH 1043 Survey of Chemistry I with CH 1051 lab or
a higher level chemistry course with lab
BIO 1123 Animal Biology or
BIO 1203 Plant Biology

Humanities (6 hours)
PHI 3013 Business Ethics or another introductory Philosophy (PHI) course
3 hours Select from University Core

Fine Arts (3 hours) Select from University Core

Social/Behavioral Sciences (6 hours)
AEC 2713 Intro to Food & Resource Econ or
EC 2123 Principles of Microeconomics
EC 2113 Principles of Macroeconomics

Major Core*

ACC 2013 Principles of Financial Accounting
ACC 2023 Principles of Managerial Accounting
AEC 2611 Seminar I
AEC 3113 Introduction to Quantitative Economics
AEC 3133 Introduction to Agribusiness Management
AEC 3213 International Trade in Agriculture
AEC 3233 Intro to Environmental Econ & Policy
AEC 3413 Intro to Food Marketing
AEC 3513 Economics of Food and Fiber Production
AEC 4133 Analysis of Food Markets & Prices
AEC 4413 Public Problems of Agriculture
AEC 4523 Farm Financial Management
EC 3113 Intermediate Macroeconomics
EC 3123 Intermediate Microeconomics
3 hours Communication or Computer Elective
6 hours Free Electives

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Writing Requirement
AIS 3203 Introduction to Technical Writing
* Courses are listed in alphanumeric order. Students should contact an advisor, refer to the appropriate departmental curriculum sheet or refer to the course description section of this bulletin to determine the prerequisites for each course.

Choose one of the following concentrations:

Food and Fiber Production Management Concentration
AEC 4123 Financial & Commodity Futures Marketing
AEC 4343 Advanced Farm Management
26 hours Restricted Electives

Food Marketing Concentration
AEC 4123 Financial & Commodity Futures Marketing
AEC 4113 Agribusiness Firm Management
MKT 3013 Principles of Marketing
23 hours Restricted Electives*

Total hours needed for major: 124

Agricultural Policy and Law Concentration
AEC 4233 Adv Topics in Environmental Economics
EC 4423 Intro to Public Finance
PS 1113 American Government
PS 2703 Intro to Public Policy
20 hours Restricted Electives*

Total hours needed for major: 124

* Choose from: AEC 4333 Econ of Aquaculture, AEC 4530 Agribusiness Mgt Intern, AEC 4713 Quant. Econ, AEC 4723 Model for Ag Econ, AEC 4733 Econometric Analysis in Ag Econ, CO 1223 Intro to Comm Theory, CO 1463 Intro to Mass Media, CO 3830 Prin of PR, EC 4223 Labor Law & Employment Policy, FSH 4164 Quality Assurance of Food Products, FSH 4173 Food Packaging, FSH 4593 New Food Devol. HS 3303 Consumer Econ, HS 4193 Social & Cultural Aspects of Food, MKT 3213 Retailing, MKT 4123 Advertising

* Choose from: AEC 4123 Fin. & Commodity Futures Mktg, AEC 4333 Econ of Aquaculture, AEC 4530 Agribusiness Mgt Intern, AEC 4713 Quant. Econ, AEC 4723 Model for Ag Econ, AEC 4733 Econometric Analysis in Ag Econ, EC 2300 Principles of Financial Accounting, EC 2423 Labor Law & Employment Policy, EC 3323 Intro to Fundamentals of Public Speaking, EC 4223 Labor Law & Employment Policy, EC 4223 Intro to Public Finance, EC 4233 Internat’l Econ Rel., EC 4333 Problems in State and Local Finance, EN 4223 Inst. of Legal Writing, PS 2483 Public Opinion, PS 4703 Prin of Public Admin, PS 4743 Environ. Policy
**Environmental and Resource Economics Concentration**

- AEC 4233 Advanced Topics in Environmental Econ
- AEC 4343 Advanced Farm Management
- BL 4263 Environmental Law
- EC 4423 Intro to Public Finance
- 20 hours Restricted Electives

**Total hours needed for major: 124**


**AGRIBUSINESS**

The Agribusiness (AGB) major provides training in business including accounting, management, marketing, finance and economics, along with training in the agricultural sciences. A student who plans to work in an off-farm agricultural profession can greatly enhance his/her training for a particular specialty by carefully choosing the courses in his/her area of interest. The program of study is designed to give the student considerable flexibility in his/her chosen field of study and to prepare him or her for career positions with all types of firms involved in getting food and fiber to the consumer.

**University Core**

- **English Composition (6 hours)**
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I

- **Mathematics (9 hours)**
  - MA 1313 College Algebra or higher level Mathematics
  - MA 1613 Calculus for Business and Life Sciences I OR
  - MA 1615 Calculus for Business and Life Sciences II OR

- **Humanities (6 hours)**
  - PHI 3013 Business Ethics or
  - PHI 3015 Introductory Philosophy (PHI) course

- **Science (7 hours)**
  - CH 1043 Survey of Chemistry I with CH 1051 lab OR
  - a higher level chemistry course w/ lab
  - BIO 1123 Animal Biology or
  - BIO 1203 Plant Biology

- **Social/Behavioral Sciences (6 hours)**
  - AEC 2713 Intro to Food & Resource Econ or
  - EC 2123 Principles of Microeconomics
  - EC 2113 Principles of Macroeconomics

**Major Core**

- ACC 2013 Principles of Financial Accounting
- ACC 2023 Principles of Managerial Accounting
- AEC 2611 Seminar I
- AEC 3113 Introduction to Quantitative Economics
- AEC 3133 Introduction to Agribusiness Management
- AEC 3213 International Trade in Agriculture
- AEC 3233 Introduction to Environmental Econ & Policy
- AEC 3413 Intro to Food Marketing
- AEC 4133 Analysis of Food Markets & Prices
- AEC 4413 Public Problems of Agriculture
- BL 2413 Legal Environment of Business
- EC 3113 Intermediate Macroeconomics
- EC 3123 Intermediate Microeconomics
- FIN 3123 Financial Management
- MGT 3114 Principles of Management and Production
- MKT 3013 Principles of Marketing
- 9 hours Ag Econ Electives

**Department of AGRICULTURAL INFORMATION SCIENCE and EDUCATION (AIS)**

**Agricultural Information Science Curriculum**

Major Advisor: Associate Professor Kirk Swortzel
Office: 130 Lloyd Ricks

Agriculture is an applied science with many disciplines. Agricultural Information Science is the science of assisting others to learn how to access, analyze, apply, and amend information to solve problems in agriculture. The curriculum is designed to prepare students to enter professions requiring extensive knowledge and skill in solving agricultural and agriculturally related problems. Students are prepared to meet agriculture industry’s needs for individuals who can create, access, disseminate, apply, amend, and integrate information to solve problems in agriculture. Agricultural Information Science graduates may become involved in a variety of occupations in agricultural business and industry, education, production, Extension, public relations, and others. A minimum of 124 semester hours is required for this major. Students may choose to complete an emphasis in either Agricultural Science or Human Resource Management. These emphases are achieved by completing 16 hours of specified courses and five hours of electives as approved by an AIS advisor. Those students who elect to minor in communication instead of selecting one of the two concentrations can do so by taking 21 hours of specified courses.

The Agricultural Science Emphasis is designed to provide skills for individuals seeking careers in production agriculture or secondary school agriculture. The Human Resource Management Emphasis is designed to provide skills for individuals seeking careers in business and industry and Extension. All students in Agricultural Information Science are required to have their own personal computer. Students should consult with the department for equipment specifications prior to purchasing.

Students desiring to receive certification to teach in secondary agriculture programs will need to complete certification requirements. This can be accomplished by completing a Master of Science Degree in Agricultural and Extension Education, Teacher Certification Concentration. To enroll in this program, individuals must possess a bachelor’s degree in an agriculture area and meet requirements for regular admission to the Master of Science degree program. The minimum GPA requirement is 2.75 on a 4.0 scale during the last two years (approximately 60 hours) of undergraduate academic work or a 3.0 minimum on 24 hours of graduate level courses. Individuals must apply to Teacher Education. Individuals must present an ACT score of 21 (SAT equivalent of 860) with no sub score below 18 or minimum score on the Pre-Professional Skills Test (PPST) to meet teacher certification standards in Mississippi. The minimum scores are 170 on Reaching, 172 on Writing, and 169 on Mathematics; or on the Computer Based Test (CBT), 316 on Reading, 318 on Writing, and 314 on Mathematics. Applicants to teacher education must complete the “Verification of Work Experience with Children and Youth” and provide two letters of recommendation.

Exit requirements include a 3.0 GPA, mastery on an oral comprehensive examination administered by the Graduate Committee and submission of the required score on the Praxis II – Principles of Learning and Teaching (PLT) - to the Mississippi State University College of Education and to the Mississippi Department of Education to obtain licensure.
Graduates will have knowledge of (1) agricultural and ecological information sciences; (2) principles of teaching and learning; (3) basic agricultural sciences; (4) theories and principles of human communication; and (5) agricultural business principles.

Graduates will be able to (1) plan and conduct education programs in classroom and community settings; (2) assess and prioritize the needs and goals of various audiences; (3) develop strategies to meet constituents' needs and accomplish goals; (4) assess the appropriateness of strategies and revise the strategies as needed; (5) communicate effectively orally and in writing to various audiences; and (6) access and analyze information.

In capstone courses, students produce and present reports that demonstrate the performance learning objectives. In addition to faculty assessment, external assessors from other departments and from typical clientele audiences observe presentations and provide feedback.

Field experience supervisors and co-curricular sponsors, along with student participants, provide feedback about the field experience using a form based on the learning objectives.

**University Core**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EN 1103</td>
<td>English Comp I OR</td>
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<tr>
<td>EN 1163</td>
<td>Accelerated Comp I</td>
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<tr>
<td>EN 1113</td>
<td>English Comp II OR</td>
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<tr>
<td>EN 1173</td>
<td>Accelerated Comp II</td>
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**Mathematics (6 hours)**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MA 1313</td>
<td>College Algebra</td>
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<tr>
<td>ST 2113</td>
<td>Intro to Statistics</td>
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**Science (9 hours)**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIO 1123</td>
<td>Animal Biology</td>
</tr>
<tr>
<td>BIO 1203</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>CH 1043</td>
<td>Survey of Chemistry I</td>
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**Humanities (6 hours)**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PHI 1103</td>
<td>Introduction to Philosophy OR</td>
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<tr>
<td>PHI 1113</td>
<td>Intro to Logic</td>
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**Fine Arts (3 hours)**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>HI elective</td>
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**Social Sciences (6 hours)**

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<th>Course Code</th>
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<tbody>
<tr>
<td>AEC 2713</td>
<td>Intro to Food and Resource Econ</td>
</tr>
<tr>
<td>PSY 1013</td>
<td>General Psychology</td>
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**Major Core**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AIS 2613</td>
<td>Intro to Info and Dec Science in Agrisci</td>
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<tr>
<td>AIS 3003</td>
<td>Information Interpretation</td>
</tr>
<tr>
<td>AIS 3333</td>
<td>Professional Presentations</td>
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<tr>
<td>AIS 3500</td>
<td>Internship</td>
</tr>
<tr>
<td>AIS 3803</td>
<td>Leadership Development</td>
</tr>
<tr>
<td>AIS 4103</td>
<td>Programs in AIS</td>
</tr>
<tr>
<td>AIS 4303</td>
<td>Info Tech Ag Learning Systems</td>
</tr>
<tr>
<td>AIS 4403</td>
<td>Development of Youth Programs</td>
</tr>
<tr>
<td>AIS 4424</td>
<td>Teaching Methods in Ag &amp; Human Sciences</td>
</tr>
<tr>
<td>ADS 1114</td>
<td>Animal Science</td>
</tr>
<tr>
<td>CH 1051</td>
<td>Experimental Chemistry Lab</td>
</tr>
<tr>
<td>CH 1053</td>
<td>Survey of Chemistry II</td>
</tr>
<tr>
<td>EPP 2213</td>
<td>Intro to Insects</td>
</tr>
<tr>
<td>FHN 1103</td>
<td>Intro to Food Sci, Nutrition and Health</td>
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<tr>
<td>PSS 1313</td>
<td>Plant Science</td>
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<tr>
<td>7 hours</td>
<td>Agriculture Electives (see advisor)</td>
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<tr>
<td>6 hours</td>
<td>Free Electives</td>
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**Oral Communication Requirement**

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>CO 1003</td>
<td>Fund of Public Speaking</td>
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**Writing Requirement**

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<th>Course Code</th>
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<tbody>
<tr>
<td>AIS 3203</td>
<td>Intro to Technical Writing in Agricomm</td>
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**Computer Literacy**

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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AIS 4203</td>
<td>App of Computer Info Systems</td>
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**Agricultural Science Emphasis**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ABE 1863</td>
<td>Eng. Technology in Ag</td>
</tr>
<tr>
<td>PO 3103</td>
<td>Genetics</td>
</tr>
<tr>
<td>PSS 2423</td>
<td>Plant Materials I OR</td>
</tr>
<tr>
<td>PSS 4343</td>
<td>Greenhouse Management</td>
</tr>
<tr>
<td>PSS 3301</td>
<td>Soils Laboratory</td>
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<td>PSS 3303</td>
<td>Soils</td>
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<td>PSS 3133</td>
<td>Weed Science</td>
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5 hours Agriculture Science Electives

**Human Resources Management Emphasis**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AEC 3133</td>
<td>Intro Agribusiness Management</td>
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<tr>
<td>AEC 3233</td>
<td>Intro Environmental Economics Policy</td>
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<tr>
<td>MGT 3114</td>
<td>Principles of Management Production</td>
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<tr>
<td>MGT 3513</td>
<td>Intro Human Resource Management</td>
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<tr>
<td>MGT 4533</td>
<td>Adv Human Resource Management</td>
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</table>

6 hours Agriculture or Management Electives

**Total hours needed for major: 124**

**Agricultural Science Curriculum**

**Major Advisor:** Associate Professor Kirk Swortzel
**Office:** 130 Lloyd Ricks

The Agricultural Science degree prepares individuals for a variety of agricultural related careers. Many agricultural businesses and organizations are seeking graduates who have a diversified knowledge of agriculture and life sciences, which includes production agriculture, business, leadership and management. Many graduates become involved in agriculture business and industry, production agriculture operations, international agriculture development or pursue advanced study in areas such as nutrition and agricultural education.

Agricultural Science allows students to develop a high concentration of science and specialized agricultural study. Through the Agricultural Science degree program, a student can pursue a bachelor of science in agriculture and develop specialization areas that will serve his/her individual needs and interests. For the degree requirements, students must complete 124 hours, which includes 33 hours of science and 58 hours of agricultural science. Thirty hours will be agricultural science electives, which must be taken from two academic departments within the College of Agriculture and Life Sciences. The student must select agricultural science electives that are closely related and compliment each other. By selecting electives from two academic departments, a student can develop two specialization areas, such as agricultural pest management and agronomy or agricultural economics and animal science. A minimum of 16 agricultural science electives must be 4000 level courses or above, and a maximum of 4 hours may be selected from 1000 level courses.

Graduates will have knowledge of (1) diversified field of agriculture; (2) basic agricultural sciences; (3) leadership principles; (4) the basic principles of production; and (5) the application of basic science principles to production agriculture and agricultural business management.

Graduates will be able to (1) plan and conduct basic agricultural research; (2) manage an agricultural enterprise (business or production); (3) provide leadership in a variety of employment settings; and (4) communicate effectively orally and in writing to various audiences.

In various courses, students produce and present reports that demonstrate the performance learning objectives. In addition to faculty assessment, external assessors from other departments and from typical clientele audiences observe presentations and provide feedback.

Internship supervisors and co-curricular sponsors, along with student participants, provide feedback about the internship using a form based on the learning objectives.

**University Core**

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<td>EN 1173</td>
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**Mathematics (6 hours)**

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<tbody>
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**Science (9 hours)**

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<tbody>
<tr>
<td>BIO 1123</td>
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<tr>
<td>BIO 1203</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>CH 1043</td>
<td>Survey of Chemistry I</td>
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**Humanities (6 hours)**

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<tr>
<th>Course Code</th>
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<tr>
<td>HI elective</td>
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**Fine Arts (3 hours)**

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**Social Science (6 hours)**

<table>
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<tbody>
<tr>
<td>AEC 2713</td>
<td>Intro to Food and Resource Econ</td>
</tr>
<tr>
<td>PS 1113</td>
<td>American Government</td>
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</table>
The Gin Management and Land Surveying concentration provides an enhanced background in geology, hydrogeology, and water quality for students pursuing careers in the agricultural industries/government agencies: food/fiber production (farming), agrichemical, agricultural lending, aquaculture, banking, cotton ginning, seed & grain processing, crop consulting, agricultural equipment manufacturers and sales, farm management, land surveying and food processing.

**University Core**

- **English Composition (6 hours)**
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II

- **Mathematics (6 hours)**
  - MA 1313 College Algebra
  - MA 1323 Trigonometry

- **Science (9 hours)**
  - PH 1113 General Physics I
  - PH 1123 General Physics II
  - CH 1043 Survey of Chemistry I

- **Humanities (6 hours)**
  - Select from University Core

- **Fine Arts (3 hrs)**
  - Select from University Core

- **Social Science (6 hours)**
  - AEC 2713 Intro to Food and Resource Econ
  - Select from University Core

**Major Core**

- ABE 1073 Agricultural Mechanics
- ABE 1863 Engineering Tech in Ag
- ABE 2063 Intro to Ag Engineering Tech
- ABE 2873 Land Surveying
- ABE 3513 GPS and GIS
- ABE 4263 Soil and Water Management
- ABE 4383 Building Construction
- ABE 4473 Elec Applications
- ABE 4961 Seminar
- EG 1143 Graphic Communications

**AETB Elective - choose one of the following:**

- ABE 2173 Internal Combustion Engines
- ABE 4163 Machinery Mgt for Agro-Ecosystems

**Science Courses**

- CH 1053 Survey of Chemistry II
- CH 1051 Experimental Chemistry
- PSS 3303 Soils Lab
- PSS 3301 Soils Lab
- ADS 1114 Animal Science OR
- BIO 1504 Principles of Zoology
- PSS 1313 Plant Science OR
- BIO 1203 Plant Biology

**Business Courses**

- ACC 2013 Prin of Financial Accounting
- ACC 2023 Principles of Managerial Accounting
- AEC 3133 Ag Business Management
- BL 2413 Legal Environment of Business
- MGT 3513 Intro Human Resources Mgt

**Financial Elective - choose one of the following:**

- INS 3413 Intro to Personal Finance Planning
- FIN 2003 Personal Money Management
- FIN 3113 Financial Systems

**Oral Communication Requirement**

- CO 1003 Fundamentals of Public Speaking

**Writing Requirement**

- AIS 3203 Intro to Tech Writing

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**Department of AGRICULTURAL and BIOLOGICAL ENGINEERING (ABE)**

**Agricultural Engineering Technology and Business (AETB)**

- **Department Head:** Dr. William Batchelor
- **Office:** 100 Agricultural and Biological Engineering Building

The AETB program provides an educational opportunity for students interested in applying technical, business, and management skills to problems in agricultural production, processing, commodity related business and finance, and natural resources utilization. A Bachelor of Science degree is offered by the Agricultural and Biological Engineering Department through the College of Agriculture and Life Sciences.

The AETB program provides the agricultural industry with men and women possessing excellent skills in the engineering technologies, as well as a thorough background in business and management. This combination allows the AETB graduate to excel in virtually any business enterprise. The AETB Base Curriculum prepares the graduate for the many diverse opportunities afforded by the industrial and agricultural industries. In addition to the broad background in agricultural technologies and business, students may concentrate on a particular career-path by completing an AETB concentration. The AETB Base Curriculum provides five concentrations: (1) Aquacultural Systems, (2) Enterprise Management, (3) Precision Agriculture, (4) Gin Management & Technology, and (5) Natural Resources & Environment Management. These concentrations are achieved by completing 18 hours of specified emphasis electives as approved by an AETB advisor. In addition, a Land Surveying concentration is supported through a unique AETB curriculum.

The Aquacultural Systems concentration provides an enhanced background in fishery management, fish disease, and water quality. The Enterprise Management concentration is designed to provide skills for agricultural and business enterprise management. The curriculum provides a broad background including both animal and plant sciences, agricultural technology, economics, business and management. The Gin Management and Technology concentration provides graduates with a thorough education in cotton gin management and fiber processing. Courses emphasize technologies that are specific to the fiber processing industry including: hydraulics, pneumatics, industrial controls, seed technologies, biological materials handling, industrial safety and human relations. The Natural Resources and Environmental Management concentration provides an enhanced background in geology, hydrogeology, resource conservation, and water quality for students pursuing careers that require environmental training. The Gin Management and Land Surveying concentrations include an intern program allowing students to apply educational concepts in real-world settings. The Precision Agriculture concentration provides courses in remote sensing, GPS, GIS, and surveying to enhance the student’s abilities for careers involving spatial technologies.

All new students in AETB are required to have a laptop computer. Students should check with the ABE Department for equipment specifications prior to purchasing. Transfer credits with a grade of C or higher will be considered toward fulfillment of the degree requirement in the AETB curriculum. A maximum of seven transfer hours of technical credit can be applied toward degree requirements.

Employment for AETB graduates includes the following agricultural industries/government agencies: food/fiber production (farming), agrichemical, agricultural lending, aquaculture, banking, cotton ginning, seed & grain processing, crop consulting, agricultural equipment manufacturers and sales, farm management, land surveying and food processing.
The ABE Department will offer ABE 4990 Special Topics courses periodically. Depending on the subject matter of the course, ABE 4990 may be an approved concentration elective.

### Land Surveying Concentration

Individuals can become registered as a Land Surveyor in Mississippi by either (a) seven years combined surveying experience and testing or (b) academic training, three years of surveying experience (supervised by a registered land surveyor) and testing. The state board for Professional Engineers and Land Surveyors requires that an individual complete 62 hours of specific course work in order to meet the academic requirements for registration. These 62 hours include nine hours of Surveying, nine hours of Mathematics including Calculus I, eight hours of Physics, three hours of Graphics, six hours of Computer Applications, nine hours of English Composition/ Writing and 18 hours of recommended electives. The following courses are needed to become a registered Land Surveyor in Mississippi and obtain a Bachelor of Science degree in Agricultural Engineering Technology and Business. In order to become a registered Land Surveyor in the state of Mississippi through academic training (see “b” above), one must: (1) complete the required course work (62 hrs.), (2) pass the Land Surveyor Intern examination (administered by the Mississippi Board of Professional Engineers and Land Surveyors), (3) successfully complete a three year internship, and (4) pass the Land Surveyor examination (administered by the Mississippi Board of Professional Engineers and Land Surveyors). Requirements for registration in other states can vary. The following sequence of courses allows the student to take the Land Surveyor Intern examination after completion of the Junior year. Employment opportunities for registered land surveyors in Mississippi include self-employment, an extensive number of land surveying or engineering firms, as well as local, state, and federal government agencies.

### University Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EN 1103</td>
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<tr>
<td>EN 1163</td>
<td>Accelerated Comp I</td>
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<tr>
<td>EN 1113</td>
<td>English Comp II OR</td>
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### Mathematics (6 hours)

<table>
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<tbody>
<tr>
<td>MA 1313</td>
<td>College Algebra</td>
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<tr>
<td>MA 1323</td>
<td>Trigonometry</td>
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### Science (9 hours)

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<tbody>
<tr>
<td>PH 1113</td>
<td>General Physics I</td>
</tr>
<tr>
<td>PH 1123</td>
<td>General Physics II</td>
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<tr>
<td>CH 1043</td>
<td>Survey of Chemistry I</td>
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### Humanities (6 hours)

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### Fine Arts

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### Social Sciences (6 hours)

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<tr>
<td>AEC 2713</td>
<td>Intro to Food and Resource Econ</td>
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<tr>
<td>3 hours</td>
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### Major Core

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<tr>
<td>ABE 1073</td>
<td>Agricultural Mechanics</td>
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<tr>
<td>ABE 2063</td>
<td>Intro to Ag Engr Tech</td>
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<tr>
<td>ABE 2873</td>
<td>Land Surveying</td>
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<tr>
<td>ABE 3513</td>
<td>GPS/GIS</td>
</tr>
<tr>
<td>ABE 4163</td>
<td>Machinery Mgt or</td>
</tr>
<tr>
<td>ABE 2173</td>
<td>Internal Combustion Engines</td>
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<tr>
<td>ABE 4263</td>
<td>Soil and Water Mgt</td>
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<td>ABE 4383</td>
<td>Building Construction</td>
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<td>ABE 4473</td>
<td>Elec Applications</td>
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<tr>
<td>ABE 4913</td>
<td>Seminar</td>
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<tr>
<td>CE 2213</td>
<td>Surveying</td>
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<tr>
<td>CE 4233</td>
<td>Control Survey</td>
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<td>CE 4243</td>
<td>Land Surveys</td>
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<tr>
<td>CH 1053</td>
<td>Survey of Chemistry II</td>
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<tr>
<td>CH 1051</td>
<td>Experimental Chemistry</td>
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<tr>
<td>PH 1063</td>
<td>Astronomy*</td>
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<tr>
<td>MA 1713</td>
<td>Calculus I</td>
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<tr>
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<tr>
<td>Emphasis Elective #2 (3 hours)</td>
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<tr>
<td>Emphasis Elective #3 (3 hours)</td>
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<tr>
<td>Restricted Elective #1 (2 hours)**</td>
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<tr>
<td>Restricted Elective #2 (3 hours)**</td>
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### Business Courses

<table>
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<tr>
<th>Course Code</th>
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<tr>
<td>ACC 2013</td>
<td>Prin of Financial Accounting</td>
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An Interdisciplinary Curriculum Including Entomology, Plant Pathology and Weed Science

Major Advisor: Assistant Professor Fred R. Musser
Office: 123 Clay Lyle Bldg

Agricultural Pest Management (APM) is an interdisciplinary program of study in Entomology, Plant Pathology and Weed Science jointly administered by the Department of Entomology and Plant Pathology and the Department of Plant and Soil Sciences. The Bachelor of Science degree in Agricultural Pest Management is offered. Effective management of pest problems in production agriculture requires a broad base of knowledge in the pest disciplines and practical field experience. The undergraduate Agricultural Pest Management major features a strong core of courses in the three pest disciplines (entomology, plant pathology, and weed science); a strong background in agriculture, biological and physical sciences; and practical training through co-op work experiences. Curricula are designed to meet the needs of students who wish to pursue advanced degrees (M.A., M.S., Ph.D.) and of students who wish to terminate their higher education with a baccalaureate degree. A range of restricted and non-restricted electives allows students to personalize their degree program for careers in crop production, agri-business, and/or graduate studies preparation. A grade of "C" or better is required in all courses with the APM, EPP, PSS, CH, or BIO prefix prior to completion of the degree. No course may be transferred for credit from another college or university in which a grade of "D" was made. A student may transfer up to nine hours of "T" level technical courses from community colleges as unrestricted lower-level electives. "T" level technical courses may not be transferred for credit on any course listed specifically in the APM curriculum.

Graduates are well prepared for employment with agricultural industries such as chemical, seed or biotechnology companies; state and federal research, extension and regulatory agencies; private agricultural consulting firms; farmer’s cooperatives; nurseries, home and garden centers; greenhouse plant production; and corporate farms.

Co-op Work: APM students must complete a minimum 12 months or three semesters of co-op work with approved co-op sponsors in industry, private consulting firms/individuals, or governmental agencies. During the three co-op experiences, students typically work in at least two of these three areas. One of the three co-op semesters enrolled by the student must be a non-summer semester. A 2.50 cumulative GPA on all MSU work is required to participate in the APM Co-op Program.

**Writing Requirement**

- AIS 3203 Intro to Tech Writing

**Total hours needed for major: 124**

*Not required if a student has 8 hrs of Physics without this course; student still needs 128 hrs to graduate.

**Any geology, CAD or statistics course; PSS 3303, TBK 3133, TKI 3043, WF 4253 or any 3000-4000 level course from FO, MGT, Mkt or REM; One course must be a 3000-4000 level course.

**Financial Course - choose one of the following:**

- AEC 4123 Financial & Commodity Futures Mkt
- AEC 4523 Farm Financial Mgt
- BCH 3613 Elem Biochemistry
- EPP 4543 Toxicol and Insecticide Chem
- PSS 4453 Soil Classification
- PSS 4533 Soil Conserv & Land Use
- PSS 4543 Greenhouse Mgt
- ST 4414 Turf Mgt
- PSS 4314 Vegetable Production

**Computer Applications - choose two of the following:**

- AIS 2613 Intro to Decision Science
- AIS 4203 Applications of Computer Tech in AIS
- AIS 4303 Information Tech in Ag Learning Systems
- BIS 1012 Intro to Business Information Systems
- TKT 1273 Computer Applications
- FO 3102 & 3101 Computer Apps for Forest Resources

**Oral Communication Requirement**

- CO 1003 Fundamentals of Public Speaking

**Major Core**

- AEC 2713 Intro to Food and Resource Econ
- 3 hours Select from University Core

**Social Sciences**

- AEC 2713 Intro to Food and Resource Econ
- 3 hours Select from University Core

**Total hours needed for major: 124**

*(Plus 9 hours co-op experience)*
The Animal and Dairy Sciences Curriculum is designed to give students essential instruction and practical experience in the science and business of animal agriculture. Courses provide training in the areas of breeding, nutrition, growth, reproductive, and lactational physiology, marketing, management, evaluation, product processing as related to farm animals. A student may pursue one of the two general concentrations within the curriculum. Students interested in a career in animal production and/or allied industries would choose the Production/Management concentration. Within the Production/Management concentration, a student may choose to emphasize in one of three species: Meat Animal, Dairy or Equine. Students pursuing admission to the College of Veterinary Medicine or the Graduate School would choose the Science concentration. The Science concentration allows students to take support courses in the sciences that will prepare the veterinary and graduate student for the professional programs in the CVM or Graduate School.

The department’s Bearden Dairy Research Center and the animal research units in the Leveck Animal Research Center provide students contact with modern techniques and practical experience to give insight to the technical problems associated with the Animal and Dairy industries.

### University Core

**English Composition (6 hours)**
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

**Mathematics (6 hours)**
Select from University Core

**Science (9 hours)**
See Major Core

**Humanities (6 hours)**
Select from University Core

**Fine Arts (3 hours)**
Select from University Core

**Social Sciences (6 hours)**
Select from University Core

### Major Core

**Chemistry Sequence**
- 7.8 hours
- (CH 1043, 1053 & 1051 OR CH 1211, 1213, 1221 & 1223)
- 4 hours Organic Chemistry & Lab
- (CH 2503 & 2501 OR CH 4513 & 4511)
- 3 hours Biochemistry - BCH 3613 OR BCH 4603

**BIO 3304 General Microbiology**

**BIO 1504 Principles of Zoology**

**Biology Core (11 hours)**
- ADS 1114 Animal Science
- ADS 4115 Nutrition
- ADS 4123 Animal Breeding
- ADS 4613 Physiology of Reproduction
- ADS 4611 Practices in Phy of Reproduction
- ADS 4423 Animal Science Internship OR
- ADS 3312 Livestock Management Practices
- ADS 4221 Animal and Dairy Sciences Seminar

**3 hours Capstone Elective Course**

**Oral Communication Requirement**
- CO 1003 Fundamentals of Public Speaking

**Writing Requirement**
- AIS 3203 Intro to Tech Writing

**Computer Literacy**
- TKT 1273 Computer Applications or equivalent

Choose one of the following concentrations:

### Production/Business Management Concentration

**Meat Animal Emphasis (25-28 hours)**
- ADS 4213 Nutrient Requirements & Form of Rations
- ADS 4412 Livestock Sales I
- PSS 4103 Forage & Pasture Crops

### Dairy Emphasis (29-31 hours)
- FSH 4164 Quality Assurance of Food Products
- ADS 4213 Nutrient Requirements & Form of Rations
- ADS 4412 Livestock Sales I
- PSS 4103 Forage & Pasture Crops
- ADS 4333 Equine Exercise Physiology

**2-3 hours**
- 1 Evaluation Elective*

**2-4 hours**
- 1 Production Elective*

**Total hours needed for major: 124**

### Equine Emphasis (28-31 hours)
- ADS 4134 Meats Processing OR
- ADS 4323 Beef Cattle Science

**Total hours needed for major: 124**

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To contact the department, you can call Professor Tom Althen at 4017 Wise Center or 662-325-3230. For more information, please visit the Department of Animal and Dairy Sciences website or contact them directly.
Course requirements for Pre-Veterinary students (3 + 1 program) to obtain a B.S. degree in Animal and Dairy Sciences

Because (1) the entrance requirements for the College of Veterinary Medicine satisfy a portion of the course requirements for the Animal and Dairy Sciences curriculum (2) a number of students are enrolled in Animal and Dairy Sciences while satisfying their pre-veterinary requirements and (3) an Animal and Dairy Sciences degree will be especially helpful to a practicing veterinarian, the following requirements for those electing to apply for a B.S. degree in Animal and Dairy Sciences after successfully completing the first year of Veterinary Medicine are listed.

University Core 36 hours

Dept Core (eliminate Capstone & Seminar) 41-42 hours

Science Concentration - excl. Science & Free Elective 28-30 hours

To qualify for the B.S. degree in ADS, a student in the 3+1 program must complete the 3 years of above listed undergraduate course work (105-108 hours) and also successfully complete the first year of the Veterinary Medicine curriculum.

Department of BIOCHEMISTRY and MOLECULAR BIOLOGY (BCH)

Major Advisor: Professor John A. Boyle
Office: 402 Dorman

Biochemistry and molecular biology are disciplines involved at the cutting edge of a revolution in biology. Molecular methods and the use of genetic engineering have given scientists unprecedented power to begin to understand the chemistry of life processes. The Department of Biochemistry and Molecular Biology aims to prepare students at Mississippi State in this exciting area.

The curriculum leads to a Bachelor of Science degree in biochemistry and molecular biology. The objective of this curriculum is to provide the student with a strong background in science as part of a liberal education and also to prepare the student for professional work and/or graduate study.

There are sufficient individual choices in the curriculum to allow students to tailor their programs to any of several areas of specialization by appropriate use of elective hours.

University Core

English Composition (6 hours)
EN 1103 English Comp I OR EN 1163 Accelerated Comp I
EN 1113 English Comp II OR EN 1173 Accelerated Comp II

Mathematics (6 hours)
MA 1713 Calculus I
MA 1723 Calculus II

Science (9 hours)
See major core

Humanities (6 hours)
Select from University Core

Fine Arts (3 hours)
Select from University Core

Social Sciences (6 hours)
Select from University Core

Major Core

CH 1213 Chemistry I
CH 1211 Investigations in Chemistry I
CH 1223 Chemistry II
CH 1221 Investigations in Chemistry II
CH 2313 Intro to Analytical Chemistry
CH 4513 Organic Chemistry I
CH 4511 Organic Chemistry Lab
CH 4523 Organic Chemistry II
CH 4521 Organic Chemistry Lab
BCH 1001 Intro to Biochem
BCH 4603 General Biochemistry I
BCH 4414 Protein Methods
BCH 4613 General Biochemistry II
BCH 4623 Biochem of Special Tissues

BCH 4713 Molecular Biology
BCH 3901 Senior Seminar
BCH 4804 Molecular Biology Methods
BIO 1203 Plant Biology
BIO 1504 Principles of Zoology
BIO 3304 General Microbiology
BIO 4114 Cell Physiology
PH 2213 Physics I*
PH 2223 Physics II*
18 hours Technical Electives **
10 hours General Electives

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Writing Requirement
Satisfied by successful completion of BCH 4414 and BCH 4804

Computer Literacy
Satisfied by successful completion of BCH 4414, BCH 4713 and BCH 4804

Total hours needed for major: 120

* PREMED, PREVET, and PREDEN students are given the option of scheduling PH 1113 and PH 1123. In addition, PREMED majors must schedule a third semester of physics, either PH 1133 or PH 2233.

** Technical electives serve to prepare students for different areas of specialization. These courses are selected in collaboration with an advisor. However, students in specific areas should use specific courses.

PRE-MEDICAL and PRE-DENTAL COURSES

Genetics, Cell Biology, an Anatomy course, Embryology, and Immunology are strongly recommended.

GRADUATE STUDIES TRACK

Students aiming for a career requiring graduate education should take Genetics and Cell Biology as technical electives. Since many graduate programs require some form of physical chemistry, it is strongly suggested that students take CH 4413/4423 Physical Chemistry or CH 4404 Biophysical Chemistry as technical electives.

BIOINFORMATICS SPECIALIZATION

The objective of this specific selection of electives is to provide the student with a B.S. in Biochemistry and Molecular Biology incorporating a strong background in the biochemical sciences along with a rigorous preparation in the field of computer science. The graduate will be able to enter graduate school or directly enter a job requiring knowledge of bioinformatics. This exciting field applies computational and database skills to molecular biological problems. Practitioners routinely mine genomic databases for information relating to basic understanding of life processes as well as information providing clues for medical and agricultural advances. This program also constitutes a minor in computer science.

Students should take the following courses for their electives: CSE 1284 Introduction to Computer Programming; CSE 1384 Intermediate Computer Programming; CSE 2383 Data Structures and Analysis of Algorithms; CSE 3324 Distributed Client/Server Programming; CSE 2813 Discrete Structures; CSE 4803 Introduction to Analysis of Algorithms; CSE 3813 Introduction to Formal Languages and Automata; CSE 463 Artificial Intelligence; CSE 4653 Cognitive Science; ST 3123 Introduction to Statistical Inference.

PREPARATION FOR ENTRY INTO MBA/MASTER OF AGRI-BUSINESS MANAGEMENT PROGRAM (4+1 PROGRAM)

The objective of this specific selection of electives is to provide the student with a B.S. in Biochemistry incorporating a strong background in science and to prepare the student for immediate entry into a graduate program leading to an advanced business degree (either the Master of Business Administration or the Master of Agribusiness Management). Either program can be completed in a minimum of three semesters. Students thus educated may enter into management level positions in the biotech or agribusiness industry. Students should take the following courses for their electives: ACC 2013 Financial Accounting; EC 2113 Macroeconomics; ACC 2023 Managerial Accounting; EC 2123 Microeconomics; BQA 2113 Business Statistics I; MGT 3114 Principles of Management and Production; BQA 3123 Business Statistics II; MKT 3013 Principles of Marketing; FIN 3123 Financial Management.
PREPARATION FOR ENTRY INTO AN ACCELERATED MASTER’S PROGRAM (THESIS) IN BIOCHEMISTRY and MOLECULAR BIOLOGY

This program requires careful planning by the student in order to complete the requirements for the B.S. while beginning a research program that should result in successful completion of a Master’s thesis at the end of the second summer after the B.S. Only exceptional and motivated students should attempt this program. It is critical that BCH 4603 General Biochemistry I be scheduled in the Spring of the Sophomore year. The student will be expected to begin a research project in the senior year by taking up to nine hours of Directed Individual Study courses (BCH 4000). Research will continue during the summer after completion of the B.S. degree. The student must register for BCH 8000 (3 hours), Thesis Research during the summer. In addition, the student should schedule a graduate level BCH course and ST 8114 in the Spring of the senior year.

The student interested in the five year program should apply early in the undergraduate program to facilitate the scheduling of courses to conform to time constraints. In addition to applying for admission to the graduate program, the student must also take the Graduate Record Examination early enough so that the results are available by the beginning of the semester in which the student expects to graduate. The student must complete the courses required for completion of the BS degree with no more than 10 hours remaining in the semester of expected graduation.

PREPARATION FOR ENTRY INTO AN ACCELERATED MASTER’S PROGRAM (NON-THESIS) IN BIOCHEMISTRY and MOLECULAR BIOLOGY

This program requires careful planning by the student in order to complete the requirements for the B.S. while initiating a graduate work that should result in completion of courses leading to a Master’s Degree, non-thesis concentration. This curriculum allows completion of the two degrees in a minimum of five years. Required courses and electives must be scheduled so that the student has only eight hours of undergraduate course work remaining in the Spring of the senior year. The student should then schedule ST 8114 Statistical Methods and an 8000 level BCH course in that same semester. Graduate work must include BCH 8654 Intermediary Metabolism and BCH 7000 (3 hrs) Directed Individual Study (to allow completion of an independent research paper).

The student interested in the five year program should apply early in the undergraduate program to facilitate the scheduling of courses to conform to time constraints. In addition to applying for admission to the graduate program, the student must also take the Graduate Record Examination early enough so that the results are available by the beginning of the semester in which the student expects to graduate. The student must complete the courses required for completion of the B.S. Degree with no more than 10 hours remaining in the semester of expected graduation.

PREPARATION FOR ENTRY INTO AN ACCELERATED PH.D. PROGRAM IN MOLECULAR BIOLOGY

This program requires careful planning by the student in order to complete the requirements for the B.S. while beginning a research program that should meaningfully accelerate progress towards early completion of the Ph.D. degree in Molecular Biology. By initiating a research program in the senior year, a student should reduce the time to completion of the Ph.D. by a year. Only exceptional and motivated students should attempt this program. It is critical that BCH 4603 General Biochemistry I be scheduled in the Spring of the Sophomore year.

The student will be expected to begin a research project in the senior year by taking the Directed Individual Study Courses. Research will continue during the summer after completion of the B.S. degree. The student must register for BCH 8003, Thesis Research during the summer.

The student should plan his/her complete graduate program of study in conjunction with research Director and Graduate Committee. Since the Ph.D. is primarily a research degree, ultimate time to completion will be dependent upon the period necessary to satisfy the research requirements of the Graduate Committee. This concentration allows the student to begin that research substantially earlier than usual.

Three year program for early admission into the COLLEGE OF VETERINARY MEDICINE

The aim of this curriculum is to allow a student to matriculate through the Department of Biochemistry and Molecular Biology for three years and then proceed into the College of Veterinary Medicine under their early admissions policy. Successful completion of the courses taken during the first year in Veterinary Medicine will satisfy the Department’s requirements for technical electives and allow the University to grant the student a B.S. in Biochemistry and Molecular Biology after this period.

30 hours University Core
- CH 1213 Chemistry I
- CH 1211 Investigations in Chemistry
- CH 1223 Chemistry II
- CH 1221 Investigations in Chemistry
- CH 2313 Intro to Analytical Chemistry
- CH 4513 Organic Chemistry
- CH 4511 Organic Chemistry Lab
- CH 4523 Organic Chemistry
- CH 4521 Organic Chemistry Lab
- BCH 1001 Intro to Biochemistry
- BCH 4603 General Biochemistry I
- BCH 4414 Protein Methods
- BCH 4613 General Biochemistry II
- BCH 4623 Biochemistry Special Tissues
- BCH 4713 Molecular Biology
- BCH 3901 Senior Seminar
- BCH 4804 Biochemical Methods
- BIO 1504 Principles of Zoology
- BIO 4413 Immunology
- BIO 3304 General Microbiology
- PH 1113 General Physics I
- PH 1123 General Physics II
- VS 3014 Anatomy and Physiology
- BIO 3103 Genetics

95 hours required plus successful completion of the first year curriculum of the College of Veterinary Medicine

Mississippi State University requires a minimum of 120 hours for the undergraduate degree. Therefore, the first year in the College of Veterinary Medicine will contribute 25 hours of technical electives to this program.

Department of ENTOMOLOGY and PLANT PATHOLOGY (EPP)

Department Head: Clarence H. Collison
Office: 106 Clay Lyle Entomology Complex

ENTOMOLOGY
Office: 103 Clay Lyle Entomology Complex

Entomology is the study of insects and the impact of insects on the health and economic well-being of mankind. The Clay Lyle Entomology Complex houses the staff and administrative offices of the department, and the laboratory and classroom facilities support a broad range of extension, research and teaching functions. Students have access to a wide range of entomological expertise. Most faculty have joint appointments with the College of Agriculture and Life Sciences and the Mississippi Agricultural and Forestry Experiment Station and/or the Mississippi Cooperative Extension Service. The breadth of the department is also influenced by several USDA/ARS research laboratories located on campus and at Stoneville, Mississippi. A Master of Science in Agricultural Life Sciences with a concentration in Entomology and a Doctor of Philosophy degree in Entomology and Plant Pathology with an emphasis in Entomology are offered. (See the Graduate Bulletin for description of programs and requirements for advanced degrees.) Entomology jointly participates in the Agricultural Pest Management degree program with Plant Pathology and Weed Science (see Agricultural Pest Management).

PLANT PATHOLOGY
Office: 206 Dorman Hall

Plant pathology is the study of plant diseases, their causal agents and methods of control. Emphasis is placed on protection of environmental quality. Graduate programs of study leading to a Master of Science in Agriculture with a concentration in Plant Pathology and a Doctor of Philosophy degree in Entomology and Plant Pathology with an emphasis in Plant Pathology are offered. (See the Graduate Bulletin for description of programs and requirements for advanced degrees.) Plant Pathology jointly participates in the Agricultural Pest Management degree program with Entomology and Weed Science (see Agricultural Pest Management).
The Food Science, Nutrition, and Health Promotion (FNH) major offers the opportunity to gain a broad education in food science, nutrition, and health, as well as the specific academic background to pursue careers as food scientists and dietitians/nutritionists. It involves the integration of new knowledge and advances in technology and the physical and biological sciences with psychological, sociological, and behavioral sciences in the provision of a safe, nutritious, food supply. Research, teaching, and outreach extend the continuum from the food processing of food to its marketing, consumption, and impact on public health and community.

Food scientists integrate knowledge from engineering, biological, and physical sciences to study the nature of foods, the causes of deterioration, the principles underlying food processing, and the improvement of foods for the consuming public (www.ift.org/cms, 2001). Food technology is the application of food science to the selection, preservation, processing, packaging, distribution, and use of safe, nutritious, and wholesome foods.

Nutritionists research ways to improve health through a better understanding of nutrition. Nutritionists focus on "the science of foods, the nutrients and other substances therein; their action, interaction, and balance in relationship to health and disease; the processes by which the organism ingests, digests, absorbs, transports and utilizes nutrients and disposes of their end products. In addition, nutrition must be concerned with social, economic, cultural and psychological implications of food and eating."

The Department of Food Science, Nutrition and Health Promotion (FNH) is proud to offer undergraduate education in Food Science (approved by the Institute of Food Technologists) and Nutrition (currently granted accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 120 South Riverside Plaza, Chicago, Illinois 60606, 312/899-0040, ext. 5400). Students in Food Science, Nutrition, and Health Promotion have many exciting and diverse career opportunities.

Food Science, Nutrition, and Health Promotion careers include Research Scientist (Industrial, Government, Academic); Food Engineer; Food Microbiologist; Research and Development/ Product Development Technologist; Research Chef; Food Manufacturing Operations Manager; Quality Control Technicians; Regulatory Affairs; Food Packaging Specialist; Processing Engineer; Technical Sales in the Food Industry; Technical Services; Community Nutritionist; Public Health Nutritionist; Clinical Dietitian; Pediatric Dietitian; Cardiovascular Dietitian; Healthcare/School Food Service Director; Private Practice Dietitian; Sports/Wellness Dietitian; Pharmaceutical Sales Representative; Dietitian in Business and Industry; Journalism and Communications; Public Relations and Marketing; and Researchers in universities and hospitals.

A major in Food Science, Nutrition and Health Promotion is also an excellent choice for students interested in pursuing pre-professional career paths like Veterinary School, Medical School, Pharmacy, Physical Therapy, etc.

The following concentrations are offered in the Department of Food Science, Nutrition, and Health Promotion:

- Food Processing/Business Concentration
- Food Science
- Food Safety
- Nutrition

### University Core

| Course Code | Course Title
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<tbody>
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<tr>
<td>EN 1173</td>
<td>Accelerated Comp II</td>
</tr>
</tbody>
</table>

### Mathematics (6 to 9 hours)
Refer to concentration

### Science (6 to 9 hours)
Refer to concentration

### Humanities (6 hours)
Select from University Core

### Fine Arts (3 hours)
Select from University Core

### Social Sciences (6 hours)
FPB/FS/PV Select from University Core (w/ advisor approval)

### NTR
Refer to concentration

### Major Core (7 hours)

#### Oral Communication Requirement
- FNH 1103 Intro to Food Sci., Nutrition, and Health Promotion
- FNH 3111 Food Sci., Nutrition and Health Promotion Seminar

#### Writing Requirement
- FNH 4373 Methods and Materials in Food Sci., Nutrition, and Health Promotion

#### Choose one of the following concentrations:

### Food Processing/Business Concentration (FPB)

- Combines food science and business courses to prepare students for careers in the food industry, government, or private business.

| Course Code | Course Title
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>CH 1211</td>
<td>Chemistry I</td>
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<tr>
<td>CH 1212</td>
<td>Investigations in Chemistry I</td>
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<tr>
<td>CH 1223</td>
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<td>CH 1221</td>
<td>Investigations in Chemistry II</td>
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<td>CH 2503</td>
<td>Elementary Organic Chemistry</td>
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<td>MA 1313</td>
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<td>ST 3123</td>
<td>Introduction to Stat. Inference</td>
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<td>BIO 3304</td>
<td>General Microbiology</td>
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<td>MGT 3513</td>
<td>Introduction to Human Resource Management</td>
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<td>ACC 2013</td>
<td>Principles of Financial Accounting</td>
</tr>
<tr>
<td>MKT 3013</td>
<td>Principles of Marketing</td>
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<td>AIS 4203</td>
<td>Applications of Computer Technology*</td>
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<td>FNH 2112</td>
<td>Food Products Evaluation</td>
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<tr>
<td>FNH 2293</td>
<td>Individual and Family Nutrition</td>
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<tr>
<td>FNH 4114</td>
<td>Analysis of Food Products</td>
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<tr>
<td>FNH 4164</td>
<td>Quality Assurance of Food Products</td>
</tr>
<tr>
<td>FNH 4333</td>
<td>Food Law</td>
</tr>
<tr>
<td>FNH 4153</td>
<td>Food Plant Management</td>
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<tr>
<td>FNH 4173</td>
<td>Food Packaging</td>
</tr>
<tr>
<td>FNH 4458</td>
<td>Food Preservation Technology OR</td>
</tr>
<tr>
<td>FNH 4573</td>
<td>Food Engineering Fundamentals</td>
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<tr>
<td>FNH 4593</td>
<td>New Food Product Development</td>
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<tr>
<td>FNH 4243</td>
<td>Compositional and Chemical Reactions of Foods</td>
</tr>
<tr>
<td>FNH 4241</td>
<td>Applied Food Chemistry</td>
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<tr>
<td>FNH 4414</td>
<td>Microbiology of Foods</td>
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<tr>
<td>6-7 hours</td>
<td>Food Processing Electives**</td>
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<tr>
<td>6 hours</td>
<td>FNH Electives ***</td>
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<tr>
<td>6-8 hours</td>
<td>Electives</td>
</tr>
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</table>

### Total needed for major: 124

** Fulfills Computer Literacy requirement.

** Choose two courses (6-7 hours) from the Food Processing Electives: FNH 4314, Meat Processing; FNH 4613 Seafood Processing; FNH 4513 Poultry Processing; FNH 4123, Fermented Food Processing; or FNH 4143 Dairy Foods Processing; or FNH 4583 Food Industry Unit Operations.

*** Choose two additional FNH 3-4000 level courses from the food processing electives, FNH 4573 Food Engineering, FNH 4583 Food Preservation Technology, or FNH 4393 Control and Prevention of Disease

### Food Science Concentration (FS)

- Is designed for students who wish to explore a career in research, pursue graduate studies, work for the government, or the food industry.

| Course Code | Course Title
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>CH 1213</td>
<td>Chemistry I</td>
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<td>CH 1223</td>
<td>Chemistry II</td>
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<td>CH 1221</td>
<td>Investigations in Chemistry II</td>
</tr>
<tr>
<td>CH 2503</td>
<td>Elementary Organic Chemistry</td>
</tr>
<tr>
<td>CH 2501</td>
<td>Elementary Organic Chemistry Laboratory</td>
</tr>
<tr>
<td>BCH 3613</td>
<td>Elementary Biochemistry</td>
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<tr>
<td>PH 1113</td>
<td>General Physics I</td>
</tr>
<tr>
<td>PH 1123</td>
<td>General Physics II</td>
</tr>
</tbody>
</table>
Students will receive a B.S in Food Science, Nutrition, and Health Promotion upon completion of their first year of school in veterinary medicine.

If students do not obtain admittance into the College of Veterinary Medicine after their junior year, an optional fourth year that is listed below will allow these students to graduate with a B.S. in Food Science, Nutrition, and Health Promotion (Food Safety Concentration) after their fourth year of studies as well as allow these students another year to attempt to earn admittance into the College of Veterinary Medicine.
SCHOOL of HUMAN SCIENCES

Director: Associate Professor Gary B. Jackson
Office: 128 Lloyd Ricks Building

The mission of the School of Human Sciences is to improve the well-being of individuals, families, communities and related businesses and industries through teaching, research and outreach. An integrative approach is carried out in these program areas:

- Agricultural Information Science and Education (AISE)
- Apparel, Textiles and Merchandising (ATM)
- Human Development and Family Studies (HDFS)

The School of Human Sciences currently has the following accreditations: American Association of Family and Consumer Sciences (AAFCS) and National Council for Accreditation of Teacher Education (NCATE) in Vocational Home Economics and Agriculture.

The School provides educational, research, and outreach programs related to the interaction of people with their environment. More importantly, the multidisciplinary areas within the School focus on the basic human needs, such as food, shelter, clothing, human interaction and relationships, commerce and family life. In light of the current trends and anticipated changes, the mission of the School of Human Sciences is to prepare students and to conduct research and outreach activities to impact the social, health, and economic concerns facing individuals, families and communities.

The School currently has the largest enrollment in the CALS. The commitment of Human Sciences’ faculty and staff to excellence is evident in teaching, especially considering the growth, demand for the programs offered in the School, and the number of teaching and advising awards received by the faculty. The School of Human Sciences has more Grisham Master Teachers and CALS Excellence in Teaching Awards than any other unit within the Division and College. The School remains committed to this path of excellence, striving to provide students with contemporary programs and outstanding learning opportunities at the undergraduate and graduate levels. The School provides strong curricula and excellent teaching and advising.

The School’s programs are strong components of the land-grant institution, which is designed to provide outreach to the community and state. The School’s commitment to this process is evident in several outreach programs, such as its early childhood development work. Human Sciences faculty and graduates work with people in and across a variety of settings, including homes; schools; clinical settings; community agencies and institutions; and business, industry, and government. Graduates are prepared to address the social and economic challenges that face the state and its communities.

Transfer credits with grade of C or higher will be considered toward fulfillment of degree requirements in Human Sciences.

The following concentrations are offered in the School of Human Sciences: Apparel, Textiles, and Merchandising (ATM); and Human Development & Family Studies (HDFS).

A minor in Human Sciences is available. Required are HS 2293, HS 2593, HS 3303, HS 3673, HS 4853. In addition, six credits are to be selected from HS 1533, HS 2203, HS 2283, HS 2603, HS 2613, HS 2813, HS 4193, HS 4313, HS 4333, HS 4403, and HS 4513.

University Core

English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Mathematics (6 hours)
ATM/ID MA 1313 College Algebra
ATM BQA 2113 Business Stats OR
ST 2113 Intro to Stats
ID MA 1323 Trigonometry
HDFS Select from University Core

Science (9 hours)
HDFS See Concentration Requirements
ATM/ID CH 1043 + 6 hrs from University Core

Humanities (6 hours)
ATM 3 hours Foreign Lang + 3 hours from Univ. Core
ID/HDFS Select from University Core

Fine Arts
Select from University Core

Social Sciences (6 hours)
PSY 1013 General Psychology

3 hrs See Concentration

Major Core

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>HS 1701</td>
<td>Survey of Human Sciences</td>
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<tr>
<td>HS 2293</td>
<td>Individual and Family Nutrition</td>
</tr>
<tr>
<td>HS 3303</td>
<td>Consumer Economics</td>
</tr>
<tr>
<td>HS 4702</td>
<td>Human Sciences Senior Seminar</td>
</tr>
<tr>
<td>HS 4853</td>
<td>The Family: A Transactional Approach</td>
</tr>
</tbody>
</table>

Choose one of the following concentrations:

Apparel, Textiles, and Merchandising Concentration

Associate Professors Wanda Cheek and Phyllis Bell Miller

This concentration is designed to provide students with an understanding of the fashion and textile industries, consumer behavior, product quality, and business principles. Students concentrate in one of two areas: Merchandising or Apparel Production and Design. Merchandising combines an overview of the fashion industry, consumer behavior, and product knowledge with an understanding of business principles. Apparel Production and Design emphasizes the total design and production process from inception to finished product and its ultimate sale to the consumer. Apparel, Textiles, and Merchandising students are required to have a laptop computer during the freshman year, selected from a range of models recommended by the School of Human Sciences.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tr>
<td>ATM/ID MA 1313</td>
<td>Principles of Financial Accounting</td>
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<tr>
<td>ATM/ID MA 2023</td>
<td>Principles of Managerial Accounting</td>
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<tr>
<td>EC 2113</td>
<td>Principles of Macroeconomics*</td>
</tr>
<tr>
<td>EC 2123</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>HS 1523</td>
<td>Visual Design in Dress</td>
</tr>
<tr>
<td>HS 2553</td>
<td>Fashion Merchandising</td>
</tr>
<tr>
<td>HS 3593</td>
<td>Merchandising &amp; Promotion Strategies</td>
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<tr>
<td>HS 2593</td>
<td>Apparel/Sewn Prod Analysis &amp; Evaluation</td>
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<tr>
<td>HS 3553</td>
<td>Fashion Retailing</td>
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<td>HS 2524</td>
<td>Textiles for Apparel</td>
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<td>HS 3573</td>
<td>Historic Costume</td>
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<tr>
<td>HS 3563</td>
<td>Visual Merchandising</td>
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<td>BL 2413</td>
<td>The Legal Environment of Business</td>
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<td>MKT 3013</td>
<td>Principles of Marketing</td>
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<td>MGT 3114</td>
<td>Principles of Management and Prod</td>
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<td>HS 4513</td>
<td>Social-Psych Aspects of Clothing</td>
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<tr>
<td>HS 4701</td>
<td>Internship Placement Seminar</td>
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<td>HS 1711</td>
<td>Professional Protocol</td>
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<td>HS 4763</td>
<td>Apparel, Textiles &amp; Merch. Internship</td>
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<tr>
<td>HS 4533</td>
<td>Merch. Planning and Buying OR</td>
</tr>
<tr>
<td>HS 4343</td>
<td>Apparel Design II</td>
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</table>

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Writing Requirement
See advisor for approved courses

Computer Literacy
HS 4733 Computer-Aided Design for Human Sciences

Restrictive Electives - choose 9 credit hours from one area

Apparel Production and Design Area

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>HS 4583</td>
<td>Entrepreneurship for Human Sciences</td>
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<tr>
<td>HS 4710</td>
<td>Study Tour</td>
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<tr>
<td>ART 1123</td>
<td>Design I</td>
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<td>ART 1133</td>
<td>Design II</td>
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<td>ART 1213</td>
<td>Drawing I</td>
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<td>Drawing II</td>
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<tr>
<td>ART 3103</td>
<td>Photography I</td>
</tr>
<tr>
<td>ART 2213</td>
<td>Life Drawing I</td>
</tr>
<tr>
<td>HS 4424</td>
<td>Teach Methods in Ag &amp; Human Sciences</td>
</tr>
</tbody>
</table>

Merchandising Area

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
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<td>HS 4710</td>
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<tr>
<td>FIN 3123</td>
<td>Financial Management</td>
</tr>
<tr>
<td>IB 3913</td>
<td>Prin of International Business</td>
</tr>
<tr>
<td>MKT 3933</td>
<td>International Marketing</td>
</tr>
<tr>
<td>MGT 3513</td>
<td>Intro to Human Resource Mgt</td>
</tr>
</tbody>
</table>

See advisor for approved courses
These programs are designed to provide comprehensive education in various fields, with a focus on enabling children and families to function effectively in today's complex society. Specific course work is required to specialize in each area or to meet requirements, including those for certification, licensure, or endorsement. Additional endorsement is available in these occupational areas: clothing, apparel, and textiles; child care guidance; and institutional food services, child life, consumer economics, human sciences teacher education, and extension. Students develop an awareness of trends, issues, and challenges in these fields, preparing them for leadership roles in their respective areas.

**Human Development & Family Studies Concentration**

Professors Jan Cooper Taylor and Lynn Pike; Associate Professors Sheri Lokken Worthy and Wanda Cheek

This program offers an interdisciplinary lifespan approach to the study of children, youth, and families. It encompasses specialty areas in preschool teaching, childcare, administration, youth studies, family services, child life, consumer economics, human sciences teacher education and extension. Students develop an awareness of trends, issues and public policy affecting families; analyze factors that influence cognitive, emotional, social, and physical development in the contexts of culture and family. Graduates enter diverse public and private sectors which focus on enabling children and families to function effectively in today’s complex society.

Specific course work is required to specialize in each area or to meet class A teacher licensure requirement for family and consumer sciences in the state of Mississippi. Specific course work is also required to specialize in child life, preschool education, youth studies or family services.

All teacher education programs at Mississippi State University are NCATE accredited. Students must conform to the policies on teacher education, as explained under “Teacher Licensure” elsewhere in this catalog. Additional endorsement is available in the areas of family and consumer sciences: clothing, apparel and textiles; child care guidance; institutional food services, child life; consumer economics; human sciences teacher education, and extension. Approved work experience is required to obtain this special endorsement.

**Individual and Family Development Emphasis**

**SO** 1003 Introduction to Sociology*
**BIO** 1004 Anatomy & Physiology*
**6 hrs** Science with Laboratory*
**EDX 3213** Psych & Ed Exceptional Children & Youth
**COE 4013** Facilitative Skills Development
**EPY 3543** Psychology of Adolescence*
**PSY 3413** Human Sexual Behavior
**HS 1802** Professional Seminar
**HS 2803** Pre-natal and Infant Development
**HS 2813** Child Development I
**HS 3813** Child Development II
**PE 3213** Emergency Health Care OR
**PE 1223** Personal Health
**HS 2603** Interior Design Fundamentals
**HS 4403** Intro to Gerontology
**HS 4424** Teach Methods in Ag & Human Sciences
**HS 4313** Family Resource Management
**HS 4803** Art of Parenting
**HS 4823** Dev & Adm of Child Svc Programs
**HS 4333** Families, Legislation, & Public Policy
**HS 4750** Internship
**12 hrs** Restricted Electives (see below - consult advisor)
**5-8 hrs** Electives

**Oral Communication Requirement**

Satisfied by successful completion of HS 4424

**Writing Requirement**

AIS 3203 Intro to Tech Writing OR
EDF 3413 Writing for Thinking

**Computer Literacy**

Satisfied by successful completion of HS 3303

**Restricted Electives - choose 12 hours from one area**

**Child Studies (Preschool/Child Life)**
**EDE 3233** Teach Literature at Elem & Mid. Levels
**HS 3803** Child Care Procedures
**HS 3823** Designing Child Care Programs
**HS 4834** The Hospitalized Child (Child Life)
**HS 2283** Child Health and Nutrition

**Youth Studies**
**COE 4023** Intro to Counseling
**EDE 3223** Middle Grade Education
**EDX 4423** Teaching the Disadvantaged Child
**HS 3673** Environments for Special Needs
**AJS 4403** Development of Youth Programs
**SW 4613** Child Welfare Services

**Family Studies**
**HS 3673** Environments for Special Needs
**HS 4824** Adult Development: The Middle Years
**HS 4843** Family Interaction
**HS 4863** Consumer Aspects of Aging

**Total hours needed for major: 121-124**

* Satisfies University Core.

**Family & Consumer Sciences Education Emphasis**

**CH 1043** Survey of Chemistry I*
**6 hrs** Science with laboratory*
**EDF 3333** Social Foundations of Education
**EDF 4243** Planning for Diversity of Learners
**EDX 3213** Psych & Ed of Excep Child & Youth
**EPY 3143** Human Dev & Learning Strategies in Ed
**EPY 3253** Evaluating Learning
**EPY 3543** Psychology of Adolescence*
**EDS 3411** Practicum in Secondary Ed
**EDS 4873** Seminar in Managing Secondary Class
**PE 1223** Personal Health
**PSY 3413** Human Sexual Behavior
**HS 2593** Apparel/Sewn Product Analysis & Evaluation
**HS 1533** Apparel Design I
**HS 2203** Science of Food Preparation
**HS 2524** Textiles for Apparel
**HS 2813** Child Development I
**HS 2283** Child Health and Nutrition
**HS 4424** Teaching Methods in Ag & Human Sciences
**HS 4803** Art of Parenting
**HS 2603** Interior Design Fundamentals
**HS 4333** Families, Legislation & Policy
**HS 4313** Family Resource Management
**HS 4462** Curriculum in Human Sciences
**HS 4886** Teaching Internship in Vocat. Human Sci.
**HS 4896** Teaching Internship in Vocat. Human Sci.

**Oral Communication Requirement**

Satisfied by successful completion of HS 4424

**Writing Requirement**

AIS 3203 Intro to Tech Writing OR
EDF 3413 Writing for Thinking

**Computer Literacy (3 hours)**

Satisfied by successful completion of HS 3303

**Total hours needed for major: 122**

* Satisfies University Core.

A minor in Human Development and Family Studies is available. Requirements are: HS 2803, HS 2813, HS 3803, HS 4803, HS 4853. In addition, six credits are to be elected from HS 4403, HS 4843, HS 3813, HS 3823, HS 4863, HS 2283, and HS 4333.

A minor in Consumer Economics is available. Requirements are: HS 3303, HS 3673, HS 4313, HS 4333. In addition, nine credits are to be elected from HS 4323, HS 4853, HS 4863 and HS 4403.
Gerontology Certificate

Associate Professor Sheri Lokken Worthy

The Gerontology Certificate is designed to provide the student with current factual and theoretical data along with practicum experience relating to the process of aging. It is a multidisciplinary effort with contributions from a variety of departments cutting across several colleges. Students completing the requirements will earn a certificate in gerontology.

This area of study is open to students from all colleges within the University. The Gerontology Certificate was developed to supplement the student’s chosen major. Undergraduate students wishing to complete the Gerontology requirements will select a major in addition to electing 15 hours of gerontology course work. Graduate students are required to complete a readings or independent study course in addition to the 15 hours of gerontology course work.

Undergraduate Certificate Requirements: (minimum 15 hours)
Select three of the following:
- ABE 4513 Dynamics of Aging
- COE 4713 Issues in Aging
- HS 4403 Intro to Gerontology
- HS 4813 Adult Development
- HS 4863 Consumer Aspects of Aging
- PSY 4983 Psychology of Aging
- SO 4413 Aging and Retirement in American Society
- SW 4623 Social Work with the Aged

Select at least two of the following: (may include courses from above list)
- SW 2233 Social Welfare Policy
- HS 3673 Environments for Special Needs
- HS 4335 Nutrition Throughout the Life Cycle
- HS 4333 Families, Legislation, and Public Policy

Graduate Certificate Requirements (minimum 18 hours)
Select three of the following:
- ABE 6513 Dynamics of Aging
- PSY 6983 Psychology of Aging
- SO 6413 Aging & Retirement in American Society
- HS 6403 Intro to Gerontology
- HS 6863 Consumer Aspects of Aging
- PE 8153 Wellness and Aging

Take at least two of the following (may include courses from above list):
- HS 6813 Adult Development
- HS 6353 Nutrition Throughout the Life Cycle
- HS 8243 Community Nutrition
- HS 6333 Families, Legislation, and Public Policy
- COE 8813 Counseling the Elderly
- COE 6713 Issues in Aging
- PSY 8313 Developmental Psychology

3 hrs Required: Independent study/readings course

There are career opportunities for landscape architects with private firms and in governmental agencies. The scope of this profession includes, but is not limited to: site planning for housing developments, shopping centers, malls, civic centers, industrial parks, campuses, motels, resort areas, country clubs, golf courses, and municipal, state, regional, and national parks.

In addition to completing the specified courses of the curriculum, all students are required to participate in at least one major department-sponsored field trip. A field trip fee will be assessed to specific courses. Students are expected to consult with their academic advisor in choosing electives.

All students in Landscape Architecture are required to have their own personal computer. Students should check with the department for equipment specifications prior to purchasing.

All students admitted to Mississippi State University may be enrolled in the first year of the program. After completion of 30 hours of course work at MSU or another university or community college, students must have achieved a minimum 2.50 grade point average (GPA), on a 4.0 scale, and must maintain at least a GPA of 2.50 to continue enrollment in the curriculum. A student who does not satisfy this requirement will not be allowed to enroll in LA prefix courses beyond the freshman (1000) level until his or her overall cumulative GPA reaches 2.50 or better.*

Landscape Architecture requires that a grade of “C” or better is required to fulfill a curriculum requirement.*

The department reserves the right to retain student work for the purpose of records, exhibition, instruction, industry review, etc. In addition to University policies, all students enrolled in this curriculum shall be required to abide by all approved departmental policies.

University Core
English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Mathematics (6 to 9 hours)
Select from University Core

Science (6 to 9 hours)
Select from University Core

Humanities (6 hours)
Select from University Core

Fine Arts (3 hours)
- ART 1113 Art Appreciation OR
- ARC 1013 Arch Appreciation

Social Sciences (6 hours)
- EC 2113 Principles of Macroeconomics
- Select from University Core

Major Core
- ART 1123 Art Design I
- LA 1153 Intro to Landscape Architecture
- LA 2253 Plant Design Fund in Landscape Arch
- LA 2323 Presentation Methods and Media
- PSS 2423 Plant Materials I
- LA 2423 History of Landscape Arch
- LA 2453 Site Inventory and Analysis
- LA 2433 Landscape Systems
- LA 3555 Design Studio I
- LA 3544 Construction I
- PSS 3303 Soils OR Geology (GG) Course
- LA 3655 Design Studio II
- LA 3644 Construction II
- LA 3623 Urban Planning Theory
- LA 3652 Case Studies
- LA 4244 Construction III
- LA 4344 Construction IV
- LA 4523 Appl of GIS in LA
- LA 4755 Design Studio III
- LA 4855 Capstone Studio
- LA 4844 Design Sustainable Comm
- Select from University Core

Electives
4 hours

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

Department of LANDSCAPE ARCHITECTURE (LA)
Department Head: Professor Cameron R. J. Man;
Office: Landscape Architecture Facility C103

Landscape Architecture Curriculum

Landscape Architecture is a design profession, concerned with the harmonious relationship of man and his environment. Thus, a student of this discipline learns how to apply the design process to discover how physical installations or activities of man can be placed upon the land in a fashion that accommodates man, functionally and aesthetically, and complements the environment.

The Landscape Architecture program at Mississippi State University is accredited by the American Society of Landscape Architects. Upon completing curriculum requirements, a student receives a Bachelor of Landscape Architecture (BLA) degree. A Master’s degree in Landscape Architecture (MLA) is also available. For more information, refer to the Graduate Bulletin.
The Department of PLANT and SOIL SCIENCES (PSS)

Department Head: Michael Collins
Office: 117 Dorman Hall

Plant and Soil Sciences curricula focus on the application of sciences to the integrated management of plants, soil, and climate for high-quality production of food, fiber, and ornamental plants. Central to this course of study is the dedication to conserve, maintain and enhance our environment. An undergraduate student may major in either Agronomy (AGN) or Horticulture (HO) and specialize in various concentration areas such as Agricultural and Environmental Soil Sciences (AGN), Golf and Sports Turf Management (AGN), Integrated Crop Management (AGN), Floriculture and Ornamental Horticulture (HO), and Retail Floristry Management (HO).

Graduate programs (M.S. and Ph.D.) are also offered in the Department of Plant and Soil Sciences in Agronomy, Horticulture, and Weed Science. Consult the Graduate Bulletin for additional details.

Agronomy (AGN)

University Core

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<td>EN 1113</td>
<td>English Comp II* OR</td>
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<td>EN 1173</td>
<td>Accelerated Comp II</td>
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Science (10 hours)**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1203</td>
<td>Plant Biology with Lab</td>
</tr>
<tr>
<td>CH 1043</td>
<td>Survey of Chemistry I</td>
</tr>
<tr>
<td>PSS 3033</td>
<td>Soils</td>
</tr>
<tr>
<td>PSS 3031</td>
<td>Soils Lab</td>
</tr>
</tbody>
</table>

Humanities (6 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLS 1113</td>
<td>Spanish I</td>
</tr>
<tr>
<td>FLS 1123</td>
<td>Spanish II</td>
</tr>
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</table>

Fine Arts (3 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 2113</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>EC 2123</td>
<td>Principles of Microeconomics</td>
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Major Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>LA 1701</td>
<td>Intro to Landscape Contracting</td>
</tr>
<tr>
<td>LA 1711</td>
<td>Landscape Contracting Internship I</td>
</tr>
<tr>
<td>LA 2323</td>
<td>Presentation Methods &amp; Media</td>
</tr>
<tr>
<td>LA 1153</td>
<td>Intro to Landscape Arch</td>
</tr>
<tr>
<td>LA 2701</td>
<td>Landscape Contracting Seminar I</td>
</tr>
</tbody>
</table>

Department of PLANT and SOIL SCIENCES (PSS)

Department Head: Michael Collins
Office: 117 Dorman Hall

Plant and Soil Sciences curricula focus on the application of sciences to the integrated management of plants, soil, and climate for high-quality production of food, fiber, and ornamental plants. Central to this course of study is the dedication to conserve, maintain and enhance our environment. An undergraduate student may major in either Agronomy (AGN) or Horticulture (HO) and specialize in various concentration areas such as Agricultural and Environmental Soil Sciences (AGN), Golf and Sports Turf Management (AGN), Integrated Crop Management (AGN), Floriculture and Ornamental Horticulture (HO), and Retail Floristry Management (HO).

Graduate programs (M.S. and Ph.D.) are also offered in the Department of Plant and Soil Sciences in Agronomy, Horticulture, and Weed Science. Consult the Graduate Bulletin for additional details.

Agronomy (AGN)

University Core

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>EN 1103</td>
<td>English Comp I OR</td>
</tr>
<tr>
<td>EN 1163</td>
<td>Accelerated Comp I</td>
</tr>
<tr>
<td>EN 1113</td>
<td>English Comp II OR</td>
</tr>
<tr>
<td>EN 1173</td>
<td>Accelerated Comp II</td>
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Mathematics (6 to 9 hours)

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<tbody>
<tr>
<td>MA 1313</td>
<td>College Algebra</td>
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Science (6 to 9 hours)

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</tr>
<tr>
<td>EN 1163</td>
<td>Accelerated Comp I</td>
</tr>
<tr>
<td>EN 1113</td>
<td>English Comp II OR</td>
</tr>
<tr>
<td>EN 1173</td>
<td>Accelerated Comp II</td>
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Humanities (6 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MA 1313</td>
<td>College Algebra</td>
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</table>

See major core/concentration

Social Science (6 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>See major core/concentration or University Core list</td>
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</table>

Fine Arts (3 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>See major core/concentration or University Core list</td>
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Humanities (6 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>See major core/concentration or University Core list</td>
<td></td>
</tr>
</tbody>
</table>

See major core/concentration or University Core list
The Golf and Sports Turf Management (GSTM) is the study of plant and soil sciences for the culture of turfgrass on golf and sports facilities. The GSTM curriculum prepares individuals for careers as golf course superintendents at private, daily fee, and resort courses or as sports turf managers at city, school, and professional sports turf facilities (i.e. football, baseball, soccer fields.) New construction of golf courses and sports facilities has led to a heightened demand for trained golf and sports turf management professionals. Three semesters of Cooperative Education work experience will be required of all students enrolled in the GSTM concentration.

Cooperative Education Requirements: GSTM students must complete a minimum 12 months or three semesters of Coop work at a golf course with an individual who is certified or progressing toward certification with the Golf Course Superintendents Association of America or at a sports stadium with a recognized sports turf manager. One of the three Coop semesters enrolled by the student must be a non-summer semester period. A 2.50 cumulative QPA on all MSU work is required to participate in the GSTM program. All new students must register with their coop advisor early in their initial semester of enrollment.

Integrated Crop Management Concentration

Major Advisors: Professor Frank B. Matta
Associate Professors Brian Baldwin, David J. Lang, and Ted Wallace

Integrated Crop Management (ICM) is the study of food and fiber production utilizing ecologically sound and technologically advanced methods. Areas covered include basic concepts of plant science and specific practices in crop initiation, culture, harvesting, processing, distribution and marketing. Biotechnological and traditional methods of germplasm enhancement are taught. Specific program areas of study include agronomic crop production, crop science, fruit science, seed science, seed technology, and vegetable crop production. Students completing the Integrated Crop Management curriculum are prepared for careers as producers, consultants, technical representatives of plant breeders, extension agents, or inspectors with USDA and state agencies. This curriculum also provides a good background of basic sciences for those who wish to pursue graduate studies.

Golf and Sports Turf Management Concentration

Major Advisor: Associate Professor Barry Stewart
Assistant Professor Greg Munshaw

Choose one of the following concentrations:

Agricultural and Environmental Soil Sciences Concentration

Professor Jac J. Varco
Associate Professors William Kingery and Michael Cox

The Agricultural and Environmental Soil Science curriculum provides an educational foundation in soil processes involving physical, chemical, and biological interrelationships. The soil resource is an integral component of our environment and is subject to loss and degradation through human activities. Humanity's dependence on soil for food and fiber production and the need for ensuring environmental quality require individuals trained in the management of this resource. Career opportunities exist both nationally and internationally in agricultural and environmental consulting, agribusiness, government agencies, teaching, and research. Required courses provide soil science training, while elective courses can be selected to meet specific needs.

Cooperative Education: Agricultural and Environmental Soil Science students are encouraged to participate in the cooperative education program.

Major Core

BIO 1203 Plant Biology*
BIO 4214 General Plant Physiology
PSS 3301 Soils Laboratory
PSS 3303 Soils
PSS 4313 Soil Fertility and Fertilizers

Fundamentals of Public Speaking

CO 1003

Satisfies University Core

Choose one of the following concentrations:

Agricultural and Environmental Soil Sciences Concentration

Professor Jac J. Varco
Associate Professors William Kingery and Michael Cox

The Agricultural and Environmental Soil Science curriculum provides an educational foundation in soil processes involving physical, chemical, and biological interrelationships. The soil resource is an integral component of our environment and is subject to loss and degradation through human activities. Humanity’s dependence on soil for food and fiber production and the need for ensuring environmental quality require individuals trained in the management of this resource. Career opportunities exist both nationally and internationally in agricultural and environmental consulting, agribusiness, government agencies, teaching, and research. Required courses provide soil science training, while elective courses can be selected to meet specific needs.

Cooperative Education: Agricultural and Environmental Soil Science students are encouraged to participate in the cooperative education program.

Major Core

BIO 1203 Plant Biology*
BIO 4214 General Plant Physiology
PSS 3301 Soils Laboratory
PSS 3303 Soils
PSS 4313 Soil Fertility and Fertilizers

Writing Requirement

** See advisor or department office for a list of approved courses.

Total hours needed for major: 122

* Satisfies University Core

** See advisor or department office for a list of approved courses.

Colleges of Agriculture and Life Sciences
Floriculture and Ornamental Horticulture offers diversified opportunities that are challenging, intellectually stimulating, and economically rewarding. Floriculture and Ornamental Horticulture is the science and art of producing, distributing, marketing, and utilizing flowers, flowering and foliage plants, and woody ornamental landscape plants. It offers a wide variety of employment opportunities and competitive salaries. Students completing this curriculum are prepared for many different careers including greenhouse or nursery management, landscape management, public service, and technical product research and sales.

**Major Advisors: Associate Professor: Richard L. Harkess**

**Oral Communication Requirement**
Satisfied by successful completion of PSS 3413: Retail Floristry Internship

**Total hours needed for major: 124**

* Satisfies University Core

**See advisor or department office for a list of approved courses."
The U.S. poultry industry is a $21 billion+ business employing hundreds of thousands of people in the United States. Mississippi ranks 4th in broiler production and is continuing to expand. This dynamic industry employs about 20,000 Mississippians and has approximately 3,000 poultry farming operations throughout the state. Poultry is the number one farm revenue commodity in Mississippi.

The management concentration is appropriate for students interested in entering into a personal poultry operation, in service and sales work with large poultry enterprises, in federal, state or local government employment, and in many employment opportunities in the allied fields relating to poultry.

The rapid growth in poultry production in Mississippi has created a large demand for graduates with good backgrounds in poultry and strong supporting work in business. The business concentration satisfies all the requirements for a minor in Agribusiness. Thus, this concentration offers lucrative employment opportunities to the poultry science major.

The Poultry curriculum provides for in-depth study of scientific principles important in the production, processing and marketing of poultry and poultry products. The curriculum is designed with academic and experiential components to ensure that graduates are prepared to manage people and resources vital to this important food industry. Poultry students should also expect to develop creative thinking skills that will allow them to develop solutions for complex real world problems as they develop their careers as managers. The strong science content of the curriculm also makes it an excellent fit for pre-vet students and students interested in graduate studies. The department provides one-on-one advising for all Poultry Science students. Concentrations available are:

- Business
- Management
- Manufacturing
- Pre-Veterinary Medicine

Only grades of C or higher will be accepted for courses with the PO and VS prefixes.

**University Core**

- English Composition (6 hours)
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II

- Mathematics (6 hours)
  - MA 1313 College Algebra

- Science (9 hours)
  - MA/ST 2113 Introduction to Statistics
  - CH 1043 Survey of Chemistry I
  - CH 1053 Survey of Chemistry II
  - BIO 1123 Animal Biology
  - BIO 1203 Plant Biology
  - BL 2413 Legal Environment of Business
  - CH 1043 Survey of Chemistry I
  - CH 1053 Survey of Chemistry II

- Humanities (6 hours)
  - Select from University Core

- Fine Arts (3 hours)
  - Select from University Core

- Social Sciences (6 hours)
  - AEC 2713 Intro to Food & Resource Econ
  - PS 1113 American Government

- Major Core
  - ACC 2013 Principles of Financial Accounting
  - AEC 3133 Intro to Agribusiness Management
  - MGT 3513 Intro to Human Resource Mgt
  - PO 3011 Seminar
  - PO 3021 Seminar
  - PO 3103 Genetics
  - PO 3313 Commercial Poultry Production
  - PO 3323 Poultry Judging
  - PO 3834 Microbiology of Food Animal Production
  - PO 4031 Seminar
  - PO 4041 Seminar
  - PO 4313 Management of Commercial Layers
  - PO 4324 Avian Reproduction
  - PO 4333 Broiler Production
  - PO 4413 Poultry Nutrition
  - PO 4423 Feed Manufacturing
  - PO 4513 Poultry Processing
  - PO 4523 Commercial Broiler Processing Tech
  - PO 4833 Avian Anatomy
  - PO 4843 Avian Physiology
  - VS 2033 Diseases of Poultry
  - PO 3353 Poultry Production Internship
  - PO 3363 Poultry Processing Internship

**Oral Communication Requirement**

- Satisfied by successful completion of PO 3021, 4031, and 4041

**Writing Requirement**

- Satisfied by successful completion of PO 4324 and 3834

**Computer Literacy**

- Satisfied by successful completion of PO 4324 and 3834

**Choose one of the following concentrations:**

**Management Concentration**

The management concentration is appropriate for students interested in entering into a personal poultry operation, in service and sales work with large poultry enterprises, in federal, state or local government employment, and in many employment opportunities in the allied fields relating to poultry.

- ACC 2023 Principles of Managerial Accounting
- AEC 3233 Intro to Envr. Econ and Policy
- AEC 3413 Intro to Food Marketing
- BIO 1123 Animal Biology
- BIO 1203 Plant Biology
- BL 2413 Legal Environment of Business
- CH 1043 Survey of Chemistry I
- CH 1053 Survey of Chemistry II
- PO 3333 Advanced Poultry Judging
- PSS 3303 Soils
- ST 2113 Introduction to Statistics

**Total hours needed for major: 120**

**Business Concentration**

The rapid growth in poultry production in Mississippi has created a large demand for graduates with good backgrounds in poultry and strong supporting work in business. The business concentration satisfies all the requirements for a minor in Agribusiness. Thus, this concentration offers lucrative employment opportunities to the poultry science major.

- ACC 2023 Principles of Managerial Accounting
- AEC 3233 Intro to Envr. Econ and Policy
- AEC 3413 Intro to Food Marketing
- BIO 1123 Animal Biology
- BIO 1203 Plant Biology
- BL 2413 Legal Environment of Business
- CH 1043 Survey of Chemistry I
- CH 1053 Survey of Chemistry II
- PO 3333 Advanced Poultry Judging
- PSS 3303 Soils
- ST 2113 Introduction to Statistics

**Total hours needed for major: 121**

**Manufacturing Concentration**

The future growth of the poultry industry is closely associated with advancements in manufacturing technology. There is a large demand for well trained poultry scientists with this capability. This concentration elective offers rapid career advancement for the poultry science major and prepares the student for future graduate work.

- BCH 3613 Elementary Biochemistry
- BIO 1123 Animal Biology
- CH 1211 Investigations in Chemistry I
- CH 1213 Chemistry I
- CH 1221 Investigations in Chemistry II
- CH 1223 Chemistry II
- CH 4513 Organic Chemistry I
- CH 4523 Organic Chemistry II
- FNH 4164 Quality Assurance of Food Products
- FNH 4243 Composition and Chemical Reactions of Foods
- FNH 4414 Microbiology of Foods
- ST 3123 Intro to Statistical Inference

**Total hours needed for major: 121**
Pre-Veterinary Concentration

The Pre-Veterinary concentration allows a student to satisfy the pre-veterinary requirements while completing a B.S. in Poultry Science. The Poultry Science department offers a 3 + 1 program for admission to the College of Veterinary Medicine. Contact the Poultry Science department for these requirements.

AEC 3413 Principles of Ag. Marketing
BCH 3613 Elementary Biochemistry
BIO 1504 Principles of Zoology
BIO 4413 Immunology
BL 2413 Legal Environment of Business
CH 1211 Investigations in Chemistry I
CH 1213 Chemistry I
CH 1223 Chemistry II
CH 4511 Organic Chemistry I Lab
CH 4513 Organic Chemistry I
PH 1113 General Physics I
ST 3123 Intro to Statistical Inference

Total hours needed for major: 121

INTERDISCIPLINARY CURRICULUMS

FOOD SCIENCE and TECHNOLOGY

AN INTERDEPARTMENTAL CURRICULUM

A student may work toward a Master of Science or a Doctor of Philosophy degree in Food Science and Technology by selecting FSN courses which are provided by the Animal and Dairy Sciences, Poultry Science, Life Sciences, Horticulture, or Food Science, Nutrition and Health Promotion Departments. The Food Science and Technology program involves staff members and facilities of the cooperating departments plus supporting work in other departments such as biochemistry, microbiology, statistics, computer science, etc. A Bachelor of Science in food science and technology will be considered to meet the prerequisites for study toward an advanced degree. Students from other disciplines involved in nutrition are listed alphabetically under the symbol PHY in the Description of Courses section (Part III) of this catalog.

Nutrition Committee
Louis R. D’Abramo
Sylvia Byrd, Coordinator
Wanda L. Dodson
A. Wayne Groce
Rebecca Kelly
Michael T. Kidd
Berry D. Lott
Melissa Mixon
Brian J. Rude
Terry R. Smith
Yvonne Vizzier
R.P. Wilson

Department
Animal and Dairy Sci
Human Sciences
College of Vet Med
College of Vet Med
Human Sciences
Poultry Science
Human Sciences
Animal and Dairy Sci
Animal and Dairy Sci
Poultry Science
BCH and Mol Bio

ANIMAL PHYSIOLOGY PROGRAM

AN INTERDISCIPLINARY CURRICULUM

The graduate program in physiology is an interdisciplinary curriculum which utilizes the staff members and facilities available in the various participating departments. The student is offered the opportunity to work toward the M.S. degree and/or the Ph.D. in Physiology.

A student wishing to do graduate work in Physiology must be in an appropriate department, usually that of the major professor, and will be expected to complete graduate work in the same fashion as any other graduate student, even though his program is interdepartmental. Listed below are the faculty members who administer the Physiology program, and their departments. Students planning a major or minor in Physiology should use the PHY prefix for each course. Courses contributing to a major in Physiology are listed alphabetically under the symbol PHY in the Description of Courses section (Part III) of this catalog.

Animal Physiology Committee

Peter Ryan, Coordinator
A. Jerald Ainsworth
Thomas G. Althen
J. A. Boyle
Randal K. Buddington
Howard Chambers
Janice E. Chambers
Timothy N. Chambless
Angelica Chapa
Terry E. Kiser
Christopher D. McDaniel
Erdogan Memili
G. W. Morgan
Molly Nicodemus
E. David Peebles
Terry R. Smith
J. Paul Thaxton
Rhoda Vann
Scott Willard

Department
Animal and Dairy Sci
Animal and Dairy Sci
Animal and Dairy Sci
Animal and Dairy Sci
Animal and Dairy Sci
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Animal and Dairy Sci
GENETICS
AN INTERDISCIPLINARY CURRICULUM

An opportunity is offered to a student who wishes to work toward the M.S. degree in Genetics.* The Genetics program is an interdisciplinary curriculum which utilizes the staff and facilities available in the various participating departments and colleges. A wide array of plant and animal material is available for genetic investigation. Listed below are the faculty members who administer the Genetics program and their departments.

The student’s complete program will be formulated in the department of his/her choice. Students planning a major or minor in Genetics should use the GNS prefix for each course. A Bachelor of Science in the biological or physical sciences will be considered a prerequisite for receiving graduate credit for the courses listed in the catalog. Courses contributing to the major in Genetics are listed alphabetically under the symbol GNS in the Description of Courses section (Part III) of this catalog.

Genetics Committee

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>Department</th>
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</thead>
<tbody>
<tr>
<td>B. S. Baldwin</td>
<td>Plant &amp; Soil Sciences</td>
</tr>
<tr>
<td>M. E. Boyd</td>
<td>Animal and Dairy Sci</td>
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<tr>
<td>M. A. Caprio</td>
<td>Entomology</td>
</tr>
<tr>
<td>R. G. Creech</td>
<td>Plant and Soil Sci</td>
</tr>
<tr>
<td>W. J. Diehl</td>
<td>Biological Sciences</td>
</tr>
<tr>
<td>L. A. Hanson</td>
<td>Veterinary Medicine</td>
</tr>
<tr>
<td>J. N. Jenkins</td>
<td>Plant &amp; Soil Sciences</td>
</tr>
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<td>Forestry</td>
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<tr>
<td>D. S. Luthe</td>
<td>BCH and Mol Bio</td>
</tr>
<tr>
<td>Din-Pow Ma</td>
<td>BCH and Mol Bio</td>
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<td>J. C. McCarty</td>
<td>Plant &amp; Soil Sciences</td>
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<tr>
<td>G. A. Pederson</td>
<td>Plant &amp; Soil Sciences</td>
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<tr>
<td>G. T. Pharr</td>
<td>Veterinary Medicine</td>
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<tr>
<td>G. V. Pinchuk</td>
<td>Biological Sciences</td>
</tr>
<tr>
<td>E. David Peebles (coordinator)</td>
<td>Poultry Science</td>
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<tr>
<td>N. A. Reichert</td>
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<tr>
<td>T. P. Wallace</td>
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<td>J. R. Welborn</td>
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<tr>
<td>W. P. Williams</td>
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</tr>
<tr>
<td>D. A. Wise</td>
<td>Biological Sciences</td>
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</table>

*The Ph.D. program has been suspended. Students should check with the Coordinator before making plans.

GRADUATE BULLETIN

For more information on graduate programs in agriculture, see the Graduate Bulletin. A copy may be secured by writing to Office of Graduate Studies, Mississippi State, MS 39762.
**College of Architecture, Art, and Design**

JAMES L. WEST, Dean  
Jane Britt Greenwood, Associate Dean

Office: 240 Giles Hall  
Telephone: 662-325-2202; Fax Number: 662-325-8872  
Mailing Address: Box AQ, Mississippi State, MS 39762  
Web site: www.caad.msstate.edu

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**SCHOOL OF ARCHITECTURE**

**GENERAL INFORMATION**

The profession of architecture offers the student the opportunity to participate in improving the physical world, in solving problems of our society, and in giving form to the needs of modern culture. To meet these demands requires a highly trained profession composed of sensitive, dedicated men and women. The School of Architecture is the educational foundation of the profession in the State of Mississippi and provides for the development of the individual skills and understanding to prepare the student for his or her role in the practice of architecture.

The School of Architecture offers an intense, carefully structured, and rich array of courses which constitute a solid foundation for architectural practice. While course work is comprehensive in scope, providing the students with an awareness of the diversity and complexity of today’s professional world, each course has its own important role in developing the unique knowledge and abilities required of architects in a modern world.

The School of Architecture at Mississippi State University is the professional program for the State of Mississippi and is the only program in the state which leads to a professional degree in architecture. To meet the needs of the state and region, the School was established in 1973 with the support of an Advisory Committee of the Mississippi Chapter of the American Institute of Architects.

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture and the Masters of Architecture. A program may be granted a six-year, a three-year, or a two-year term of accreditation, depending on its degree of conformance with established educational standards. The five-year Bachelor of Architecture program at Mississippi State has been continuously accredited since its inception and in 2004 was reaccredited for another six-year term.

**CURRICULUM**

The curriculum is divided into three parts: the first year is defined as the pre-professional program; the second, third, and fourth years compose the professional core; the fifth year provides the transition to professional practice. The curriculum is composed of four areas of study representing: (1) History/Theory, (2) Management, (3) Design, (4) Technology.

1. **History/Theory** - composed of architectural history and philosophy, current architectural ideas and directions.
2. **Management** - representing the tools necessary to direct the processes of architecture, areas of economics, real estate, finance, promotion, land development, law, and office practice.
3. **Design** - concerned with the understanding of form, shape, and space responsive to human needs and programs, together with development of architectural communication skills.
4. **Technology** - providing basic knowledge in physical systems of structures, materials, construction and service systems of plumbing, electrical, heating and air conditioning.

The fifth year is a unique experience and is located in downtown Jackson, Miss. It offers the student an opportunity to develop depth and expertise. The city provides a major resource for design activities and acts as a laboratory for continued study. Professionals involved in all areas of the built environment contribute to teaching, and weekly field trips are scheduled to building and manufacturing sites. Research and design projects are focused on the city. This unique experience provides a transition from the academic foundation to the professional realities of architecture.

At the completion of the fifth year, students receive the professional degree of Bachelor of Architecture.

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**ADMISSIONS**

Admission to the School of Architecture is limited and highly competitive. Prospective students should communicate with the School of Architecture to request current information, and if possible, arrange for a building tour and admissions advisement.

The School of Architecture admits applicants under one of three categories of admission. All three require completing a general application to the University; followed by the submission of a separate Supplementary Application Form and other supporting materials required by the School of Architecture. The three categories of admissions are as follows:

1. **Full Admission** with the opportunity to begin freshman architectural design studio in the fall term. This category is only open to new freshman with very strong abilities. Since selection of the majority of this group will be announced by March, initial application should be made by January 15th. A limited number of places will be held for late applicants with exceptional abilities.
2. **Pre-Architecture** admission is generally granted to students acceptable to the University but who applied late or have not qualified for “full admission” to the School of Architecture. Pre-architecture students are enrolled in the School of Architecture and complete all required freshman courses except freshman architectural design studios. At such time as all required freshman courses are completed, and if the overall MSU GPA is a minimum 2.5, pre-architecture students may apply to take freshman design studios in the summer term. Entrance to design studios is highly competitive, on a space available basis, and is not automatic. All transfer students from other disciplines or other colleges or universities are considered “pre-architecture” students. Admission to summer design studios requires a special application process which must be initiated prior to February 15 and requires submission of a portfolio. Admission to the summer studio is highly selective.
3. **Accelerated Studies** admission is a special category for incoming students who hold four-year undergraduate degrees in other fields. Application must be made prior to February 15 and is similar to the pre-architecture application process for summer design studios. The “accelerated studies” program begins with admission to summer design studios and requires 35 consecutive months to complete the professional degree. Demonstrated abilities in mathematics, physics, and freehand drawing are required, and admission is highly selective.

Students may receive transfer credit for non-professional courses completed at other universities, colleges, and community colleges, provided a grade of C or better is received for each course. Transfers from other architecture schools are not encouraged. No transfer credit will be given for courses listed as technical, vocational, or architectural. A student may receive six hours of Reserve Officers’ Training Corps (ROTC) credit.

4. **International Undergraduate Students** must submit an acceptable score on the Test of English as a Foreign Language (TOEFL). The Mississippi State University minimum is 525, and the School of Architecture minimum is 550. TOEFL scores must be no more than two years old and must be official and verifiable. Completion of intensive English training or English Composition courses at a U.S. college does not waive the TOEFL requirement. Only students who are citizens of Australia, Bahamas, Belize, Canada, England, Guyana, New Zealand, Trinidad and Tobago, and Ghana and The Gambia are automatically exempt from this requirement. Citizens of South Africa, Botswana, Lesotho, and Swaziland are only exempt if English is listed as the first language on the Secondary Certificate. For further information regarding both international admissions and TOEFL requirements, please contact the Mississippi State University Office of Admissions and Scholarships at 662-325-2224.

Prospective students are urged to contact the Director of Undergraduate Admissions of the School of Architecture to discuss individual program development through the curriculum. Students intending to spend one year at a community college should seek academic advice from the School of Architecture prior to beginning the community college.
The School of Architecture also offers a Master of Science in Architecture degree with a specialization in computer graphics visualization. The degree program is appropriate for 1) students from various design fields who can demonstrate a high level of creative accomplishment, experience with digital media, and an ability to master computer programming; or 2) students with a mastery of computer programming, including such languages as C++, Autolisp, and Java, and substantial course work or experience in a design field; or 3) students with specialized backgrounds in such fields as archaeology and anthropology who wish to use design visualization as a means of scientific inquiry. The Master's program is not a professional degree and does not lead to Architectural registration. Interested students should consult the Director of the Graduate Program.

FINANCES

Costs for an architectural education are somewhat higher than in other disciplines. In addition to standard costs of fees, tuition, room, board, books, etc., an architecture student must buy required drawing equipment and materials for drawings and models during the school year. This can add $200 per semester. As a result, at least one major field trip is required each year. Charges for field trip expenses are collected with tuition and currently range from $350 in first year to $550 in fourth year. These charges are intended to cover transportation and lodging during field trips. These fees are not refundable after the first day of classes. Students can expect to purchase a laptop computer in their second year and must adhere to and follow hardware and software specifications identified by the School at that time.

A number of small scholarship opportunities as well as design competitions and awards are available to students within the School of Architecture's design programs. Normal MSU Scholarships are available to in-state and out-of-state students. Inquiries for financial aid or assistance should be sent directly to the MSU Office of Student Financial Aid and Scholarships.

COUNSELING

Once accepted into the Design Studio courses, students are required to maintain at least an MSU 2.00 cumulative quality point average to remain in design courses. At the end of the first year, a student must have completed all required courses in order to enter the second year, and at the end of the fourth year, a student must have completed all required courses in order to advance to the fifth year. Any student who receives a grade of D or lower for two sequential design courses must repeat both of these courses and receive a grade of C or better in both courses in order to advance in the program, or receive the Bachelor of Architecture degree. If a studio course is failed, a grade of C must be received to advance in the program, or receive the Bachelor of Architecture degree.

ACCELERATED STUDIES

A special program is available for graduates of other disciplines. The Accelerated Studies candidate must apply to the School of Architecture prior to February 15 and, if accepted, may expect to begin studies in the summer term and to complete the program in three years, including work during the summer terms (see admissions, paragraph #3).

CARL SMALL TOWN CENTER

From its inception the School has made small town problems and the solutions to these problems one of its foremost concerns. The Carl Small Town Center was created in 1979 to formalize this commitment. The Center seeks to initiate theoretical and applied research and to serve as a national focus for the collection, storage, dissemination, and application of information pertinent to small town issues.

For further information, contact the Director of the Carl Small Town Center at 662-325-2207.

JACKSON COMMUNITY DESIGN CENTER

The Jackson Community Design Center is a laboratory professional design office whose mission is to support the revitalization of Jackson’s urban living and working environments. The Design Center provides research, design, planning, and technical assistance to individuals and associations working to make a viable, safe and healthy urban environment. The Design Center undertakes large and small scale projects that serve the community at large and benefit individuals who are socially, economically, or physically disadvantaged. The Design Center conducts public educational programs and sponsors visiting lectures and other Continuing Education Programs.

For further information, contact the Director of the Jackson Community Design Center at 601-354-6480.

Curriculum in Architecture

Major Advisor: Jane Britt Greenwood
Office: 240 Giles Hall

University Core

English Composition (6 hours)
EN 1103 English Comp I or
EN 1163 Accelerated Comp I
EN 1113 English Comp II or
EN 1173 Accelerated Comp II

Mathematics (6 to 9 hours)
MA 1313 College Algebra*
MA 1323 Trigonometry*
MA 1463 Finite Mathematics and Intro to Calculus OR
MA 1613 Calculus for Business and Life Sciences I

Science (9 hours)
PH 1113 General Physics I
PH 1123 General Physics II
ARC 2713 Passive Building Systems

Humanities (6 hours)
ARC 2313 History of Architecture I
ARC 3313 History of Architecture II

Fine Arts (3 hours)
See University Core

Social Sciences (6 hours)
See University Core

Major Core

ART 1213 Drawing I
ART 1223 Drawing II***
ARC 1536 Architecture Design I-A**
ARC 1546 Architectural Design I-B**
ARC 2536 Architectural Design II-A
ARC 2546 Architectural Design II-B
ARC 2723 Materials
ARC 3323 History of Architecture III
ARC 3536 Architectural Design III-A
ARC 3546 Architectural Design III-B
ARC 3713 Assemblages
ARC 3723 Active Building Systems
ARC 3904 Architectural Structures I
ARC 3914 Structures II with lab
ARC 4313 Architectural Theory
ARC 4536 Architectural Design IV-A
ARC 4546 Architectural Design IV-B
ARC 4733 Site Planning for Architects
ARC 5353 Philosophy of Architecture
ARC 5383 Legal Aspects of Architecture
ARC 5443 Thesis Programming
ARC 5493 Architectural Practice
ARC 5576 Architectural Design V-A
ARC 5589 Architectural Thesis V-B
ARC 5623 Theory of Urban Design
3 hours Architectural Elective
9 hours Approved Electives****

Oral Communication Requirement
Satisfied by successful completion of Architectural Design courses.

Writing Requirement
Satisfied by successful completion of ARC 4313

Total hours needed for major: 152

*  Prospective students with composite ACT of 24 in Mathematics are excused from College Algebra. Those with a “B” or better in a full semester high school trigonometry course may be excused from College Trigonometry. Others should take these courses at MSU or a community college in the summer prior to beginning studies in Architecture. Math placement tests are available from the Computer Based Testing Center at 662-325-4610.

** Pre-architecture, transfer students, and accelerated-studies students take ARC 1536 and ARC 1546 in the summer following completion of all freshman required courses. Special application must be made by February 15 prior to summer design. Admission is highly selective and on a space available basis.

*** This course is required if a student receives a grade of C or lower in ART 1213 Drawing I.

**** The new curriculum requires a student to take three (3) electives between his/her second and fourth year. At least one must be an architectural elective. The remaining electives must be selected from the current School of Architecture Approved Electives List.
Department of ART (ART)

Mission

The Department of Art’s primary undergraduate responsibilities include educating professional artists with concentrations in Ceramics, Drawing/Painting, Graphic Design, Photography, Printmaking, and Sculpture; preparing students for a career or advanced study; offering courses that fulfill University requirements; and providing an active art gallery to serve the University, the community, and region.

Bachelor of Fine Arts

The Bachelor of Fine Arts (B.F.A.) degree is a professional studio degree. The B.F.A. degree is earned after successful completion of an intensive, 4-year program that provides the student with a series of in-depth studio experiences leading to thesis/senior presentation balanced by studies in humanities, communication, mathematics, and sciences.

The B.F.A. degree may also serve as a preparation for graduate studies-usually the Master of Fine Arts degree in studio art or design.

Concentrations

In the Bachelor of Fine Arts degree, a student may choose an concentration from the following: Ceramics, Drawing/Painting, Graphic Design, Photography, Printmaking, or Sculpture.

Art major students must earn a grade of C or higher in each studio and art history course in the B.F.A. program. (A grade of D or F would require a repeat of the course until a C or higher is attained.) An art major student must earn a grade of B or higher in each studio concentration course, or retake the course until a grade of B or higher is attained. These requirements also apply to all transfer courses submitted for consideration.

Transfer Requirements

After successful admission to the University, and before application to the Foundation Portfolio Review, transfer students must arrange for a meeting with the Department’s Foundation Coordinator in order to articulate art studio and history credits. This meeting requires the presentation of a comprehensive portfolio of artwork completed in studio courses, as well as course descriptions (and in some cases, syllabi) from classes completed for credit at other institutions. This meeting should take place as soon as possible after admission, but no later than the preregistration advising period of the first semester at MSU. The MSU Department of Art reserves the right to deny or accept transfer courses as applicable to the B.F.A. degree based on portfolio evaluation.

Foundation Portfolio Review Requirements

Only Art majors who are interested in the Graphic Design concentration are required to participate in the Foundation Portfolio Review. The review is a faculty evaluation of student work from a minimum of 18 credit hours completed in the following courses: Drawing I, Drawing II, Design I, Design II, 3-D Design, and Introduction to Computing for Art and possibly additional art courses. A grade of "C" or better must be achieved in each of these courses before students are allowed to participate in the review.

The Foundation Portfolio Review will result in an “accept” or “deny” into the Graphic Design concentration. The student who is accepted (by faculty evaluation) may begin the concentration sequence of courses. A student who is denied may remain in the art program and may resubmit a portfolio in the next Foundation Portfolio Review offered the following year. Students who are denied cannot take concentration courses in Graphic Design until they resubmit a portfolio and are accepted into the program. A student who is denied twice cannot pursue a Graphic Design concentration. He or she will have to choose another Fine Arts concentration in order to pursue a B.F.A. degree in Art at MSU.

The Foundation Portfolio Review is held in December of each year. Only the top students will be selected into the Graphic Design concentration due to enrollment demand and limits in resources and classroom space. The usual acceptance rate is about 60-70 percent of those applying.

Senior Presentation Requirements

Senior graphic design students are required to present a portfolio and senior students in the other concentration areas are required to present an exhibition as degree requirements. These final presentation requirements are fulfilled in capstone courses; ART 4640 Advanced Graphics for students in the Graphic Design concentration; and ART 4083 Senior Honors Research/ART 4093 Senior Honors Thesis for students in the other concentration areas.

Computer and Equipment Requirements in the Graphic Design and Photography Concentrations

The Department of Art requires incoming (post review) B.F.A. Art majors with a concentration in Graphic Design or Photography to purchase certain tools and equipment.

The Graphic Design concentration student is required to purchase a computer after successfully passing the Foundation Portfolio Review, usually in the sophomore year, and before enrolling in ART 3313 Graphic Design I. Art faculty prepare an approved list of current software and minimum computer specifications each year.

The Photography concentration student is required to purchase a camera and, in the digital photography option, a computer, usually in the sophomore year, and before enrolling in ART 3203 Photography II. Art faculty prepare an approved list of specific cameras and minimum computer specifications each year.

Financial aid that includes this requirement may be available by contacting the MSU Student Financial Aid and Scholarship office.

Student Materials Fee

Additional fees associated with class materials, technology and laboratory materials are required of students. These range from $10 to $100 per course and are automatically included in tuition.

Art Minor

A minor in art shall consist of ART 1123 Design I, ART 1213 Drawing I, one of the following: ART 1223 Drawing II, ART 1133 Design II, or ART 1153 3D Design, and at least nine hours in art courses at the 2000 level or above.

Accreditation

Mississippi State University is an accredited institutional member of the National Association of Schools of Art and Design.

Bachelor of Fine Arts

University and College Core

English Composition (6 hours)
- EN 1103 English Comp I or
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II or
- EN 1173 Accelerated Comp II

Humanities (6 hours)
- 3 hours Literature - See University Core
- 3 hours History - See University Core

Math (6 hours)
- MA 1313 College Algebra
- 3 hours See University Core

Fine Arts (3 hours)
- See Art History and Theory Program
- See University Core

Natural Sciences (9 hours)
- See major courses - Consult advisor for specifics

Writing Requirement
- ART 3603 Modern Art Writing

Oral Communication Requirement
- Satisfied by successful completion of ART 4640, 4083 or 4093

Graphic Design Concentration

Foundation Program (18 hours)
- ART 1123 Design I
- ART 1133 Design II
- ART 1153 3-D Design
- ART 1213 Drawing I
- ART 1223 Drawing II

Computer Literacy Requirement
- ART 2803 Intro to Computing for Art

Survey Program (15 hours)
- ART 2013 Painting I
- ART 2213 Life Drawing I
- ART 2303 Printmaking I
- ART 2403 Sculpture I

Bachelor of Fine Arts

Mississippi State University
**Interior Design**

Program Director: Beth Miller  
Major Advisor: Associate Professors Margaret S. Bateman and Instructor Robin Carroll  
Office: 121 Etheredge Hall

The Interior Design Program offers students the opportunity to develop an ability to identify, analyze, and create solutions using critical thinking and spatial designing in solving design problems in the built environment. The program prepares future professional designers to enhance the function and quality of interior spaces for the purpose of improving the quality of life, increasing productivity, and protecting the health, safety, and welfare of the public as well as protecting the environment. Practical studio experience builds competency in design theory; the specification of interior materials and finishes; lighting, barrier-free, and computer-aided design; building and life safety codes; historical interiors; professional practices; interior construction and furniture design; space planning and programming; and graphic and verbal communication skills.

**Accreditation**

The Bachelor of Science in Interior Design degree program is fully accredited by the Foundation for Interior Design Education Research (FIDER).

**Portfolio Review**

Each student is required to participate in two portfolio reviews. The first will occur between the second and third year in order to determine a student’s admission to upper level courses. The Sophomore portfolio review will consist of original work (a minimum of two projects per class) from the first two years of ID foundation courses. A grade of C of higher must be made in these courses in order to request a review. Students must have a cumulative GPA of 2.5 or higher and a 2.5 in the courses. Students failing to pass the review will not be allowed to enter ID 3614 Interior Design Studio III.

The second required review occurs during the spring semester of their senior year. Prior to graduation, all seniors must have their most current portfolios reviewed and approved by faculty panel.

**Internships**

All Interior Design majors are required to complete an internship the summer following either their Junior or Senior year. The internship offers employment experiences through a wide range of projects in the design field. Many ID students are placed in Fortune 100 Interior Design Firms across the United States.

**Financial Requirements**

Costs for an interior design education are somewhat higher than in other disciplines. In addition to standard costs of fees, tuition, room board, books, field trips, etc., an interior design student must buy required drawing equipment and materials for drawings and models during the school year. A student should budget for at least $300 or so per semester for these extra costs.

Due to the technological aspect of the profession, each student is required to purchase a personal laptop computer by the fall of his or her Sophomore year. Specifications for minimum hardware and software requirements can be found on the college website at www.caad.msstate.edu.

**Field Trips**

Field trips are an important part of the curriculum. The observations and experiences from filed trips cannot be replaced by library research or reports. Because field trips are a vital part of the design education experience, the cost is added to tuition to ensure that all students are able to take part in these essential learning opportunities.

**University Core**

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<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>EN 1103</td>
<td>English Comp I OR</td>
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<tr>
<td>EN 1163</td>
<td>Accelerated Comp I</td>
</tr>
<tr>
<td>EN 1113</td>
<td>English Comp II OR</td>
</tr>
<tr>
<td>EN 1173</td>
<td>Accelerated Comp II</td>
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</tbody>
</table>

**Math (6 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>MA 1313</td>
<td>College Algebra</td>
</tr>
<tr>
<td>MA 1323</td>
<td>Trigonometry OR</td>
</tr>
<tr>
<td>MA 1463</td>
<td>Finite Mathematics</td>
</tr>
</tbody>
</table>
Natural Sciences (9 hours)
   CH 1043  General Chemistry I
       6 hours  See University Core
Humanities (6 hours)
   See University Core
Fine Arts (3 hours)
   ID 3643  History of Interiors I
Social Sciences (6 hours)**
   PSY 1013  General Psychology
   EC 1033  Economics of Social Issues OR
   EC 2113  Principles of Macroeconomics OR
   EC 2123  Principles of Microeconomics
Major Core
   ARC 1003  Concept and Form
   ART 1123  Design I
   ART 1133  Design II
   ART 1213  Drawing I
   ART 2203  Rendering
   ART 3103  Photography I OR
   CO 3403  Intro to Photography as Communication
   HS 2664  Textiles for Interiors
   ID 1683  Interior Design Graphics
   ID 1694  ID Studio I
   ID 2615  ID Studio II
   ID 2633  Int Materials, Treatments & Resources
   ID 3363  3D CAD Modeling in Interior Design
   ID 3603  Digital Design for Interiors
   ID 3611  Portfolio Presentation
   ID 3614  ID Studio III
   ID 3624  ID Studio IV
   ID 3633  ID Detailing & Construction Documents
   ID 3653  History of Interiors II
   ID 3663  Color and Lighting for Interiors
   ID 4644  ID Studio V
   ID 4651  Internship Placement
   ID 4654  ID Studio VI
   ID 4663  Prof Procedures & Practices for Interior Des
   ID 4693  Furniture Design
   ID 4753  Interior Design Internship
       3 hours  Free Elective
Oral Communication Requirement
   Satisfied by successful completion of ID 3653
Writing Requirement
   ID 3673  Environments for Special Needs
Computer Literacy Requirement
   HS 4733  Computer-Aided Design

Total hours needed for major: 124
GENERAL INFORMATION

The College of Arts and Sciences provides the fundamental training needed by all persons who wish to become college graduates. Students in all undergraduate schools and colleges in the University take more than half their courses during the first two years in the College of Arts and Sciences. In addition, the College provides pre-professional curricula for students who take their professional training elsewhere. Thus, pre-medical, pre-dental, pre-pharmacy, pre-law, pre-ministerial, pre-optometry, medical records administration, pre-nursing, and physical therapy training are available within the College of Arts and Sciences. Medical and dental students completing required courses are eligible for consideration of a B.S. degree from Mississippi State after one year in the professional school.

Majors are offered in the following: anthropology, biological sciences, chemistry, communication, economics, English, foreign languages, general liberal arts, general science, geoscience, history, international business, mathematics, medical technology, microbiology, music, physics, political science, philosophy, psychology, sociology, and social work.

Students who are undecided about a specific curriculum should select the Undeclared category. Advisors are available to assist these students in developing their educational and career goals. A student is permitted to delay a decision as to a field of concentration for one year.

Minors are available in the following: aerospace studies, anthropology, business, chemistry, communication, economics, English, foreign languages, geography, geology, geoscience, history, international business, mathematics, philosophy, physics, political science, psychology, religion, sociology and statistics.

In addition to these majors and minors, courses are offered in Air Force ROTC, archaeology, Army ROTC, corrections, gerontology, and women’s studies. Information concerning these offerings can be found in this section of the catalog.

MISSION

The educational mission of the College of Arts and Sciences is two-fold: to provide students with a liberal education which will facilitate intellectual development and stimulate a life-long pursuit of knowledge, and to give students an in-depth education in at least one specialized area necessary to prepare them for a career or for advanced study.

The College offers curricula in the fine arts, the humanities, the sciences and the social sciences. These curricula are designed to introduce students to the basic methods of inquiry in diverse disciplines, to develop their analytical abilities, to improve their skills in writing and speaking, and to broaden their perspectives on humanity and culture in the natural and technological worlds. Additionally, they provide intensive preparation in one or more academic disciplines.

A liberal education attained in this context should ensure that graduates of the College have gained an understanding and appreciation of human culture. They should have examined the social, historical, political, philosophical and economic dimensions of the human condition and mankind’s perception of the world as it is expressed through the fine arts, language, and literature. They should have learned the use of quantitative and scientific methods and should have participated in the universal quest to comprehend natural phenomena and to utilize this knowledge beneficially and ethically.

ADVISING

The student is assigned an advisor as soon as he or she enters the College of Arts and Sciences and should maintain contact with that advisor throughout the university affiliation. The advisor will assist the student in developing a course of study and will serve as a resource person to deal with academic problems and student needs.

DEGREES

The College of Arts and Sciences offers three degrees: the Bachelor of Arts, the Bachelor of Social Work, and the Bachelor of Science. All B.A., B.S., and B.S.W. students take a common set of requirements consisting of 25-29 semester credit hours in basic skills, 9-10 semester credit hours in natural sciences, 6 semester credit hours each in humanities and social sciences, and 3 semester credit hours in fine arts, computer literacy, and a junior/senior level writing course. The B.A. and B.S.W. curricula requires 12 additional semester credit hours each in humanities and social sciences. The requirements for all four degrees as well as the curricula for specific areas of study are described below. Details for B.S.W. degree requirements are listed under Social Work.

In order to qualify for a second bachelor’s degree at Mississippi State University, the candidate must meet the following requirements: (1) The student must satisfy all course requirements for the degree sought; and (2) The student must satisfy residency requirements at Mississippi State University after the first degree has been conferred. The major department from which the second degree is sought shall determine completion of requirements.

COLLEGE REQUIREMENTS for ALL A&S DEGREES

The College of Arts and Sciences has identified graduation requirements which must be satisfied by all students pursuing degrees conferred by the College. Furthermore, these requirements (listed immediately below) must be satisfied from a list of courses approved by the College. These approved courses are taken from a longer list of courses satisfying University Core requirements which can be found in the front pages of this Bulletin. However, majors in the College of Arts and Sciences must be aware that there are numerous courses on the University Core list which are not on the College approved list. Copies of the College courses approved list are available both from the Dean’s Office and from advisors.

BACHELOR of ARTS DEGREES and REQUIREMENTS

A Bachelor of Arts degree is offered in the following areas: anthropology, chemistry, communication, economics, English, foreign languages, general liberal arts, history, mathematics, music, philosophy, political science, psychology, and sociology. The Bachelor of Social Work is offered in Social Work and follows the same basic regulations as the B.A. degree except that courses must be taken in proper sequence and a minimum of 124 hours is required.

The liberal arts include certain basic academic disciplines that contribute to the development of intelligent, moral beings. Over the centuries various subjects have at one time or another been spoken of as “liberal arts,” but the objective of liberal-arts training has remained unchanged. Whether students major in liberal arts or whether they merely take a few basic courses in that field, the liberal arts will enable them to develop those fundamental habits of good citizenship and cultural awareness which are expected of all members of our society.

The curriculum in liberal arts at Mississippi State University is intended to provide:

1. a broad educational experience in the liberal arts, regardless of professional objectives;
2. adequate preparation for admission to professional schools and graduate schools in the liberal arts disciplines;
3. specialized training of a professional or pre-professional nature, as offered by the several liberal-arts departments.

BACHELOR of ARTS CURRICULA

A minimum of 120-124 credit hours is required in all B.A. programs, 31 of which must be upper-division (3000-level or higher) Arts and Sciences credits.
In most departmental majors, the curricular requirements are sufficiently flexible to allow a student in liberal arts to select his or her departmental major at any time during the freshman or sophomore year. Whenever a student has made a decision as to a departmental major, whether it be at the beginning of the freshman year or later, he or she will be assigned to a major advisor in that department. If a student has not decided upon a major field, he or she should register as an Undecided student and take courses in the common curriculum which will prepare him or her for a subsequent shift into a departmental major.

**BACHELOR of SCIENCE DEGREES and REQUIREMENTS**

A Bachelor of Science degree is offered in the following areas: biological sciences, chemistry, general science, geoscience, mathematics, medical technology, microbiology, physics and psychology.

The Bachelor of Science degree is awarded:

1. on the completion of not fewer than 124 semester credit hours of study including 31 upper-division Arts & Sciences approved credits and the common curricula for Arts & Sciences (carrying 248 quality points) approved by the dean and an official advisor.

2. on the completion of at least 98 semester credit hours (carrying two quality points for each credit hour) of approved study (not fewer than 31 semester hours of upper-division courses in residence at Mississippi State University) and on presentation through the dean or registrar of an approved school of medicine, dentistry, or medical technology of a certificate of the satisfactory completion of all courses in the first year of professional study.

3. on the transfer of satisfactory credits from other institutions, provided the candidate, during at least one academic year in actual residence, receives 31 credits in upper-division courses in the College of Arts and Sciences.

**GRADUATION REQUIREMENTS in the COLLEGE**

Arts and Sciences majors are responsible both for knowing the graduation requirements associated with their degree program and for keeping track of their own progress toward graduation. Faculty advisors are available to offer students informed answers to their questions and, during registration, to review and approve their course schedules. In addition to the graduation requirements outlined above, students pursuing majors in the College of Arts and Sciences need to be aware of a number of special requirements having to do with graduation.

1. Senior Check sheets: College seniors who have completed 75 or more semester hours (including ‘S’ hours) must meet with their advisors and complete a Senior Check sheet or they will be unable to register for courses. A completed Senior Check sheet allows a student to determine which graduation requirements are not completed at the time the Check sheet is completed; it also allows the student to identify those remaining courses he/she still needs to pass in order to graduate. A Senior Check sheet cannot be completed until all transfer course work and/or independent study is on record with the Office of the Registrar.

2. Independent Study: Arts and Sciences majors are expected to take courses on the Mississippi State University campus when possible. If the desired courses are not offered, or if special circumstances exist, students may receive permission from the Dean to take courses through independent study.

3. CLEP Credit: The College does not allow graduation requirements in English Composition, literature, or Public Speaking to be satisfied by the awarding of CLEP credit.

**ENGLISH and FOREIGN LANGUAGES REQUIREMENTS**

The English and foreign language requirements apply to all Arts and Sciences students. Since departments have the authority to require specific foreign languages for their majors, students must become familiar with the language required by their individual major. The foreign language requirement is ordinarily satisfied.

The B.A. degree requires a 3rd semester proficiency in a foreign language. Students may fulfill the requirement through placement tests administered by the Department of Foreign Languages or by passing nine hours of a foreign language. One year of a foreign language taken at the high school level allows a student to bypass one semester of foreign language study. Students may be judged to take the foreign language placement test before enrolling in a foreign language course.

The B.S. degree requires a 2nd semester proficiency in a foreign language. Students may fulfill the requirement through placement tests administered by the Department of Foreign Languages or by passing six hours of a foreign language. Students are encouraged to take the foreign language placement test before enrolling in a foreign language course.

**Students For Whom English is a Second Language**

Students for whom English is a second language must fulfill the English and foreign language requirements as stated in this bulletin. Most majors allow these students to use their native languages to fulfill the foreign language requirement. But students planning to use their native languages in order to satisfy the foreign language requirement are urged to check with their major department to determine if that language is acceptable to the department. As far as the College of Arts and Sciences is concerned, students may use their native language to satisfy the foreign language requirement provided that:

1. the language is a recognized mode of communication in conducting official business in a given country and taught in the primary and secondary schools of the country (regional languages and dialects do not qualify as official languages);

2. the Department of Foreign Languages has the expertise to administer a test in the language (where such expertise is not available, the student takes the initiative to take a test in the language from those administered through the National Testing Service, or by another certifiable agency);

3. the language meets specific departmental requirements.

In English, a maximum of 12 semester hours total of English as a Second Language (ESL) and freshman composition courses (including the required EN 1103 and EN 1113) may be counted for graduation. Proper placement of international students from ESL courses into English composition courses is important to students’ academic success.

International students with a TOEFL score of 525 or higher should be placed in EN 1103. If their TOEFL score is 475-500, they should be placed in EN 1133; if their TOEFL score is 501-524, they should be placed in EN 1143. Once EN 1143 is passed, such students should be placed in EN 1103.

**PRE-PROFESSIONAL CURRICULA**

The College offers appropriate curricula for students who plan to enter schools of dentistry, law, medicine, theology, nursing, optometry, pharmacy, and physical therapy. These are described with the departmental entries in the following pages.

**TEACHER EDUCATION**

Please see the appropriate departmental entry or advisor for information on major programs which can incorporate courses for certification. It is especially important for students desiring certification to consult with their advisors before choosing options in required categories, like the natural sciences, or electives.

Students seeking secondary school teaching certification must complete phases II-IV of the Teacher Education program. (See “Admission Procedures in the College of Education”)

The Mississippi State Department of Education provides an alternate route to certification to individuals who hold a baccalaureate or higher degree from a regionally accredited institution of higher education and have achieved a score at or above the 51st percentile, based on the 1983 norms, on each part of the core battery and the specialty area of the NTE. An individual who meets the two above requirements may, upon proper application, receive a provisional certificate for one year. The provisional certificate will allow the holder to seek a teaching job. Additional information is available from the Dean of Arts and Sciences, the Dean of Education, and the Mississippi State Department of Education.

**ARTS & SCIENCES CORE**

In order to satisfy College graduation requirements, students seeking B.A., B.S., or B.S.W. degrees must take the number of courses indicated in each of the areas below. By satisfying these College requirements, students will also satisfy all analogous University Core requirements.

B.A. and B.S.W. students must complete 12 hours in Humanities and 12 hours in Social Sciences in addition to the two courses in the Humanities and Social Sciences required of all majors. Hence, a student must complete a total of 18 hours in the Humanities (EN, HI, PHI, REL), AND 18 hours in the Social Sciences (AN, GR, PS, PSY, SO).

These additional 24 hours are not limited to the courses listed below; they may be satisfied by others in EN, HI, PHI, and REL or in AN, EC, GR, PS, PSY, SO as long as they satisfy the distribution requirements for the major.

While all of the courses below satisfy college-wide requirements, individual departments may require that particular courses in each area be taken to satisfy requirements for their majors.

NOTE: Courses listed on the same line, separated by “or” cannot be taken in combination. Students will not receive credit in Arts & Sciences for two courses which are listed on the same line.
Also, Honors classes satisfy requirements and students who qualify are encouraged to take the Honors sections.

**Basic Skills**

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

(Air Force ROTC students may substitute AS 3013 and AS 3023.)

Foreign Language
- 3 sem. for B.A. One Foreign Language (1113, 1123, 2133)
- 2 sem. for B.S. One Foreign Language (1113, 1123)

**Fine Arts (one course required)**

- ARC 1013 Architectural Appreciation
- ARC 2313 History of Architecture I
- ARC 3313 History of Architecture II
- ART 1013 Art History I
- ART 1023 Art History II
- ART 1113 Art Appreciation OR
- ART 3143 Italian Renaissance in Art History
- CO 1503 Intro to Theatre
- MU 2213 History and Literature of Music I
- MU 2233 History and Literature of Music II
- MU 1113 Music Appreciation
- PE 1123 History and Appreciation of Dance

**Humanities (EN, HI, REL, PHI)**

B.S. degree requires one EN and one HI from the core listing. B.A. and B.S.W. require one EN, one HI, and one PHI course plus 3 other humanities (not necessarily on the following list). These three courses must cover at least two areas.

- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

**Mathematics & Statistics**

Either 2 hours required or one MA course at the level of MA 1463 or higher.

- MA 1313 College Algebra OR
- MA 1303 Quantitative Reasoning
- MA 1323 Trigonometry
- MA 1613 Calculus for Business and Life Sciences I
- MA 1713 Calculus I
- MA 1623 Calculus for Business and Life Science II OR
- MA 1723 Calculus II
- MA 2733 Calculus III
- MA 2743 Calculus IV
- MA 3113 Introduction to Linear Algebra
- ST 2113 Statistics for the Behavioral Sciences OR
- ST 3123 Introduction to Statistical Inference

**Natural Sciences**

3 courses required, 2 with labs. B.A. and B.S.W. Majors must take one lab course in the Life Sciences BIO or EPP and one in the Physical Sciences CH, GG, GR, PH.

- BIO 1004 Anatomy and Physiology
- BIO 1033 Biological Sciences OR
- BIO 1023 Plants and Humans OR
- BIO 1123 Animal Biology
- BIO 1203 Plant Biology OR
- BIO 1023 Plants and Humans
- BIO 1504 Principles of Zoology OR
- BIO 1123 Animal Biology
- BIO 3103 Genetics I or equivalent
- BIO 3304 Parasitology
- CH 1043 Survey of Chemistry I OR
- CH 1213 Chemistry I
- CH 1053 Survey of Chemistry II OR
- CH 1223 Chemistry II
- CH 1051 Experimental Chemistry
- CH 1211 Investigations in Chemistry I
- CH 1221 Investigations in Chemistry II
- EPP 4154 General Entomology
- GG 1111 Earth Science I Lab
- GG 1113 Survey of Earth Science I
- GG 1121 Earth Science II Lab
- GG 1123 Intro to World Geography
- GR 1114 Elements of Physical Geography
- PH 1041 Physics Laboratory
- PH 1042 Physics of Sound and Music
- PH 1011 Physical Laboratory I
- PH 1063 Descriptive Astronomy
- PH 1021 Physical Science Lab 2
- PH 1013 Physical Science Survey I
- PH 1023 Physical Science Survey II
- PH 1113 General Physics I OR
- PH 2213 Physics I
- PH 1123 General Physics II
- PH 2223 Physics II
- PH 1133 General Physics III
- PH 2233 Physics III

**Junior/Senior Writing**

3 hours Consult advisor for selections.
ANTHROPOLOGY (AN)

See the Department of SOCIOLOGY, ANTHROPOLOGY, and SOCIAL WORK

ARCHAEOLOGY

See the Department of SOCIOLOGY, ANTHROPOLOGY, and SOCIAL WORK

Department of BIOLOGICAL SCIENCES (BIO) (MDT) (MIC)

The biological sciences encompass the three basic sub-disciplines of biology: botany, microbiology and zoology. The curricula of the major areas of concentration are designed to provide the student with a broad academic base while offering valuable practical experiences in laboratory and field situations.

The biology curriculum contains a nucleus of basic courses that present unifying principles, and advanced courses in either botany or zoology. Botany may be defined as a scientific study of plants. It is the basic science of all applied fields of work having to do with plants, such as agronomy, forestry, horticulture, plant breeding and plant pathology. Zoology is a basic science of all work having to do with animals such as taxonomy, ecology, physiology.

Microbiology is the study of living microscopic and submicroscopic organisms which are of importance to mankind. Majors in microbiology are prepared to work in food processing plants, plant or animal disease control agencies, pharmaceutical companies, quality control positions, and research areas of concentration are designed to provide the student with a broad academic base while offering valuable practical experiences in laboratory and field situations.

A senior research thesis in the biological sciences is available to outstanding students. A description of the program and application materials may be obtained from the department office.

BIOLOGICAL SCIENCES (BIO)

Major Advisors: Professor Walter Diehl; Office: 104 Harned Hall
Associate Professor Giselle Munn; Office: 323 Harned Hall

University and College Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>EN 1103</td>
<td>English Comp I OR</td>
</tr>
<tr>
<td>EN 1163</td>
<td>Accelerated Comp I</td>
</tr>
<tr>
<td>EN 1113</td>
<td>English Comp II OR</td>
</tr>
<tr>
<td>EN 1173</td>
<td>Accelerated Comp II</td>
</tr>
</tbody>
</table>

Foreign Language (6 hours)

- 2 semesters one Foreign Language (see advisor)

Humanities (6 hours)

- 3 hours Literature
- 3 hours History

Mathematics (6 hours)

- MA 1313 College Algebra
- MA 1323 Trigonometry

Fine Arts (3 hours)

See A&S requirements

Natural Sciences (9-12 hours)

See Major Core - Consult advisor for specifics

Social Sciences (6 hours)

Must be from 2 different areas - see A&S requirements

Major Core - Biological Sciences (23 hours)

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIO 1203</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>BIO 1504</td>
<td>Principles of Zoology</td>
</tr>
</tbody>
</table>

BIO 3304 General Microbiology
BIO 4133 Human Genetics
BIO 2103 Cell Biology

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Writing Requirement
BIO 3013 Writing for Biologists

Computer Literacy Requirement
BIO 3013 Writing for Biologists
BIO 4133 Human Genetics

Biological Sciences Area Courses - minimum 6 hours in each area

(Three Biological Sciences area courses must include a laboratory. A minimum of one animal course and one plant course is required from Areas 2, 3 or 4.)

Area 1: Molecules and Cells*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BIO 4114</td>
<td>Cellular Physiology</td>
</tr>
<tr>
<td>BIO 4413</td>
<td>Immunology</td>
</tr>
<tr>
<td>BIO 4433</td>
<td>Pran Virology</td>
</tr>
<tr>
<td>BIO 4504</td>
<td>Embryology</td>
</tr>
<tr>
<td>BIO 4503</td>
<td>Histology</td>
</tr>
<tr>
<td>BCH 4603</td>
<td>General Biochemistry</td>
</tr>
<tr>
<td>BCH 4613</td>
<td>General Biochemistry</td>
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Area 2: Anatomy and Physiology*

<table>
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<tr>
<td>BIO 4204</td>
<td>Plant Anatomy</td>
</tr>
<tr>
<td>BIO 4214</td>
<td>General Plant Physiology</td>
</tr>
<tr>
<td>BIO 3504</td>
<td>Comparative Anatomy</td>
</tr>
<tr>
<td>BIO 4514</td>
<td>Animal Physiology</td>
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</table>

Area 3: Organisms*

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIO 2213</td>
<td>Survey of Plants &amp; Fungi</td>
</tr>
<tr>
<td>BIO 3303</td>
<td>Parasitology</td>
</tr>
<tr>
<td>BIO 4203</td>
<td>Taxonomy of Spermatophytes</td>
</tr>
<tr>
<td>BIO 4223</td>
<td>Freshwater Algae</td>
</tr>
<tr>
<td>BIO 3524</td>
<td>Biology of Vertebrates</td>
</tr>
<tr>
<td>BIO 4513</td>
<td>Ichthyology</td>
</tr>
<tr>
<td>BIO 4523</td>
<td>Mammalogy</td>
</tr>
<tr>
<td>BIO 4543</td>
<td>Ornithology</td>
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</table>

Area 4: Ecology and Evolution*

<table>
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<tr>
<th>Course</th>
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<tr>
<td>BIO 3104</td>
<td>Ecology</td>
</tr>
<tr>
<td>BIO 4113</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>BIO 4213</td>
<td>Plant Ecology</td>
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</table>

Life Science Elective (10 hours)* consult advisor

Physical Science Core (20 hours)

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<tr>
<td>CH 1213</td>
<td>Chemistry I</td>
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<tr>
<td>CH 1223</td>
<td>Chemistry II</td>
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<tr>
<td>CH 1211</td>
<td>Investigations in Chemistry I</td>
</tr>
<tr>
<td>CH 1221</td>
<td>Investigations in Chemistry II</td>
</tr>
<tr>
<td>CH 4513</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>CH 4523</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td>PH 1113</td>
<td>General Physics I</td>
</tr>
<tr>
<td>PH 1123</td>
<td>General Physics II OR</td>
</tr>
<tr>
<td>PH 1133</td>
<td>General Physics III</td>
</tr>
</tbody>
</table>

General Electives (14 hours)

- Hours in excess of 24 hours from area courses may be deducted from elective hours. Life Science electives may be taken in other Departments but must be courses for respective “majors”. See advisor.

NOTE: University, College and Department restrictions - the following courses may not be used to meet the above science requirements:

- BIO 1004, BIO 1023, BIO 1033/1001, BIO 1043, BIO 1123, BIO 2004, BIO 2014, BIO 4713/6713

Minor in Biological Sciences (28 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 1213</td>
<td>Chemistry I</td>
</tr>
<tr>
<td>CH 1223</td>
<td>Chemistry II</td>
</tr>
<tr>
<td>CH 1211</td>
<td>Investigations in Chemistry I</td>
</tr>
<tr>
<td>CH 1221</td>
<td>Investigations in Chemistry II</td>
</tr>
<tr>
<td>17 hours</td>
<td>Biology Core (less BIO 3013 and CO 1003)</td>
</tr>
<tr>
<td>4 hours</td>
<td>One course from Area 4 above</td>
</tr>
</tbody>
</table>
**MICROBIOLOGY (MIC)**

Major Advisors: Professor Frank Champlin; Office: 127 Harned Hall
Professor Karen Coats; Office: 113 Harned Hall

**University and College Core**

**English Composition (6 hours)**
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

**Foreign Language (6 hours)**
- 2 semesters one Foreign Language (see advisor)

**Humanities (6 hours)**
- 3 hours Literature - see A&S requirements
- 3 hours History - see A&S requirements

**Mathematics (6 hours)**
- MA 1713 Calculus I
- ST 3123 Intro to Statistical Inference

**Fine Arts (3 hours)**
See A&S requirements

**Natural Sciences**
See Major Core - Consult advisor for specifics

**Social Sciences (6 hours)**
Must be from 2 different areas and from A&S Core. Consult advisor for acceptable areas.

**Major Core**
- BIO 3304 General Microbiology
- BIO 4405 Pathogenic Microbiology
- BIO 4413 Immunology
- BIO 4433 Virology
- BIO 4443 Bacterial Genetics
- BIO 4442 Bacterial Genetics Lab
- BIO 4463 Bacterial Physiology
- 8 hours Microbiology Electives

**Oral Communication Requirement**
- CO 1003 Fundamentals of Public Speaking

**Writing Requirement**
- BIO 3013 Writing for Biologists

**Computer Literacy Requirement**
Satisfied by Successful completion of BIO 3013 and BIO 4442.

**Departmental Core**
- BIO 1203 Plant Biology
- BIO 1504 Principles of Zoology
- BIO 2103 Cell Biology

**Additional department requirements**
- CH 1211 Chemistry I
- CH 1223 Chemistry II
- CH 1211 Investigations in Chemistry I
- CH 1221 Investigations in Chemistry II
- CH 4513 Organic Chemistry I
- CH 4523 Organic Chemistry II
- CH 4511 Laboratory
- CH 4521 Laboratory
- PH 1113 General Physics I
- PH 1123 General Physics II OR
- PH 1133 General Physics III
- BCH 3613 Elementary Biochemistry OR
- BCH 4603 General Biochemistry AND
- BCH 4613 General Biochemistry

**General Electives**

Total hours needed for major: 124

Applied microbiology courses are strongly recommended, regardless of the department in which they are offered (for example, Food Micro, Environmental Micro, or Soil Micro). Upper division courses in MDT or BCH are also acceptable. BIO 2004 (Human Anatomy), and BIO 2014 (Human Physiology), BIO 3504 (Comparative Anatomy) and BIO 4502 (Toxicology) are also acceptable. Hours in excess of 8 will reduce the general electives requirement by an equal number.

Students planning to attend professional schools should check with the faculty advisor for that program to identify additional courses that may be needed. Such courses can be taken for general elective credit.

For career track, BCH 3613 and 19 hours of general electives are required. For the pre-professional/graduate track, BCH 4603/4613 and 16 hours of general electives are required.

Students desiring a minor must take General Micro, Bacterial Cultivation, Pathogenic Micro, and elective microbiology courses to total no less than 19 total hours of microbiology course work.

**MEDICAL TECHNOLOGY (MEDT)**

Major Advisor: Associate Professor Carol Williams
Office: 102 Harned Biology Building

Medical technologists are prepared for positions in hospital laboratories, clinics, research laboratories, the Public Health Service industry, and in various local, state and federal health organizations.

The medical technology curriculum leading to the Bachelor of Science degree from Mississippi State University includes three years of study at Mississippi State University and one year of study in a hospital School of Medical Technology accredited by the National Accrediting Agency for Clinical Laboratory Sciences. Admission to the hospital school is competitive. A student who has satisfactorily completed the three years on the campus and has gained admission to a hospital school will register for the hospital phase and will be considered to be enrolled at Mississippi State during the final year of study. Graduates are prepared for certification by several national agencies.

**University and College Core**

**English Composition (6 hours)**
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

**Foreign Language (6 hours)**
- 2 semesters one Foreign Language (see advisor)

**Humanities (6 hours)**
- 3 hours Literature - see A&S requirements
- 3 hours History - see A&S requirements

**Mathematics (6 hours)**
- MA 1313 College Algebra
- MA 1323 Trigonometry OR
- ST 3123 Intro to Statistical Inference

**Fine Arts (3 hours)**
See A&S requirements

**Writing Requirement**
- BIO 3013 Writing for Biologists

**Computer Literacy Requirement**
Satisfied by Successful completion of BIO 3013 and BIO 4442.

**Natural Sciences (9-12 hours)**
See Major Core - Consult Advisor for specifics

**Social Sciences (6 hours)**
Must be from 2 different areas - See University/A&S Core

**Major Core**
- BIO 1504 Principles of Zoology
- BIO 1301 Perspectives in Med Tech
- BIO 3304 General Microbiology
- BIO 3303 Parasitology
- BIO 4304 Quantitative Methods I
- BIO 4405 Pathogenic Microbiology
- BIO 4303 Bioinstrumentation
- BIO 4314 Quantitative Methods II
- BIO 4413 Immunology
- BIO 4636 Clinical Chemistry
- BIO 4614 Serology/Immunology
- BIO 4626 Hematology
- BIO 4602 Urinalysis
- BIO 4612 Special Topics
- BIO 4624 Immunohematology
- BIO 4606 Clinical Microbiology
- BCH 3613 Biochemistry
- CH 1213 Chemistry I
- CH 1211 Chemistry Lab
- CH 1223 Chemistry II
- CH 1221 Chemistry Lab
- CH 4513 Organic Chemistry I
- CH 4523 Organic Chemistry II
- 7 hours General and Science Electives

**Oral Communication Requirement**
- CO 1003 Fundamentals of Public Speaking
**BROADCASTING**

See Department of COMMUNICATION

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**Department of CHEMISTRY (CH)**

Major Advisors: Professors Bill Wilson and David Wipf
Assistant Professor John Young
1115 Hand Chemical Laboratory

Chemistry is concerned with the properties and compositions of substances and the transformations which they undergo. Because chemistry is a basic science to many careers, three undergraduate degree programs are offered to provide the needed flexibility for majors. These degrees are the B.S. (ACS), B.S., and the B.A. degrees. A minimum of 124 hours is required for the B.S. degree and the B.A. degrees. A minimum of 120 hours is required for the B.S. degree and the B.A. degrees. A minimum of 124 hours is required for the B.S. degree and the B.A. degree. The department also offers the M.S. and the Ph.D. graduate degrees. Students in other majors may earn a minor in Chemistry by achieving at least a 2.00 average in a total of 22 hours of chemistry with 14 of the hours in upper-division courses and a minimum of 11 of the total hours completed at MSU.

The American Chemical Society (ACS) has continually approved the department and its curriculum since 1941, and awards a certificate to students who complete the B.S. (ACS) program. The B.S. (ACS) program is primarily intended as preparatory for graduate study in chemistry leading to a career in basic research. Graduates could also go directly into research and development positions in industry.

The B.S. (non ACS) program has more flexibility than the B.S. (ACS) program and the choices of electives are based upon the career choice. Chemistry advisors can help students choose the proper electives for different careers.

The B.A. degree program has a stronger liberal arts emphasis and could serve as a preparation for a secondary teaching career, chemical sales, or further study in a professional school.

---

**B.S. in Chemistry (A.C.S. Certification)**

**University and College Core**

- English Composition (6 hours)
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II

- Foreign Language (6 hours)
  - 2 semesters one Foreign Language (see advisor)

- Humanities (6 hours)
  - 3 hours Literature - see A&S requirements
  - 3 hours History - see A&S requirements

- Mathematics (6 hours)
  - MA 1713 Calculus I
  - MA 1723 Calculus II

- Fine Arts (3 hours)
  - See A&S requirements

- Natural Sciences (9-12 hours)
  - See Major Core - Consult Advisor for specifics

- Social Sciences (6 hours)
  - Must be from 2 different areas and must be selected from University/A&S Core

**Major Core**

Student should check for prerequisites for all courses. See advisor.

- CH 1141 Professional Chemistry: Paths
- CH 1213 Chemistry I
- CH 1211 Investigations in CH I
- CH 1223 Chemistry II
- CH 1221 Investigations in CH II
- CH 2141 Professional Chemistry: Tools
- CH 2314 Analytical Chemistry I
- CH 3141 Professional Chemistry: Literature
- CH 3213 Inorganic Chemistry
- CH 4141 Professional Chemistry: Research
- CH 4212 Advanced Inorganic Lab
- CH 4213 Advanced Inorganic Chemistry
- CH 4351 Analytical Chemistry Lab II
- CH 4353 Analytical Chemistry II
- CH 4413 Physical Chemistry I
- CH 4411 Physical Chem Lab I
- CH 4423 Physical Chemistry II
- CH 4421 Physical Chem Lab II
- CH 4513 Organic Chemistry I
- CH 4511 Organic Chemistry Lab I
- CH 4523 Organic Chemistry II
- CH 4521 Organic Chemistry Lab II
- CH 4603 Undergraduate Research
- CH 4711 Senior Seminar
- BCH 4603 General Biochemistry I
- 3 hours Chemistry Electives*
- PH 2213 Physics I
- PH 2223 Physics II
- PH 2233 Physics III
- MA 2733 Calculus III

- Oral Communication Requirement
  - Satisfied by successful completion of CH 1141, 2141, 3141, 4141 and 4711.

- Writing Requirement
  - Satisfied by successful completion of CH 3141, 4141 and 4711.

- Computer Literacy
  - Satisfied by successful completion of CH 1141, 2141, 2314, 3141, 4141, 4351 and 4711.

- Technical Electives (12 hours)
  - Advisor approved courses

- General Electives
  - Number of credit hours needed to bring the total number of credit hours to 124. Consult advisor.

**Total hours needed for major: 124**

* Advisor approved chemistry courses 3000-level and above.
### B.S. in Chemistry (without A.C.S. Certification)

**University and College Core**

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<tr>
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<td>EN 1163 Accelerated Comp I</td>
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<td>EN 1113 English Comp II OR</td>
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<td>EN 1173 Accelerated Comp II</td>
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<table>
<thead>
<tr>
<th>Foreign Language (6 hours)</th>
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<tr>
<td>2 semesters one Foreign Language (see advisor)</td>
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<table>
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<tr>
<th>Humanities (6 hours)</th>
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<tbody>
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<td>3 hours Literature - see A&amp;S requirements</td>
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<tr>
<td>3 hours History - see A&amp;S requirements</td>
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<th>Mathematics (6 hours)</th>
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<td>MA 1713 Calculus I</td>
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<table>
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<tr>
<th>Fine Arts (3 hours)</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Natural Sciences (9-12 hours)</th>
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</thead>
<tbody>
<tr>
<td>See Major Core - Consult Advisor for specifics</td>
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<table>
<thead>
<tr>
<th>Social Sciences (6 hours)</th>
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<tbody>
<tr>
<td>Must be from 2 different areas and must be selected from University/ A&amp;S Core</td>
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<table>
<thead>
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<th>Major Core</th>
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<tbody>
<tr>
<td>Student should check for prerequisites for all courses. See advisor.</td>
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**CH 1141 Professional Chemistry: Paths**

**CH 1213 Chemistry I**

**CH 1211 Investigations in CH I**

**CH 1223 Chemistry II**

**CH 1221 Investigations in CH II**

**CH 2141 Professional Chemistry: Tools**

**CH 2314 Analytical Chemistry I**

**CH 3141 Professional Chemistry: Literature**

**CH 4141 Professional Chemistry: Research**

**CH 4213 Advanced Inorganic Chemistry**

**CH 4351 Analytical Chemistry Lab I**

**CH 4353 Analytical Chemistry Lab II**

**CH 4413 Physical Chemistry I**

**CH 4411 Physical Chemistry Lab I**

**CH 4423 Physical Chemistry II**

**CH 4513 Organic Chemistry I**

**CH 4511 Organic Chem Lab I**

**CH 4523 Organic Chemistry II**

**CH 4521 Organic Chem Lab II**

**CH 4603 Undergraduate Research**

**CH 4711 Senior Seminar**

3 hours Chemistry Elective*

<table>
<thead>
<tr>
<th>MA 1723 Calculus II</th>
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<tbody>
<tr>
<td>PH 2213 Physics I</td>
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<tr>
<td>PH 2223 Physics II</td>
</tr>
<tr>
<td>PH 2233 Physics III</td>
</tr>
</tbody>
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**Oral Communication Requirement**

Satisfied by successful completion of CH 1141, 2141, 3141, 4141 and 4711.

**Writing Requirement**

Satisfied by successful completion of CH 3141, 4141 and 4711.

**Computer Literacy**

Satisfied by successful completion of CH 1141, 2141, 2314, 3141, 4141, 4351 and 4711.

**Technical Electives (20 hours)**

Advisor approved courses

**General Electives**

Number of credit hours needed to bring the total number of credit hours to 124. Consult advisor.

**Total hours needed for major: 124**

* Advisor approved chemistry courses 3000-level and above.

### B.S. in Chemistry (Pre-Medical)

**University and College Core**

<table>
<thead>
<tr>
<th>English Composition (6 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 1103 English Comp I OR</td>
</tr>
<tr>
<td>EN 1163 Accelerated Comp I</td>
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<tr>
<td>EN 1113 English Comp II OR</td>
</tr>
<tr>
<td>EN 1173 Accelerated Comp II</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Foreign Language (6 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 semesters one Foreign Language (see advisor)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities (6 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 hours English Literature - see A&amp;S requirements</td>
</tr>
<tr>
<td>3 hours History - see A&amp;S requirements</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematics (6 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA 1313 College Algebra</td>
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<tr>
<td>MA 1713 Calculus I</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fine Arts (3 hours)</th>
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</thead>
<tbody>
<tr>
<td>See A&amp;S requirements</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Natural Sciences (9-12 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Major Core - Consult Advisor for specifics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Sciences (6 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Must be from 2 different areas and must be selected from University/ A&amp;S Core</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Major Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student should check for prerequisites for all courses. See advisor.</td>
</tr>
</tbody>
</table>

**CH 1141 Professional Chemistry: Paths**

**CH 1213 Chemistry I**

**CH 1211 Investigations in CH I**

**CH 1223 Chemistry II**

**CH 1221 Investigations in CH II**

**CH 2141 Professional Chemistry: Tools**

**CH 2314 Analytical Chemistry I**

**CH 3141 Professional Chemistry: Literature**

**CH 4141 Professional Chemistry: Research**

**CH 4213 Advanced Inorganic Chemistry**

**CH 4351 Analytical Chemistry Lab I**

**CH 4353 Analytical Chemistry Lab II**

**CH 4413 Physical Chemistry I**

**CH 4411 Physical Chemistry Lab I**

**CH 4423 Physical Chemistry II**

**CH 4513 Organic Chemistry I**

**CH 4511 Organic Chem Lab I**

**CH 4523 Organic Chemistry II**

**CH 4521 Organic Chem Lab II**

**CH 4603 Undergraduate Research**

**CH 4711 Senior Seminar**

3 hours Chemistry Elective*

<table>
<thead>
<tr>
<th>BCH 4603 General Biochemistry I</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCH 4613 General Biochemistry II</td>
</tr>
<tr>
<td>MA 1723 Calculus II</td>
</tr>
<tr>
<td>PH 2213 Physics I</td>
</tr>
<tr>
<td>PH 2223 Physics II</td>
</tr>
<tr>
<td>PH 2233 Physics III</td>
</tr>
</tbody>
</table>

**Oral Communication Requirement**

Satisfied by completion of CH 1141, 2141, 3141, 4141 and 4711.

**Writing Requirement**

Satisfied by successful completion of CH 3141, 4141 and 4711.

**Computer Literacy**

Satisfied by successful completion of CH 1141, 2141, 2314, 3141, 4141, 4351 and 4711.

**Technical Elective (21 hours)**

<table>
<thead>
<tr>
<th>BIO 1504 Principles of Zoology</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 3103 Genetics I</td>
</tr>
<tr>
<td>BIO 3304 General Microbiology</td>
</tr>
<tr>
<td>BIO 3504 Comparative Anatomy</td>
</tr>
</tbody>
</table>

3-4 hours BIO elective

Advisor approved course

**General Electives**

Number of credit hours needed to bring the total of credit hours to 124. Consult advisor. (BIO 4514 & BIO 4413 are recommended)

**Total hours needed for major: 124**

* Advisor approved chemistry courses 3000-level and above.
B.A. in Chemistry

University and College Core

English Composition (6 hours)
- EN 1103  English Comp I OR
- EN 1163  Accelerated Comp I
- EN 1113  English Comp II OR
- EN 1173  Accelerated Comp II

Foreign Language (9 hours)
- 3 semesters one Foreign Language (see advisor)

Humanities (18 hours)
- 3 hours Literature - see University Core
- 3 hours History - see University Core
- 3 hours Philosophy - see A&S Core
- 9 hours Electives (Must be from 2 different areas) See A&S Core

Math (6 hours)
- MA 1313  College Algebra
- MA 1713  Calculus I

Fine Arts (3 hours)
- See A&S requirements

Natural Sciences (9-12 hours)
- See Major Core - Consult advisor for specifics

Social Sciences (18 hours)
- 6 hours See A&S requirements
- 12 hours Social Sciences Electives - See advisor*

Major Core

Student should check for prerequisites for all courses. See advisor.

CH 1141  Professional Chemistry: Paths
CH 1213  Chemistry I
CH 1211  Investigations in Chemistry I
CH 1223  Chemistry II
CH 1221  Investigations in Chemistry II
CH 2141  Professional Chemistry: Tools
CH 2314  Analytical Chemistry I
CH 3141  Professional Chemistry: Literature
CH 3213  Inorganic Chemistry OR
CH 4213  Adv Inorganic Chemistry
CH 4141  Professional Chemistry: Research
CH 4513  Organic Chemistry I
CH 4511  Organic Chem Lab I
CH 4523  Organic Chemistry II
CH 4521  Organic Chem Lab II
CH 4711  Senior Seminar

7 hours Chemistry Electives - See advisor**

MA 1723  Calculus II
PH 1113  General Physics I OR
PH 2213  Physics I
PH 1123  General Physics II OR
PH 2223  Physics II
PH 1133  General Physics III OR
PH 2233  Physics III

Oral Communication Requirement
Satisfied by successful completion of CH 1141, 2141, 3141, 4141 and 4711.

Writing Requirement
Satisfied by successful completion of CH 3141, 4141 and 4711.

Computer Literacy
Satisfied by successful completion of CH 1141, 2141, 2314, 3141, 4141, and 4711.

Technical Electives
- 8 hours Advisor approved courses

General Electives
Number of credit hours needed to bring the total number of credit hours to 124. Consult advisor.

Total hours needed for major: 124

* Must be from 2 different areas and must cross 4 disciplines over the 18 hours. Only one Economics allowed.

** Advisor approved chemistry courses 3000-level and above

Department of COMMUNICATION (CO)

Major Advisor: Khristi Edmonds
Office: 130 McComas Hall

The Bachelor of Arts degree in Communication is offered. The department offers concentrations in Broadcasting, Communication Studies, Journalism, Public Relations, and Theatre. Minors are available in all areas. Contact specific advisors for additional information.

BROADCASTING

The Broadcasting concentration prepares students for work in radio, television, multi-media and other areas. Graduates work in front of and behind the camera, from anchorman to camera technician. Broadcasting graduates also find positions in extension service, university relations, government and industry.

COMMUNICATION STUDIES

The career track for this area is aimed at positions in corporate and public communication offices. Students preparing for graduate school in Communication and other areas often choose the Communication Studies curriculum.

JOURNALISM

In addition to filling positions for newspapers, magazines, and Web publications in the state and around the country, graduates of the Journalism concentration obtain news-related jobs in universities, business, and industrial relations.

PUBLIC RELATIONS

The Public Relations concentration prepares students for a variety of professional positions. In addition to work with public relations and advertising agencies, graduates are employed by newspapers and broadcasting organizations, banks, churches, hospitals, insurance companies, charitable and political groups, and state and federal governments.

THEATRE

Students choosing the Theatre concentration find positions with regional and repertory companies, community theatres (both on stage and off stage), and professional theatres in educational institutions, broadcasting, and film.

COMMUNICATION MINORS

Minors in each of the concentration areas (Broadcasting, Communication Studies, Journalism, Public Relations, and Theatre) are available. Because of the differences between and among the disciplines in the department, students considering a minor are advised to meet with the department advisor, Khristi Edmonds, prior to making a decision regarding a minor. The Department of Communication endeavors to work with individual students so that the minor field combines appropriately with his/her major field of study. Students with majors in business, agriculture, social sciences and the humanities are especially encouraged to consider a minor in one of the related areas.

Awards and Professional Societies

Students in any of the departmental concentration areas with superior averages after completing certain courses may qualify for membership in the Theta Alpha Chapter of Lambda Pi Eta, the official honor society of the National Communication Association. Students in Theatre may be tapped for Alpha Psi Omega honorary after completing certain work in theatrical productions.

Numerous scholarships are available in the Department of Communication. The Turner Catledge Scholarships, the Hank Flick Outstanding Service Scholarships, the Helen and Joe Phillips Scholarship, the Earl Love Guyton Scholarships, and the Founders Scholarships are offered annually to outstanding majors. In addition, Theatre students may apply for the Blackfriars Scholarships or the Paula Mabry Scholarship. The Aggie G. Weems Scholarship in Journalism is also provided for Journalism concentration students. Applicants may pick up necessary forms in the department office or by contacting the Scholarship Committee Chair, P.O. Box PF, Mississippi State, MS 39762.

Professional societies are available for students in most of the concentration areas. The Public Relations Student Society of America and the Public Relations Association of Mississippi provide pre-professional experience and contacts for students of public relations. Blackfriars is available to students of Theatre. The Society of Professional Journalists services students of Journalism and Broadcasting. The Student Broad-
casting Association services students in the Broadcasting concentration; this group is directly involved in the production of several television programs. The Communication Student Council, comprised of one officer and one representative of each student group, provides coordination and leadership within the departmental student body.

**Programs of Study**

Students who major in Communication select from several areas of emphasis: Broadcasting, Communication Studies, Journalism, Public Relations, or Theatre. The total major consists of 45 semester hours in Communication courses: 12 hours of the departmental core; 15 hours of the professional core (which must be completed at Mississippi State University); and 18 hours of additional specified work in the area of emphasis. In addition, students complete the Arts & Sciences core curriculum and electives for a total of 124 semester hours leading to the B. A. Degree.

1. A minimum grade of C in all Communication courses (or approved substitutes) is required. Students earning a grade lower than C in a Communication course must retake that course.

2. Incoming freshmen must earn a score of 20 or higher on the ACT Enhanced English sub-scale before entering the major. Students who believe that ACT does not accurately assess their language ability and who can present evidence of above average language skills (excellent English grades, extensive writing samples, etc.) will be given the opportunity to satisfactorily complete a screening test and gain admission to the major.

3. No transfer student, either from another college or within the university, will be accepted who has not earned a minimum 2.0 GPA on all college work attempted prior to entering the major.

Prospective students are reminded that Communication is a language intensive discipline. Students with only minimal oral and written language competency should expect to be at a competitive disadvantage in classes as well as in careers after graduation. Transfer students with less than a C in English composition courses may have difficulty with the advanced writing courses required in this major.

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University and College Core

**English Composition (6 hours)**
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

**Oral Communication Requirement**
- CO 1003 Fundamentals of Public Speaking

**Foreign Language (9 hours)**
- 3 semesters one Foreign Language (see advisor)

**Humanities (18 hours)**
- 3 hours English Literature - see University Core
- 3 hours History - see University Core
- 3 hours Philosophy Elective - see University Core
- 9 hours Humanities Elective*

**Math (6 hours)**
- MA 1313 College Algebra
- MA 1323 Trigonometry OR
- ST 2113 Statistics

**Fine Arts (3 hours)**
- CO 1503 Intro to Theatre (required unless student has completed acceptable Fine Arts course prior to declaring CO major)

**Natural Sciences (9-12 hours)**
- 3-4 hours Physical Science w/Lab**
- 3-4 hours Life Science w/Lab***
- 3-4 hours Natural Science Elective****

**Social Sciences (18 hours)**
- PSY 1013 General Psychology
- SO 1003 Intro. to Sociology
- GR 1123 World Geography
- CO 1223 Intro. to Communication Theory
- CO 1403 Intro. to Mass Media*++
- 6 hours Electives

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**Broadcasting Concentration**
- CO 1423 History of the Mass Media
- CO 2413 Intro. to Newswriting and Reporting
- CO 2333 TV Production
- CO 3313 News Writing for Electronic Media
- CO 3833 Interviewing
- CO 3333 Advanced Television Production
- CO 4373 TV Practicum
- CO 4313 Mass Media Law
- CO 4323 Mass Media and Society
- 6 hours Upper Division CO electives - see advisor
- 13-16 hours General Electives*

**Total hours needed for major: 124**
* May need to be taken at Upper Division level to meet A&S UD requirement.

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**Communication Studies Concentration**
- CO 2253 Interpersonal Communication
- CO 2213 Small Group Communication
- CO 4203 Nonverbal Communication
- CO 4223 Advanced Communication Theory
- CO 4253 Elements of Persuasion
- CO 4243 Rhetorical Theory
- CO 4323 Mass Media and Society OR
- CO 4313 Mass Media Law
- CO 4213 Political Communication
- 12 hours Upper Division CO Electives - see advisor
- 10-13 hours General Electives*

**Total hours needed for major: 124**
* May need to be taken at Upper Division level to meet A&S UD requirement.

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**Journalism Concentration**
- CO 1423 History of the Mass Media
- CO 2413 Intro. to Newswriting and Reporting
- CO 2423 News Editing
- CO 3403 Intro. to Photography as Communication
- CO 3423 Feature Writing
- CO 4313 Mass Media Law
- CO 3443 Advanced Newswriting
- CO 4403 Journalism Ethics
- 9 hours Upper Division CO Electives - see advisor
- 13-16 hours General Electives*

**Total hours needed for major: 124**
* May need to be taken at Upper Division level to meet A&S UD requirement.
Public Relations Concentration

CO 3803 Principles of Public Relations
CO 2413 Intro. to Newswriting and Reporting
CO 2213 Small Group Communication
CO 2333 TV Production OR
CO 3403 Intro. to Photography as Communication
CO 2343 Writing for Radio, TV and Film OR
CO 3423 Feature Writing OR
CO 3313 News Writing for Electronic Media
CO 3833 Interviewing
CO 3813 Public Relations Case Problems
CO 3823 Public Relations Copy and Layout
CO 4813 Public Relations in Organizations
CO 4253 Elements of Persuasion
CO 4313 Mass Media Law OR
CO 4323 Mass Media and Society
10-13 hours General Electives*

Total hours needed for major: 124
* May need to be taken at Upper Division level to meet A&S UD requirement.

Theatre Concentration

CO 2013 Voice and Articulation
CO 2613 Intro. to Oral Interpretation
CO 2503 Acting
CO 2524 Stagecraft & Lighting
CO 4504 History of Theatre
CO 2544 Makeup and Costume
CO 4524 Directing
CO 4573 Theatre Management
CO 4533 Advanced Acting
CO 4583 Playwriting
CO 1523 Practicum
9-12 hours General Electives*

Total hours needed for major: 124
* May need to be taken at Upper Division level to meet A&S UD requirement.

COMMUNICATION STUDIES

See Department of COMMUNICATION

CRIMINAL JUSTICE and CORRECTIONS (COR)

See Department of SOCIOLOGY, ANTHROPOLOGY, and SOCIAL WORK

ECONOMICS (EC)

Major Advisor: Charles Campbell; Office: 326 McCool Hall
Minor Advisor: Rebecca Campbell; Office: 326 McCool Hall

Economics is the scientific study of how people and institutions make choices concerning the use of society’s scarce resources. It is a broad social science that shares common interests with both the behavioral sciences (e.g. sociology and psychology) and the decision sciences (e.g. finance and management). The importance of economic analysis is recognized by being the only social science in which a Nobel Prize is awarded. Economics students receive training in the methods and uses of economic analysis as applied to households, businesses, and governments.

The study of economics offers students many career options. Economics majors are found pursuing careers in industry, trade, finance, law, government, and education. An economics major or minor also helps prepare the student for graduate professional training in business, public administration, and law. The flexibility of the economics major is reflected in relatively high starting salaries and lifetime earnings of economists. Undergraduates at Mississippi State may pursue an economics major through either the College of Arts and Sciences (B.A. degree) as described below or through the College of Business and Industry (B.B.A. degree). The business program in economics is described later in this Bulletin.

Economics Major

Students seeking the B.A. with a major in economics are required to complete all College of Arts and Sciences and University common and core requirements. Majors must also complete the program of study on this page, including 12 hours of advanced electives. Elective courses should be chosen with the advisor’s approval and used to enhance the student’s overall program. Although not required, economics majors may elect to pursue a minor in another discipline with the advisor’s approval.

Economics Minor

A minor in economics is attained by selecting, in consultation with the economics minor advisor, at least 15 hours of economics courses. Three hours of courses from finance (FIN) or agricultural economics (AEC) may be applied to the economics minor with approval from the advisor. All economics minors must register with the economics minor advisor in the Department of Finance and Economics, 326 McCool Hall. Students with majors in business, engineering, agriculture, the social sciences, mathematics, and pre-law are especially encouraged to consider the economics minor.

Advising and Honors Organization

Academic advising and career counseling are available from the economics faculty for both majors and minors. Students interested in the study of economics should contact the Department of Finance and Economics, 326 McCool Hall. Any student who completes 12 credit hours of economics with at least a 3.0 GPA and has an overall GPA of 3.0 or higher is eligible for membership in Omicron Delta Epsilon, the international honor society in economics.

University and College Core

English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Foreign Language (9 hours)
3 semesters one Foreign Language (see advisor)

Humanities (18 hours)
3 hours Literature - see University Core
9 hours Humanities Elective*
3 hours Philosophy Elective - see University Core

Math (6 hours)
MA 1613 Calculus for Business & Life Science I
ST 2113 Stats for Behavioral Sciences

Fine Arts (3 hours)
3 hours See A&S Core Requirements

Natural Sciences (9-12 hours)
3-4 hours Physical Science w/Lab**
3-4 hours Biological Science w/Lab***
3-4 hours Natural Science Elective****

Social Sciences (18 hours)#
3 hours Met in major requirement
PS 1113 American Government
AN 1103 Intro to Anthropology
PSY 1013 General Psychology
PS 1513 Comparative Government
SO 1003 Intro to Sociology

Major Core
EC 2113 Principles of Macroeconomics
EC 2123 Principles of Microeconomics
EC 3113 Intermediate Macroeconomics
EC 3123 Intermediate Microeconomics
EC 4643 Economic Forecasting & Analysis
12 hours EC Upper Division Electives

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking
Writing Requirement
Satisfied by successful completion of EC 3113 and EC 4643

Computer Literacy
BIS 1012 Intro to Business Information Systems OR
TKT 1273 Computer Applications

General Electives (20 hours) See advisor

**Total hours needed for major: 124**
(31 hours must be 3000/4000 from A&S)
* Must be selected from 2 different areas. Not required to be selected from core listing; may have to be taken at Upper Division level to meet 32 hours A&S UD requirement.
** CH, GG, or PF; see University Core.
*** BIO, EPP, or PO; see University Core.
**** Consult advisor.

Department of ENGLISH (EN)

Major Advisors: Professors Richard Raymond (Head)  
Professor Richard Patteson (M.A. program)  
Associate Professor Kelly Marsh (B.A. program)  
Office: 316 Lee Hall

The study of English not only gives students knowledge of language and literature but also helps to develop their ability to read perpectively, think critically, analyze problems, and write correctly and persuasively. For this reason, a major in English has traditionally been viewed as good training for careers in law, government, business, and publishing, as well as for careers in teaching and writing.

The department offers an undergraduate major (B.A.), a minor in English, and an M.A. The department also edits and publishes the distinguished literary journal, *The Mississippi Quarterly*. Additionally, the department operates the university Writing Center (200 Lee Hall) to assist all MSU students with their writing.

The Department of English awards several scholarships annually: the Howell H. Gwin Scholarships to an outstanding junior majoring in English and to two entering graduate students in English; the George B. Nutt Scholarship to a freshman declaring an English major or to a sophomore or junior English major; the Helen W. Skelton Annual Scholarship to an outstanding junior majoring in English composition; and the William H. Nutt Scholarships to a freshman declaring an English major or to a sophomore or junior English major; the Helen W. Skelton Annual Scholarship to a sophomore or junior English major; the William H. Magruder Scholarship to an upper-division or graduate English major; and the Eugene Butler Creative Writing Scholarship to an undergraduate or graduate student. The Department of English sponsors XI Kappa Chapter of Sigma Tau Delta National English Honor Society; memberships are offered by invitation to scholastically qualified junior and senior undergraduate students and to second-year graduate students who are English majors. The Department of English also sponsors a writing contests and publishes *The Jabberwock Review*, a student-edited collection of literature and art.

In addition to two semesters of freshman composition, which the department recommends be taken at the 1163/73 level, English majors take EN 2213, 2223, 3363 (or 2243 and 2253), 3413, and at least 21 additional hours of English electives, of which 15 hours must be 4000 level. English electives include courses satisfying the following group requirements:

Group I (one course): EN 4503, 4513, 4523, 4533, 4703, 4713
Group II (one course): EN 4643, 4653, 4723, 4733, 4863, 4883, 4663
Group III (two courses): EN 4333, 4343, 4903, 4913, 4923, 4933
Group IV (one course): to be taken from Group I or Group II

No more than one experimental course may be counted toward fulfillment of the English elective requirements. For students who have taken accelerated or honors composition, EN 2203 does not count toward the requirements for the major.

English majors should take HI 3743, History of England, in fulfilling the Arts and Sciences B.A. common curriculum requirements.

1. English majors must maintain at least a 2.5 GPA in all upper-division English courses. Students who fall below a 2.5 GPA must bring it up to 2.5 the next semester or drop the English major.

2. English majors must attain a C or better in all English courses at the 2000 level or above in order for those courses to count toward the requirements of the major.

3. English majors must take 15 hours at the 4000 level in residence at MSU.

Students seeking secondary-school teaching certification should consult with an English advisor.

English minors take at least 18 hours of English electives beyond completion of the freshman composition requirement of their major. Of these hours, at least six must be at the 4000 level; these must be completed in residence with a grade of C or better. Students should consult the English major advisor to plan a minor program which will complement their major studies and career interests.

University and College Core

English Composition (6 hours)
EN 1113 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Foreign Language (9 hours)
3 semesters one Foreign Language (see advisor)

Humanities (9 hours)
3 hours Philosophy Elective - see advisor
6 hours History Sequence - choose one of the following:
HI 1063 Early U.S. History
HI 1073 Modern U.S. History
HI 1163 World History Before 1500
HI 1173 World History Since 1500
HI 1213 Early Western World
HI 1223 Modern Western World

Math (6 hours)
MA 1103 College Algebra
MA 1313 College Algebra
3 hours above College Algebra

Fine Arts (3 hours)
3 hours See A&S requirements

Natural Sciences (9-12 hours)
3-4 hours Physical Science w/Lab*
3-4 hours Biological Science w/Lab**
3-4 hours Natural Science Elective***

Social Sciences (18 hours)****
6 hours see A&S requirements
12 hours Social Sciences Electives

Major Core
3 hours Fourth semester in chosen Foreign Lang
HI 3743 History of England
EN 2213 English Literature I
EN 2223 English Literature II
EN 2243 American Literature I and
EN 2253 American Literature II
EN 3414 Advanced Composition

Upper Division Requirements (15 hours)
3 hours Pre-1660 English Lit Elective
3 hours Post-1660 English Lit Elective
3 hours American Lit Elective
3 hours American or contemporary Lit Elective
3 hours English Lit Elective

English Vocational Elective (3 hours)
EN 4323 Lit Criticism
EN 4403 Linguistics
EN 3303 Creative Writing

Elective (3 hours)

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

General Electives (17 hours)
Consult advisor

**Total hours needed for major: 124**
(Must maintain a 2.5 GPA in upper-division English courses. Must make a grade of C or higher in all upper-division English courses. Must complete 31 upper division A&S hours. Must take 15 hours at the 4000 level in residence.)
* CH, GG, or PF; see University Core.
** BIO, EPP, or PO; see University Core.
*** Consult advisor.
**** Must be from 2 different areas and must cross 4 disciplines over the 18 hours. Only one Economics allowed. See advisor.
Department of FOREIGN LANGUAGES (FL)

Major Advisors: Professor Edmond Emplaincourt (Head)
Associate Professor Robbins-Herring
Office: 300 Lee Hall

Foreign language majors prepare for careers in government (State Department, foreign service, diplomatic corps, FBI, CIA, USA, the military, immigration, etc), international business, the human services fields, teaching at all levels (secondary school, junior college, university), and other language-related jobs.

Programs of study leading to the Bachelor of Arts (B.A.), the joint Bachelor of Arts and Bachelor of Business Administration, and the Master of Arts (M.A.) in Foreign Languages are offered. A minor in one foreign language may be obtained upon satisfactory completion of 10 semester hours beyond the intermediate (III and IV) level courses. Education students desiring teacher certification must earn at least 27 semester hours in the language they plan to teach.

The Department sponsors three honor societies: Pi Delta Phi (French), Delta Phi Alpha (German), and Sigma Delta Pi (Spanish). Information about membership requirements may be obtained from the Head of the Department. The Department also sponsors language clubs which provide social and cultural activities for faculty and students.

The Bachelor of Arts in Foreign Languages is awarded upon the successful completion of a minimum of 123 semester hours, including the following areas: (The hours needed for graduation will depend upon the entry level of study into the major language; a minimum of six courses in the primary language at the 3000-level, or higher, is required.)

1. University Core Requirements
2. Bachelor of Arts Common Requirements
3. FL 3203, FL 3313, FL 4013, or approved substitute(s).
4. 30 semester hours in the primary language (French, German, Latin, Russian, Spanish). The normal sequence is FLF/G/S I, II, III, IV, Advanced FLF/G/S I, Advanced FLF/G/S II, Survey FLF/G/S I, Survey FLF/G/S II, and 6 hours of upper-division electives in the primary language. A civilization course related to the primary language is strongly recommended.
5. Completion of the fourth semester course of a second foreign language (12-14 semester credit hours) is recommended.

Foreign Language majors interested in following this recommended course of study should notify the Department Head as soon as possible, so that a plan of study can be developed in which courses are taken in proper sequence.

B.A. in Foreign Languages

University and College Core

English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Humanities (18 hours)
3 hours Literature - see University/A&S Core
3 hours History - see University/A&S Core
3 hours Philosophy Elective - see advisor
9 hours Humanities Electives *

Math (6 hours)
MA 1313 College Algebra
MA 1223 Trigonometry or
ST 2113 Stats for BelSci or higher math

Fine Arts (3 hours)
See A&S Requirements

Natural Sciences (9-12)
3-4 hours Physical Science w/Lab**
3-4 hours Biological Science w/Lab***
3-4 hours Natural Science Elective****

Social Sciences (18 hours)
6 hours See A&S requirements
12 hours Social Sciences Electives *+

Major Core

FL 1113 Foreign Language I
FL 1123 Foreign Language II

FL 2133 Foreign Language III
FL 2143 Foreign Language IV
FL/FLG 3114 or FLS 3111 & FLS 3113
FL/FLG 3124 or FLS 3121 & FLS 3233
FL 3203 Intro to Hist and Appl Linguistics***
FL 4013 Major Themes of Movements**+
FL/FLG/FLS 3513
FL/FLG/FLS 3523

Second Language 1113
Second Language 1123
Second Language 2133
Second Language 2143

6 hours FL Electives (3000 or 4000 level)

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Writing Requirement
FL 3313 Composition

International Business Program

A Five-Year Double Degree Program: B.A. in Foreign Languages & B.B.A. in General Business Administration

John O. Lox, Director
International Business Academic Program
Office: 355-356 McCool Hall

Major Advisors, Business Administration:
Professors Capella and Taylor; Associate Professor Addy;
Assistant Professor Rezck

Major Advisors, Foreign Languages:
Professor Emplaincourt; Associate Professors Jordan
and Robbins-Herring;
Assistant Professors Lestrade and Rice
300 Lee Hall

The International Business Program provides students an academic background and work experience to help ensure success in the marketplace. Students receive a double degree at graduation reflecting the dual concentration in Arts & Sciences: B.A. (language and cultural proficiency), and in Business: B.B.A. (with an international focus + a specific discipline like Marketing or Finance). This is in addition to the first two years of study developing abilities in writing, math, sciences, and computer literacy.

The hallmark of this program is a work internship, an outside the country work experience of a full summer or one semester duration (generally taken the last of the 4th year or beginning of the 5th year). This work is ideally reflective of the student’s specific business discipline and language proficiency area. The student who selects to separate the work and abroad experience must petition the IB committee for approval. Minimum acceptable levels are 1. WORK: 10 continuous weeks of international tasks and responsibilities, 2) ABROAD: 6 continuous weeks in one location for cultural immersion. An International Business Co-Op Work program offers 3 semesters paid international work experience in concert with pursuing the academic degrees.

The total number of semester credit hours (SCH) will be 154 for most students. The program has five main components:
1. a core of basic skills, including courses in writing, mathematics, sciences, and communication (30 SCH, or 10 courses);
2. a core of humanities and social science courses selected to fit the special needs of international business majors, emphasizing both the history and culture of other societies and the ways these societies relate to our own (27 SCH or 9 courses);
3. intensive training to develop proficiency in one foreign language and its associated cultures and literatures (37 SCH or 11 courses);
4. a thorough grounding in business techniques and practices, including 33 SCH of general business courses, 12 SCH of International Business courses, and 12 SCH in one of six functional/discipline emphases in business (accounting, banking and finance, management information systems, economics, management, marketing*, or risk management, insurance and financial planning*) (57 SCH, or 19 courses);
5. a one-semester internship program with an international business (3 SCH).

Students interested in following this recommended course of study should notify the Department Head of Foreign Languages and the Director of International Business Academic Programs. Students must have the Director’s written approval to join the International Business Program. Students must meet all graduation requirements for the College of Business and Industry and the College of Arts & Sciences. This includes having no more than 2 Ds in upper level courses or in upper level Foreign Language courses. In excess of two Ds will require course(s) to be repeated with a grade of C or better. International Business students must have an overall and previous semester GPA of 2.5 to be eligible for internship and study abroad.

* Information Systems, Insurance & Marketing functional emphasis areas will need an additional 3 credits in their program

**International Business**

**University and College Core**

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Mathematics (6 hours)
- MA 1313 College Algebra
- MA 1613 Calculus for Business and Life Sciences I

Science (6 hours)
- Life Science and Lab (BIO prefix)
- Physical Science and Lab (CH, GG, OR PH prefix)

Math/Science Elective (3 hours)
- ST 2113 Statistics for the Beh Sciences OR
- ST 3123 Intro to Statistical Inferences

Humanities (6 hours)
- EN 2273 World Literature I OR
- EN 2283 World Literature II
- HI 1173 World History Since 1500 OR
- HI 1223 Modern Western World

Fine Arts (3 hours)
- Choose from the following:
  - ARC 1013 Architectural Appreciation
  - ARC 2313 History of Architecture I
  - ART 1013 Art History I
  - ART 1023 Art History II
  - ART 1113 Art Appreciation
  - ART 3143 Italian Renaissance Art History
  - MU 1113 History and Appreciation of Music
  - CO 1053 Introduction to Theatre
  - PE 1123 History and Appreciation of Dance

Social/Behavioral Sciences (6 hours)
- GR 1123 Introduction to World Geography
- AN 1143 Introduction to Cultural Anthropology

**College of Arts and Sciences Core**

- PHI 3013 Business Ethics
- PS 1313 Intro to International Relations OR
- PS 1513 Comparative Government
- HI 3000+ Upper-level History Elective (see advisor)
- SO 3000+ Upper-level Social Science Elective (see advisor)
- FLF/G/S 1113 French/German/Spanish I
- FLF/G/S 1123 French/German/Spanish II
- FLF/G/S 2133 French/German/Spanish III
- FLF/G/S 2143 French/German/Spanish IV
- FLF/G/S 3114 or FLS 3113 & 3111 Advanced Foreign Lang I
- FLF/G/S 3124 or FLS 3233 & 3121 Advanced Foreign Lang II
- FLF/G/S 3143 Civilization of a Foreign Language
- FLF/G/S 3313 Business French/German/Spanish I
- FLF/G/S 3323 Business French/German/Spanish II
- FLF/G/S 3523 Sur of French/German/Spanish Lit

Foreign Language Elective - (see FL advisor for options)

**College of Business and Industry Core**

- ACC 2013 Principles of Financial Accounting
- ACC 2023 Principles of Managerial Accounting
- EC 2113 Principles of Macroeconomics
- EC 2123 Principles of Microeconomics
- BL 2413 Legal Environment of Business
- BIS 3233 Intro to Management Info Systems
- FIN 3123 Financial Management
- MGT 3013 Principles of Marketing
- MGT 3114 Principles of Management and Production
- GB 4853 Business Policy

**Oral Communication Requirement**
- CO 1003 Fundamentals of Public Speaking

**Computer Literacy Requirement**
- BIS 1012 Intro to Business Information Systems OR
- CSE 1013 Basic Computer Concepts and Apps

**Writing Requirement**
- MGT 3213 Organizational Communications

**Major Core**

International Business Electives- 9-12 hours
- ACC 4053 International Accounting
- BL 4273 International Business Law
- EC 3513 Economic Systems of the World
- EC 4323 International Economic Relations
- FIN 4923 International Financial Management
- IB 3913 Principles of International Business
- IB 3933 International Marketing
- MGT 4613 Cross Cultural Management
- 3 hours Transportation Course - See advisor

(BIS & INS majors must select 12 hours from the above list; all others must select 9 hours.)

**Business Functional Emphasis**

15 hours Major Electives (Choose from ACC, BIS, EC, FIN, MGT, MKT, or INS) See Business Advisor for Options.
- IB 3900 Internship Work
- IB 4903 Internship Work/ Academic Report
- 2 hours Free Electives

**Total hours needed for major:** 154

(Must have 32 upper division A&S hours)

* To be selected with the advice and approval of advisor

**GENERAL LIBERAL ARTS (GLA)**

Advisor: Mark Goodman
Office: 106 McComas

Students who prefer to specialize in more than one field of study may earn a B.A. degree in General Liberal Arts. Requirements for this degree include all of the following: satisfactory completion of the University and College Core curriculum, satisfactory completion of the College of Arts and Sciences B.A. requirements; approval of the proposed GLA program; satisfactory completion of 12 hours of upper-division courses (courses numbered 3000 and above) in each of three fields of study. The three fields may all be within the College of Arts and Sciences, or one of the three may be within another school/college of the University if that field is related to the student’s educational or career goals. To insure an orderly progression of work toward the degree, interested students should meet with the program’s advisor as early as possible. Furthermore, admittance into the program requires a GPA of at least 2.5 and the approval of the GLA Committee and the Associate Dean of the College of Arts and Sciences. General Liberal Arts is not suitable for students who are uncertain about their choice of a major; these students should see the Undecided listing in this section.
University and College Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Foreign Language (9 hours)
- 3 semesters one Foreign Language (see advisor)

Humanities (6 hours)
- 3 hours Literature - see Major Core
- 3 hours History - see A&S requirements
- 3 hours Philosophy Elective - consult advisor
- 9 hours Humanities Electives - consult advisor

Math (6 hours)
- MA 1313 College Algebra
- 3 hours Above College Algebra

Fine Arts (3 hours)
- 3 hours See A&S requirements

Natural Sciences (9-12 hours)
- 3-4 hours Physical Science w/Lab*
- 3-4 hours Biological Science w/Lab**
- 3-4 hours Natural Science Elective***

Social Sciences (18 hours)****
- 6 hours See A&S requirements
- 12 hours Social Sciences Electives

Major Core
- Consult advisor.

Oral Communication Requirement (3 hours)
  CO 1003 Fundamentals of Public Speaking

Writing Requirement - consult advisor for approved courses

Electives
- 8 or more hours to equal 124

Total hours needed for major: 124

* CH, GG, or PH; see University Core.

** BIO, EPP, or PO; see University Core.

*** Consult advisor.

**** Must be from 2 different areas and must cross 4 disciplines over the 18 hours. Only one Economics allowed. See advisor.

GENERAL SCIENCE (GSC)

Major Advisor: Professor Christopher P. Dewey
Office: 210 Hilbun Hall

For various reasons, a student may not require the intensive preparation that is typical of a professional curriculum. The general science curriculum is tailored for his/her needs. Flexibility is the key characteristic of the curriculum. The general science program is designed to give students a broad general education and at the same time teach them the fundamentals of science. By judiciously choosing his/her course of study, a student may use the general science curriculum in many ways. For example, by concentrating on biological science or chemistry the student may prepare for medical or dental school, and with appropriate choice of electives preparation for clinical and other laboratory positions in such fields as public health and marine biology is possible.

If the student is interested in interdisciplinary studies related to environmental science, the general science curriculum is suitable. Any one of the physical or biological sciences may be emphasized. The curriculum, however, involves courses from several sciences, and from other fields concerned with the environment. Persons trained in this option should be in demand in federal, state, and local governmental agencies, and in industries involved with earth resources.

Successful completion of the University and curriculum requirements will result in the awarding of a B.S. degree in General Science.

The following requirements apply to all general science students:
1. The B.S. Common Curriculum must be satisfied.
2. A minimum of 60 credit hours in science, of which at least 30 must be in one science, is required.
3. Normally, science courses must include: BIO 1504, BIO 3103,

CH 1213 & 2211, CH 1223 & 2221, CH 4513 & 4511, CH 4523 & 4521, PH 1113, & PH 1123, GG 1113 & GG 1111.
4. Electives must be approved by the faculty advisor.
5. A total of 124 credit hours is required.

University and College Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Foreign Language (6 hours)
- 2 semesters one Foreign Language (see advisor)

Humanities (6 hours)
- 3 hours Literature - see University/A&S Core
- 3 hours History - see University/A&S Core

Mathematics (6 hours)
- MA 1313 College Algebra
- 3 hours MA course above College Algebra

Fine Arts (3 hours)
- See A&S requirements

Natural Sciences (9-12 hours)
- See major courses - consult advisor for specifics

Social Sciences (6 hours)*
- See A&S requirements

Major Core
- Student should check for prerequisites for all courses. Consult advisor. Minimum of 60 hours in science, of which at least 30 must be in one science.

GG 1113 Earth Science I

GG 1111 Earth Science I Lab

CH 1211 Invest in Chemistry I Lab

CH 1213 Chemistry I

CH 1221 Invest in Chemistry II Lab

CH 1223 Chemistry II

CH 4511 Organic Chemistry I Lab

CH 4513 Organic Chemistry I

CH 4521 Organic Chemistry II Lab

CH 4523 Organic Chemistry II

PH 1113 General Physics I

PH 1123 General Physics II

BIO 1504 Prin of Zoology

BIO 3103 Genetics

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

Writing Requirement - Consult advisor and choose from the following:
- BIO 3013 Professional Writing for Biologists
- CH 4103 Chemical Literature
- EN 3303 Creative Writing
- GG 4333 Geowriting

Computer Literacy
- Consult advisor for options

General Electives (13 hours) Consult Advisor

Total hours needed for major: 124

* (31 hours must be A&S upper division)

** Must be from 2 different areas and must be selected from University/A&S Core requirements.

Department of GEOSCIENCES

Major Advisor: Dr. Darrell Schmitz
Office: 109 Hilbun Hall

B.S. and M.S. degrees in Geoscience are offered with emphasis in sub-disciplines described below. Minors are offered at both B.S. and M.S. levels in Geoscience.

The Department of Geosciences strives for an integrated, interdisciplinary study of the whole Earth at both the bachelor and master of science levels. Course offerings are grouped into six areas of emphasis:
1) Professional Geology - physical, biological, and chemical aspects of
the Earth; 2) Geography - distribution of physical features and human interaction with the Earth; 3) Environmental Geoscience - conservation and management of Earth resources and remediation of natural and human hazards; 4) Broadcast Meteorology/Climatology - radio/television weathercasting; 5) Professional Meteorology/Climatology - atmospheric processes and climatic variability; and 6) Geographical Information Systems - spatial analysis and topological relationships of geographic data. A general program of study is built upon a foundation of natural and social sciences, humanities, and computer applications. The Geoscience curriculum provides fundamental training for future employment in the petroleum and environmental industries; education; state and federal government agencies; environmental consulting; meteorological/climatological consulting; weathercasting on radio and television; and advanced studies in graduate school.

Within the six areas of emphasis outlined above, a student may further their interests in a variety of areas including: water resources, hydrogeology and environmental clean-up and monitoring, petroleum exploration and services, construction and urbanization involving geological applications, geophysics and geochemistry, sedimentary geology and paleontology, Quaternary geology and karst processes, paleomagnetism, Geographic Information Systems or analysis and prediction of weather and climate. A minimum of 40 credit hours in geoscience courses is required for the geoscience degree. Students in the professional geology concentration are required to take the Association of State Board Geologists (Fundamentals of Geology) exam.

A minor in geoscience consists of a minimum of 14 credit hours in courses numbered 2000 and above, in addition to the first year courses. The following are examples of variations within a geoscience minor. A minor with a Geology emphasis should include physical (GG 1113/1111) and historical geological (GG 1123/1121) plus 14 hours 2000 and above for a total of 22 hours; for an Environmental Geology emphasis, physical and historical geology with laboratory plus introduction to environmental geology (GG 3133) and other course work 2000 and above for a total of 22 hours; for emphasis in Geography and Broadcast Meteorology/climatology, physical geography (GR 1114) and either introduction to environmental geology (GG 3133) or conservation of natural resources (GR 3113) and other course work 2000 and above for a total of 21 hours; for emphasis in Geographic Information Systems, physical geography (GR 1114) and either introduction to environmental geology (GG 3133) or conservation of natural resources (GG 3113) and other course work 2000 and above for a total of 22 hours. Minors in Geoscience are also available at the M.S. level.

Three scholarships are available to students majoring in Geoscience, namely the F. F. Mellen, the Gordon W. Gulmon, and the Dunn Memorial Scholarships. The Mellen Scholarship provides financial assistance to those enrolled in field geology camp during the summer. The Gulmon and the Dunn Memorial Scholarships are awarded to students for academic excellence. All are restricted to students at junior or senior rank.

The Department of Geosciences encourages involvement in Sigma Gamma Epsilon, a nationally recognized honor society for students in environmental earth science. Requirements for acceptance include a grade-point average of at least 3.00 in 12 or more hours of geoscience and a cumulative average of 2.67.

The Department of Geosciences participates with the National Weather Association (NWA) and the American Meteorological Society (AMS) in training individuals for the respective “Weathercaster Seals of Approval”. The Office of the State Climatologist and the MSU Climatology Laboratory are housed in the Department and are strongly involved in programs for all students with interests in broadcast meteorology and climatology.

### DISTANCE LEARNING PROGRAMS

The Department of Geosciences offers three distance learning programs listed below. Each program utilizes DVDs and the Internet for course instruction.

- **Broadcast Meteorology Program.** A three-year, 17 course, 52 credit hour program of study that can lead to a B.S. degree in Geosciences. Primarily for individuals in television weather.

- **Operational Meteorology Program.** A three-year, 17 course, 52 credit hour program of study that can lead to a B.S. degree in Geosciences. Enrollment is restricted to members of the United States Armed Forces.

- **Teachers In Geoscience Program.** A two-year, 12 course, 36 credit hour program of study that leads to a M.S. degree in Geosciences. Primarily for K-12 teachers. An additional two-year, 10 course, 30 credit hour program of advance course work is available.

### GEOSCIENCES Core

#### University and College Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>EN 1103</td>
<td>English Comp I OR</td>
</tr>
<tr>
<td>EN 1163</td>
<td>Accelerated Comp I</td>
</tr>
<tr>
<td>EN 1113</td>
<td>English Comp II OR</td>
</tr>
<tr>
<td>EN 1173</td>
<td>Accelerated Comp II</td>
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#### Foreign Language (6 hours)

<table>
<thead>
<tr>
<th>Language</th>
<th>Requirement</th>
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</thead>
<tbody>
<tr>
<td>2 semesters</td>
<td>one Foreign Language (see advisor)</td>
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#### Humanities (6 hours)

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<thead>
<tr>
<th>Hours</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>3</td>
<td>Literature - see University Core</td>
</tr>
<tr>
<td>3</td>
<td>History - see University Core</td>
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#### Mathematics (6 hours)

<table>
<thead>
<tr>
<th>Requirement</th>
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</thead>
<tbody>
<tr>
<td>Specified under concentration areas</td>
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#### Fine Arts (3 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>CO 1503</td>
<td>Intro to Theatre (for Broadcast Meteorology)</td>
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</table>

#### Natural Sciences (9-12 hours)

<table>
<thead>
<tr>
<th>Requirement</th>
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<tbody>
<tr>
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#### Social Sciences (6 hours)

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>GR 1123</td>
<td>World Geography</td>
</tr>
<tr>
<td>3 hours</td>
<td>see University/A&amp;S Core requirements</td>
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#### For Broadcast Meteorology

<table>
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<tr>
<th>Course Code</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>GR 1123</td>
<td>World Geography</td>
</tr>
<tr>
<td>CO 1403</td>
<td>Mass Media</td>
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### Major Core

#### Basic Courses

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>GG 1113</td>
<td>Earth Science and</td>
</tr>
<tr>
<td>GG 1111</td>
<td>Earth Science Lab OR</td>
</tr>
<tr>
<td>GR 1114</td>
<td>Physical Geography w/Lab</td>
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<table>
<thead>
<tr>
<th>Requirement</th>
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<tbody>
<tr>
<td>Oral Communication Requirement</td>
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<table>
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<tr>
<th>Course Code</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO 1003</td>
<td>Fundamentals of Public Speaking</td>
</tr>
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</table>

#### Choose one of the following concentrations:

#### Professional Geology Concentration

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA 1713</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MA 1723</td>
<td>Calculus II</td>
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#### Natural Sciences

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<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>CH 1213</td>
<td>Chemistry I</td>
</tr>
<tr>
<td>CH 1211</td>
<td>Investigations in CH I</td>
</tr>
<tr>
<td>CH 1223</td>
<td>Chemistry II</td>
</tr>
<tr>
<td>CH 1221</td>
<td>Investigations in CH II</td>
</tr>
<tr>
<td>PH 1113</td>
<td>Physics I</td>
</tr>
<tr>
<td>PH 1123</td>
<td>Physics II</td>
</tr>
<tr>
<td>PH 1133</td>
<td>Physics III OR</td>
</tr>
<tr>
<td>GG 4233</td>
<td>Applied Geophysics</td>
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#### Concentration Requirements

<table>
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<tr>
<th>Course Code</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>GG 1121</td>
<td>Earth Sciences II Lab</td>
</tr>
<tr>
<td>GG 1123</td>
<td>Survey of Earth Sciences II</td>
</tr>
<tr>
<td>GG 3133</td>
<td>Intro to Environmental Geology</td>
</tr>
<tr>
<td>GG 3613</td>
<td>Water Resources*</td>
</tr>
<tr>
<td>GG 4114</td>
<td>Mineralogy</td>
</tr>
<tr>
<td>GG 4123</td>
<td>Petrology</td>
</tr>
<tr>
<td>GG 4201</td>
<td>Practicum in Paleontology</td>
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<tr>
<td>GG 4304</td>
<td>Principles of Sed. Dep I</td>
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<tr>
<td>GG 4413</td>
<td>Structural Geology</td>
</tr>
<tr>
<td>GG 4333</td>
<td>Geowriting**</td>
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<tr>
<td>GG 4443</td>
<td>Prin of Sed Dep II</td>
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<tr>
<td>GG 4503</td>
<td>Geomorphology</td>
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<tr>
<td>GR 2313</td>
<td>Maps and Remote Sensing</td>
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<tr>
<td>GR 3113</td>
<td>Conservation of Natural Resources</td>
</tr>
<tr>
<td>ST 3123</td>
<td>Intro to Statistical Inference OR</td>
</tr>
<tr>
<td>GR 4633</td>
<td>Statistical Climatology*</td>
</tr>
<tr>
<td>6 hours</td>
<td>Summer Field Camp**</td>
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#### Choose one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>GG 4203</td>
<td>Principles of Paleobiology</td>
</tr>
<tr>
<td>GG 4113</td>
<td>Micropaleontology</td>
</tr>
<tr>
<td>GG 4133</td>
<td>Principles of Paleocology</td>
</tr>
</tbody>
</table>

### COLLEGE of ARTS and SCIENCES
Choose two of the following:
- GG 1133 Planetary Geology
- GG 3603 Intro to Oceanography
- GG 4523 Coastal Environments
- GR 1603 Intro to Meteorology

Choose three of the following:
- GG 4063 Dev of Fossil Fuel Resources
- GG 4153 Engineering Geology
- GG 4433 Subsurface Methods
- GG 4613 Physical Hydrogeology
- GG 4623 Chemical Hydrogeology
- GR 4303 Principles of GIS

General Electives - 3 hours

Total hours needed for major: 124

* Fulfills Computer Literacy Requirement.
** Fulfills Computer Literacy Requirement and Writing Requirement.
*** From an approved university. See advisor.

Environmental Geoscience Concentration

<table>
<thead>
<tr>
<th>Mathematics</th>
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<tbody>
<tr>
<td>MA 1313</td>
<td>College Algebra</td>
</tr>
<tr>
<td>MA 1323</td>
<td>Trigonometry</td>
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<table>
<thead>
<tr>
<th>Natural Sciences</th>
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</thead>
<tbody>
<tr>
<td>6-9 hours</td>
<td>Science with lab (CH, PH, BIO)</td>
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<tr>
<td>3 hours</td>
<td>Science without lab (CH, PH, BIO)</td>
</tr>
</tbody>
</table>

Concentration Requirements

- GG 3603 Intro to Oceanography
- GG 3613 Water Resources*
- GG 4333 Geowriting*
- GR 1603 Intro to Meteorology
- GR 4633 Statistical Climatology*
- 18 hours 4000 level departmental courses

Choose one of the following:
- GG 1133 Planetary Geology
- GR 2313 Maps and Remote Sensing
- GG 3133 Intro to Environmental Geology
- GG 4523 Coastal Environments
- GR 3113 Conservation of Natural Resources
- GR 4813 Natural Hazards

General Electives
- 39 hours Consult advisor

Total hours needed for major: 124

* Fulfills Computer Literacy Requirement.
** Fulfills Computer Literacy Requirement and Writing Requirement.

Geography Concentration

<table>
<thead>
<tr>
<th>Mathematics</th>
<th></th>
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<tbody>
<tr>
<td>MA 1313</td>
<td>College Algebra</td>
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<tr>
<td>MA 1323</td>
<td>Trigonometry</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>6-9 hours</td>
<td>Science with lab (CH, PH, BIO)</td>
</tr>
<tr>
<td>3 hours</td>
<td>Science without lab (CH, PH, BIO)</td>
</tr>
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</table>

GG 4443 Geowriting*
GR 2013 Cultural Geography
GR 2313 Maps and Remote Sensing
GR 4103 Geography of Tourism
GR 4203 Geography of North America
GR 4303 Principles of GIS

6 hours 4000 level departmental courses

Choose four of the following:
- GG 1133 Planetary Geology
- GG 3133 Intro to Environmental Geology
- GG 3603 Intro to Oceanography
- GG 3613 Water Resources**
- GG 4523 Coastal Environments
- GR 1603 Intro to Meteorology
- GR 3113 Conservation of Natural Resources
- GR 4813 Natural Hazards

Total hours needed for major: 124

* Fulfills Computer Literacy Requirement.
** Fulfills Writing Requirement.

Broadcast Meteorology Concentration

<table>
<thead>
<tr>
<th>Mathematics</th>
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<tbody>
<tr>
<td>MA 1713</td>
<td>Calculus I</td>
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<tr>
<td>MA 1723</td>
<td>Calculus II</td>
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<tr>
<th>Natural Sciences</th>
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</thead>
<tbody>
<tr>
<td>CH 1043</td>
<td>Survey of Chemistry I</td>
</tr>
<tr>
<td>PH 1113</td>
<td>General Physics I w/ lab</td>
</tr>
<tr>
<td>PH 1123</td>
<td>General Physics II w/ lab</td>
</tr>
</tbody>
</table>

Concentration Requirements

GG 3613 Water Resources*
GR 1603 Intro to Meteorology
GR 4402 Weather Analysis I
GR 4412 Weather Analysis II
GR 4422 Weather Forecasting I
GR 4432 Weather Forecasting II
GR 4613 Applied Climatology
GR 4623 Physical Meteorology
GR 4633 Statistical Climatology*
GR 4733 Synoptic Meteorology
GR 4753 Satellite and Radar Meteorology
GR 4813 Natural Hazards
GR 4823 Dynamic Meteorology I
GR 4933 Dynamic Meteorology II
GR 4963 Mesoscale Meteorology
GR 4502 Pract in Broadcast Meteorology I
GR 4512 Pract in Broadcast Meteorology II
GR 4522 Pract in Broadcast Meteorology III
GR 4532 Pract in Broadcast Meteorology IV
CO 2013 Voice and Articulation
CO 3313 News Writing for Electronic Media**
CO 2333 TV Production
CO 3333 Advanced Television Production

Choose two of the following:
- GG 1133 Planetary Geology
- GG 3133 Intro to Environmental Geology
- GG 3603 Intro to Oceanography
- GG 4523 Coastal Environments
- GR 3113 Conservation of Natural Resources
- GR 4203 Geography of North America

Total hours needed for major: 124

* Fulfills Computer Literacy Requirement.
** Fulfills Writing Requirement.

Professional Meteorology Concentration

<table>
<thead>
<tr>
<th>Mathematics</th>
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<tbody>
<tr>
<td>MA 1713</td>
<td>Calculus I</td>
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<tr>
<td>MA 1723</td>
<td>Calculus II</td>
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<td>MA 2733</td>
<td>Calculus III</td>
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<tr>
<td>MA 3253</td>
<td>Differential Equations</td>
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<tr>
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<tbody>
<tr>
<td>CH 1213</td>
<td>Chemistry I</td>
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<tr>
<td>CH 1211</td>
<td>Investigations in CH I</td>
</tr>
<tr>
<td>PH 2213</td>
<td>Physics I</td>
</tr>
<tr>
<td>PH 2223</td>
<td>Physics II w/ lab</td>
</tr>
</tbody>
</table>
Concentration Requirements

** Fulfills Writing Requirement.
* Fulfills Computer Literacy Requirement.

** Concentration Requirements **

** Natural Sciences **

** Mathematics **

GR 4333 Geowriting**
GR 1603 Intro to Meteorology
GR 4402 Weather Analysis I
GR 4412 Weather Analysis II
GR 4422 Weather Forecasting I
GR 4432 Weather Forecasting II
GR 4613 Applied Climatology
GR 4623 Physical Meteorology
GR 4633 Statistical Climatology*
GR 4733 Synoptic Meteorology
GR 4753 Satellite and Radar Meteorology
GR 4823 Dynamic Meteorology I
GR 4933 Dynamic Meteorology II

3 hours ** General Electives **

Choose two of the following:

GG 1133 Planetary Geology
GG 3133 Intro to Environmental Geology
GG 3603 Intro to Oceanography
GG 3613 Water Resources
GG 4523 Coastal Environments
GR 4813 Natural Hazards
GR 3113 Conservation of Natural Resources
GR 4203 Geography of North America

Specified Electives (20-23 hours) - See advisor

** AMS (Broadcast Meteorology) **

GR 4502 Pract in Broadcast Meteorology I
GR 4512 Pract in Broadcast Meteorology II
GR 4522 Pract in Broadcast Meteorology III
GR 4532 Pract in Broadcast Meteorology IV
GG 3613 Water Resources
GR 4813 Natural Hazards
CO 2333 TV Production
CO 3333 Advanced Television Production

** GIS **

GR 2313 Maps and Remote Sensing
GR 3303 Survey of Geospatial Tech
GR 3313 Intro to Geodatabases
GR 4303 Principles of GIS
GR 4313 Advanced GIS
GR 4333 Remote Sensing of the Physical Envir.
GR 4323 Cartographic Sciences

** ROTC **

AS 1012 The Air Force Today I
AS 1022 The Air Force Today II
AS 2012 The Development of Air Power I
AS 2022 The Development of Air Power II
AS 3013 Air Force Leadership Studies I
AS 3023 Air Force Leadership Studies II
AS 4013 Prep for Active Duty I
AS 4023 Prep for Active Duty II

** General Electives **

1-4 hours Consult advisor

Total hours needed for major: 124

* Fulfills Computer Literacy Requirement.
** Fulfills Computer Literacy Requirement and Writing Requirement.

** Geography Information Systems (GIS) Concentration **

Mathematics
MA 1313 College Algebra
MA 1323 Trigonometry

Natural Sciences
6-9 hours Science with lab (CH, PH, BIO)
3 hours Science without lab (CH, PH, BIO)

Concentration Requirements

GR 1603 Intro to Meteorology
GR 2313 Maps & Remote Sensing
GR 3303 Survey of Geospatial Tech
GR 3133 Conservation of Nat. Resources
GR 3311 Geospatial Applications
GR 3313 Intro to Geodatabases
GR 4303 Principles of GIS
GR 4313 Advanced GIS
GR 4323 Cartographic Sciences
GR 4333 Remote Sensing of the Phy. Envir.
GG 4333 Geowriting**
GR 4990 GIS Senior Research
12 hours 4000-level departmental courses
CSE 1284 Intro to Computer Programming
ECE 4423 Introduction to Remote Sensing
ST 3123 Intro to Statistical Inference

Choose two of the following:

GG 1133 Planetary Geology
GG 3133 Environmental Geology
GG 3603 Intro to Oceanography
GG 3613 Water Resources*
GG 4523 Coastal Environments
GR 4813 Natural Hazards

Choose three of the following:

GR 4633 Statistical Climatology*
WF 4253 Applied Spatial Tech to Wildlife Mgt.
ABE 3513 GPS and GIS in Ag. Engineering
ST 4213 Nonparametric Methods
PSS 4373 Geospatial Ag Econ Mgt.
PSS 4411 Remote Sensing Seminar
FO 4313 Spatial Tech in Natural Resources
FO 4452 Remote Sensing Applications

** Total hours needed for major: 124 **

* Fulfills Computer Literacy Requirement.
** Fulfills Computer Literacy Requirement and Writing Requirement.

** Health Information Management Curriculum (BIOH) **

Major Advisor: Professor Don Downer
Office: 224 Harned Hall

The health records administration curriculum is designed to prepare students for careers as administrators in charge of hospital medical records. Completion of the two-year curriculum qualifies a student for admission to the University of Mississippi Medical Center at Jackson or some other medical center offering a medical records administration program. The clinical work must be taken at a school having a program approved by the Council on Medical Education for Hospitals of the American Medical Association and the American Medical Record Association. Students who satisfactorily complete the pre-professional and professional training will be awarded the B.S. degree by the professional school and will be eligible to take the examination administered by the American Medical Record Association for certification as a registered medical records administrator.

** Department of History (HI) **

Major Advisor: Assistant Professor M.K. Barbier
Office: 214 Allen Hall

Among the humanities disciplines, history is unique in the emphasis it places on interpreting the human experience within the context of time. Past, present, and future are a continuum in which human beings and societies evolve along more or less predictable lines; the present is a product of the past just as the future is the product of present. History is a humane study that emphasizes the importance of people, their individual choices, and the values they hold. It also provides the indispensible background, the social and political context, for other academic disciplines and branches of knowledge.

Specialization in history on the undergraduate level has direct professional application in the field of secondary education and provides excellent preparation for careers in law, the ministry, communication, journalism, government service, the military, and business. The department maintains a close working relationship with other departments on
campus, making it possible for students who desire to do so to pursue double majors, joining history with geography, English, political science, business, computer science, or other fields.

To earn a Bachelor of Arts degree with a major in history, a student must pass a minimum of 39 semester hours in history with a 2.50 average in those courses. All undergraduates majoring in history must complete two of the following basic sequences: HI 1063/1073; HI 1163/1173; HI 1213/1223; HI 1313/1323. Along with these basic sequences, majors are required to take a minimum of two upper division courses in United States history, two upper division courses in European history, two upper division courses in African, Ancient, Asian or Latin American history plus two upper division electives in any area of history. At the beginning of their junior year majors must enroll in and pass with a grade of "C" or better, a course in Historiography and Historical Method (HI 3903). Fifteen hours of the upper division work (3000 and 4000 level courses) must be taken at Mississippi State. For a minor in history, a student must take a minimum of 18 semester hours of history including one of the basic sequences listed above plus twelve additional credit hours in history courses numbered 2000 and above including at least one at the 4000 level. Students interested in a major or minor in history should consult one of the advisors listed.

The Department of History offers work leading to both the M.A. and Ph.D. degrees. The prerequisite for admission to a graduate program in history is a minimum of 18 hours of undergraduate history courses. Students desiring to pursue graduate studies should consult the Graduate Coordinator.

Mississippi State has a chapter of Phi Alpha Theta, the international history honorary society. Those interested in the eligibility requirements should consult with Professor Connie Lester in the history department.

**University and College Core**

**English Composition (6 hours)**

EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

**Foreign Language (9 hours)**

3 semesters one Foreign Language - see advisor

**Humanities (18 hours)**

3 hours Literature - see University Core
3 hours History - see major
3 hours Philosophy Elective - see A&S requirements
9 hours Humanities Elective - see A&S core
Must be from 2 different areas. Can be upper division hours; 6 hours may be HI courses; 3 hours must be from another area.

**Math (6 hours)**

MA 1313 College Algebra
MA 1323 Trigonometry OR
ST 2113 Stats for Beh Sci or higher math

**Fine Arts (3 hours)**

See A&S requirements

**Natural Sciences (9-12 hours)**

3-4 hours Physical Science w/Lab*
3-4 hours Biological Science w/Lab**
3-4 hours Natural Science Elective***

**Social Sciences (18 hours)**

6 hours See A&S requirements
12 hours Social Sciences Electives

**Major Core**

Must choose two of the following sequences:

HI 1163, HI 1173  World History
HI 1213, HI 1223  Western World
HI 1063, HI 1073  U.S. History
HI 1313, HI 1323  East Asian Civ
6 hours U.S. History U/D Electives
6 hours African, Ancient, Asian, or Latin Amer U/D Elect.
6 hours European History U/D Elective
6 hours U/D History Elective

**Oral Communication Requirement**

CO 1003 Fundamentals of Public Speaking

**Writing Requirement**

HI 3903 Historiography and Historical Method

**Computer Literacy**

BIS 1012 Intro to Business Information Systems OR
TKT 1273 Computer Applications

**General Electives**

12 hours Consult advisor

**Total hours needed for major: 124**

(31 hours must be A&S 3000 or above)

*  CH, GE, or PH; see University Core.
**  BIS, EPP, or PO; see University Core.
***  Consult advisor.
****  Must be from 2 different areas and must cross 4 disciplines over the 18 hours. Only one Economics allowed. Can be upper division hours. See advisor.

+  13 hours of general electives required if BIS 1012 is chosen for computer requirement.

**JOURNALISM**

See Department of COMMUNICATION

**Department of MATHEMATICS (MA) and STATISTICS (ST)**

Interim Department Head: Michael Neumann
Associate Head and Graduate Coordinator: Corlis Johnson
Undergraduate Coordinator: Vivien Miller
Office: 410 Allen Hall

The Department of Mathematics and Statistics offers a Bachelor of Arts degree, Bachelor of Science degree, and a BS in math with teaching certification. All degrees are 124 hours. The department also offers undergraduate minors in mathematics and statistics which are described below.

Candidates for the Bachelor of Arts degree are required to complete a minimum of 36 hours of mathematics. Candidates for the Bachelor of Science degree are required to take a minimum of 42 hours of mathematics. Candidates for the Bachelor of Science with teaching certification are required to take 36 hours of mathematics, 22 hours of education and 12 hours of teaching internship. Required courses for each degree are listed below.

For all degree programs, the student needs to have an overall C average and a C average in the math classes. In addition, the student must satisfy the common University and College Core requirements, including speech, computer literacy and writing requirements.

A minor is not required for either of the above degrees, but if a student wishes a minor it has to be chosen from a subject that offers a minor. For example, the only subject in the College of Engineering that offers a minor is Computer Science. To learn if a subject has a minor, the student should contact the department in question.

A minor in mathematics consists of MA 1713, MA 1723, MA 2733, MA 2743, MA 3113, MA 3253 and two more math courses at the 3000+ level. A minor in statistics consists of MA/ST 4313, MA 4353, and MA/ST 4543 and two additional statistics courses at the 4000 level. Because not all 4000-level statistics courses count toward the minor, the student should consult the major advisor in statistics.

Regarding graduate study, the Department of Mathematics and Statistics offers a Master of Science in Mathematics, Master of Science in Statistics, and a Doctor of Philosophy in Mathematical Sciences. Major areas of study for the Doctor of Philosophy in Mathematical Sciences include applied and computational mathematics, ordinary and partial differential equations, functional analysis and operator theory, functional equations, graph theory, topology and statistics. Please see the graduate coordinator for more details.

**B.A. in Mathematics**

**University and College Core**

**English Composition (6 hours)**

EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II
Foreign Language (9 hours)  
3 semesters one Foreign Language - see advisor

Humanities (18 hours)  
3 hours Literature - see University/A&S Core  
3 hours History - see University/A&S Core  
3 hours Philosophy - see University/A&S Core  
9 hours from at least 2 different areas of Humanities

Math (6 hours)  
See major Core

Fine Arts (3 hours)  
See A&S Requirements

Natural Sciences (9-11 hours)  
BIO 1203 Plant Biology OR  
BIO 1504 Principles of Zoology  
and  
CH 1213 Chemistry I  
CH 1223 Chemistry II  
CH 1211 Investigations in Chemistry I  
OR  
PH 2213 Physics I  
PH 2223 Physics II  
PH 2233 Physics III

Option 1  
BIO 1203 Plant Biology  
BIO 1504 Principles of Zoology  
BIO 3103 Genetics I  
CH 1213 Chemistry I  
CH 1223 Chemistry II  
CH 1211 Investigations in Chemistry I

Option 2  
PH 2213 Physics I  
PH 2223 Physics II  
PH 2233 Physics III

PLUS choose two of the following:  
BIO 1203 Plant Biology  
BIO 1504 Principles of Zoology  
BIO 3103 Genetics I

Option 3  
BIO 1203 Plant Biology  
BIO 1504 Principles of Zoology  
BIO 3103 Genetics I  
CH 1213 Chemistry I  
CH 1223 Chemistry II  
CH 1211 Investigations in Chemistry I

Social Sciences Electives (18 hours)  
Courses must spread over at least 4 disciplines with a max of one Economics and a max of 2 in each remaining discipline; 6 hours need to be from A&S requirements.

Major Core  
Students should check for prerequisites for all courses and consult their advisor.

MA 1713 Calculus I  
MA 1723 Calculus II  
MA 2733 Calculus III  
MA 2743 Calculus IV  
MA 3053 Foundations of Math  
MA 3113 Intro to Linear Algebra  
MA 3163 Intro to Modern Algebra  
MA 3253 Differential Equations I  
MA 4633 Advanced Calculus I  
3 hours Math Elective - 3000+  
3 hours Math Elective - 4000

Oral Communication Requirement  
CO 1003 Fundamentals of Public Speaking

Writing Requirement  
MA 4213 Senior Seminar in Math

Computer Literacy (3 hours)  
CSE 1213 Fortran OR  
CSE 1233 Programming with C

General Electives  
17-28 hours Consult advisor

Total hours needed for major: 124  
(31 hours must be 3000/4000 from A&S)
Natural Sciences (9-10 hours) - Choose one of three options:

Option 1
- PH 2213 Physics I
- PH 2223 Physics II
- CH 1213 Chemistry I
- CH 1211 Investigations in Chemistry I

Option 2
- PH 2213 Physics I
- PH 2223 Physics II
Choose one:
- BIO 1203 Plant Biology
- BIO 1504 Principles of Zoology

Option 3
- BIO 1203 Plant Biology
- BIO 1504 Principles of Zoology
- CH 1213 Chemistry I

Social Sciences (6 hours)
See A&S Requirements

Major Core
Students should check for prerequisites for all courses and consult their advisor.

Math and Statistics Requirements
- MA 1713 Calculus I
- MA 1723 Calculus II
- MA 2733 Calculus III
- MA 2743 Calculus IV
- MA 3053 Foundations of Math
- MA 3113 Intro to Linear Algebra
- MA 3163 Intro to Modern Algebra
- MA 3253 Differential Equations I
- MA 4633 Advanced Calculus I

3 hours Math or Stats Elective (3000+)

Choose one of the following:
- MA 4523 Intro to Probability
- MA 4533 Intro to Prob. and Random Process
- MA 4543 Intro to Math Stats I

Education Requirements
- EPY 3143 Human Development and Learning
- EDF 3333 Social Foundations of Education
- EDS 3411 Practicum in Secondary Education
- EDF 4243 Planning for the Diversity of Learners
- EDS 4633 Methods of Teaching Mathematics
- EDX 3213 Psych and Educ of Exceptional Children
- EDF 3523 Evaluating Learning
- EDS 4873 Seminar in Managing Secondary Class
- EDS 4886 Teaching Internship in Secondary Ed
- EDS 4896 Teaching Internship in Secondary Ed

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement - choose one:
- CSE 1233 Programming with C
- TKT 1273 Computer Applications

Writing Requirement
- EDF 3413 Writing for Thinking

General Electives (8-15 hours) - Please consult advisor.

Total hours needed for major: 124
(31 hours must be 3000/4000 from A&S)

STATISTICS (ST)
Major Advisor: Associate Professor Jane Harvill
Office: 438 Allen Hall

Courses in statistics are designed to satisfy two objectives. The first objective is to provide graduate training for those wishing to pursue a career as professional statisticians. Both graduate and undergraduate courses are available for this purpose. The second is to provide minors for students from other disciplines. The undergraduate minor in statistics consists of ST 3123, ST 4111, ST 4213, either ST 4523 or ST 4543, and two additional statistics courses at the 4000 level. Because not all 4000-level statistics courses count toward the minor, the student should consult the major advisor in statistics.

Graduate study is offered in the Department of Mathematics and Statistics leading to the degree of Master of Science in Mathematics, Master of Science in Applied Mathematics, Master of Science in Statistics and a Doctor of Philosophy in Mathematical Sciences. Many applied statistics courses are offered which are suitable for a minor in statistics at the master’s or doctoral level. Specific course requirements for the graduate minor in statistics may be obtained from the Graduate Coordinator of the Department of Mathematics and Statistics.

Admission to the master’s program in statistics is open to graduates in all disciplines. The program of study is a blend of both statistical theory and statistical methods. In addition, there is ample flexibility in the non-thesis option to allow a graduate student with special interests in an area of statistical application to minor in that particular applied field. The department awards a limited number of teaching assistantships. For further details, consult the Graduate Coordinator of the Department of Mathematics and Statistics.

MUSIC (MU)

Major Advisors: Dr. Michael Brown or Dr. Jackie Edwards-Henry
Office: Music Building A

The Department of Music Education offers a Bachelor of Arts in Music degree in a liberal arts tradition of music study. This degree is designed to provide foundation coursework to apply to a variety of interdisciplinary careers including music, in preparation for graduate study or for self-improvement.

The department also offers a minor in Music. The minor includes 18 or 19 hours of music history and theory courses, piano, applied study, and participation in ensembles and recitals. All coursework for the minor in Music must be completed at the MSU Starkville campus with a grade of C or better. Consult the major advisor for specific course requirements.

University and College Core

English Composition (6 hours)
- EN 1103 English Composition OR
- EN 1163 Accelerated Composition
- EN 1113 English Composition II or
- EN 1173 Accelerated Composition II

Foreign Languages (9 hours)
- 3 semesters Foreign Language - see advisor

Humanities (18 hours)
- 3 hours Literature Elective - see A&S requirements
- 3 hours History Elective - see A&S requirements
- 3 hours Philosophy Elective - see A&S requirements
- 6 hours Must be from 2 areas - EN, HI, PHI or REL
- 3 hours Met in Major Core

Mathematics (6 hours)
- MA 1313 College Algebra
  3 hours Math higher than MA 1313

Natural Sciences (9-12 hours)
- 3-4 hours Physical Sciences w/lab (CH, GG, PH)*
- 3-4 hours Biological Sciences w/lab (BIO, EPP, PO)*

Fine Arts (3 hours)
- MU 2323 Music History III

Social Science (18 hours)
- 6 hours See A&S requirements
- 9 hours Must be from 3 areas - AN, CO, EC, GR, PS, PSY or SO
- 3 hours Met in Major Core

Major Core
- MU 1162 Music History I
- MU 2322 Music History II
- MU 1213 Music Theory I
- MU 1321 Ear Training I
- MU 1413 Music Theory II
- MU 1521 Ear Training II
- MU 2613 Music Theory III
- MU 2721 Ear Training III
- MU 2813 Music Theory IV
- MU 2921 Ear Training IV
- MU 3412 Conducting
Philosophy, Introduction to Logic, Introduction to Ethics, History of Philosophy, and with approval by, the major advisor.

including six that must be PHI courses, are to be selected in consultation with the major advisor.

losophy, Parts I and II, and Seminar in Philosophy. The final 12 hours, its own sake, the general perspective it provides, and the rational skills it develops, are of immense practical value in any profession.

Although students often study philosophy for its own sake, the general perspective it provides, and the rational skills it develops, are of immense practical value in any profession.

Religion Concentration

Major Advisors: Professors Paul Jacobs and Joe Seger
Assistant Professors Eve Mullen and Jimmy Hardin

Office: 29-30 President Circle

Religion refers to the basic human impulse to seek coherence in life, to find that unity which guides and orders human existence. As an academic discipline the study of religion involves consideration of those writings, customs, and rituals that have historically served to form and distinguish religious groups. It includes examination of primitive religions and sectarian developments as well as study of the major world religions of both the east and west.

Some Religion faculty are housed in the Cobb Institute of Archaeology and are cross-appointed to the Institute staff. In addition, there are other archaeologists in the Institute, including specialists in the Middle East and Southeastern U.S.

The Department of Philosophy and Religion offers a concentration in religion leading to the Bachelor of Arts degree in philosophy. The baccalaureate degree in religion is an accepted major for those planning to enter graduate school in philosophy. It is, however, an excellent pre-law and pre-seminary degree and, because of its general nature, philosophy is highly appropriate as a double major with any other academic discipline.

The standard program leading to the Bachelor of Arts degree in philosophy has a major requirement of 30 hours, including Introduction to Philosophy, Introduction to Logic, Introduction to Ethics, History of Philosophy, Parts I and II, and Seminar in Philosophy. The final 12 hours, including six that must be PHI courses, are to be selected in consultation with, and with approval by, the major advisor.

The department also offers a minor in philosophy, with the requirements being 15 hours of PHI courses.

Students considering either a major or minor in philosophy should meet with one of the department’s advisors as early in their careers as possible.

University and College Core

English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Foreign Language (9 hours)
3 semesters one Foreign Language - see advisor

Humanities (18 hours)
3 hours Literature - see University/A&S Core
3 hours History - see University/A&S Core
3 hours Philosophy Elective - see major
9 hours Humanities Elective - see major

Must be from 2 different areas- see A&S Core

Math (6 hours)
MA 1313 College Algebra
MA 1323 Trigonometry OR
ST 2113 Stats for Beh Sci or higher math

Fine Arts (3 hours)
See University/A&S Requirements

Natural Sciences (9-12 hours)
3-4 hours Physical Sciences w/lab (CH, GG, PH)*
3-4 hours Biological Sciences w/lab (BIO, EPP, PO)*
3-4 hours Natural Science Elective**

Social Sciences (18 hours)***
6 hours See A&S requirements
12 hours Social Sciences Electives

Major Core
PHI 1103 Intro to Philosophy
PHI 1113 Intro to Logic
PHI 1123 Intro to Ethics
PHI 3023 History Western Phil I
PHI 3033 History Western Phil II

12 hours PHI Electives

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Writing Requirement
PHI 3133 Seminar in PHI

Computer Literacy - choose one of the following:
TKT 1273 Computer Applications
BIS 1012 Intro to Bus. Computer Systems
CSE 1213 Computer Programming with Fortran
CSE 1233 Computer Programming with C
CSE 1273 Computer Programming with Java

General Electives (19 hours) - Consult advisor

Total hours needed for major: 124

(31 hours must be 3000/4000 from A&S)

* See University/A&S Core.
** Consult advisor.
*** Must be from 2 different areas and must cross 4 disciplines over the 18 hours. Only one Economics allowed. See advisor.

Department of PHILOSOPHY and RELIGION

PHILOSOPHY MAJOR (PR)

Professors Michael Clifford and Lynn Holt (Head)
Associate Professor Yolanda Estes
and Assistant Professor Trisha Phillips

Office: 29-30 President Circle

Philosophy is the study of the basic concepts—such as reality, truth, and goodness—which underlie the more specialized pursuits of science, art, education, religion, etc. Although students often study philosophy for its own sake, the general perspective it provides, and the rational skills it develops, are of immense practical value in any profession.

The baccalaureate degree in philosophy is the accepted major for those planning to enter graduate school in philosophy. It is, however, an excellent pre-law and pre-seminary degree and, because of its general nature, philosophy is highly appropriate as a double major with any other concentrated field of study.

The standard program leading to the Bachelor of Arts degree in philosophy has a major requirement of 30 hours, including Introduction to Philosophy, Introduction to Logic, Introduction to Ethics, History of Philosophy, Parts I and II, and Seminar in Philosophy. The final 12 hours, including six that must be PHI courses, are to be selected in consultation with, and with approval by, the major advisor.

The department also offers a minor in philosophy, with the requirements being 15 hours of PHI courses.

Students considering either a major or minor in philosophy should meet with one of the department’s advisors as early in their careers as possible.
enter graduate school or to prepare for careers in a professional ministry or in teaching. However, because it offers a broad historical and cultural orientation, the religion major offers excellent preparation for any career. It is highly appropriate as a double major, or as a minor in association with any other concentrated field of study.

The major with the concentration in religion has a requirement of 15 hours in REL courses.

University and College Core

See Philosophy Requirements above

Major Core

REL 1103 Intro to Religion
Choose one of the following combinations:
REL 1213 Intro Old Testament
REL 1223 Intro New Testament
or
REL 3213 World Religion I
REL 3223 World Religion II
Choose one of the following combinations:
PHI 1103 Intro to Philosophy
PHI 1113 Intro to Logic
or
PHI 3023 History of W. Philosophy I
PHI 3033 History of W. Philosophy II

Electives

12 hours REL/PHI Electives

Oral Communication Requirement

CO 1003 Fundamentals of Public Speaking

Writing Requirement

PHI 3133 Seminar in Philosophy

Computer Literacy - choose one of the following
CTE 1273 Computer Programming with Java
CSE 1223 Computer Programming with Fortran
CSE 1233 Computer Programming with C
CSE 1273 Computer Programming with Java

General Electives (19 hours) - Consult advisor

Total hours needed for major: 124

(31 hours must be 3000/4000 level from A&S)

* See University/A&S Core.
** Consult advisor.
*** Must be from 2 different areas and must cross 4 disciplines over the 18 hours. Only one Economics allowed. See advisor.

OCCUPATIONAL THERAPY CURRICULUM (BIOT)

Major Advisor: Professor Don Downer
Office: 224 Harned Hall

Mississippi State University does not provide training in occupational therapy but does offer the background work necessary to transfer to a professional school. In their admission requirements professional schools differ, some requiring two years of pre-professional study, some three, and others four. Sixteen hours of observation are also required. Upon successful completion of the pre-professional and professional work, students are awarded the M.S. degree by the professional school. Students wishing to apply to the University of Mississippi Medical Center should do so by January preceding the September they wish to enter. The University of Mississippi Medical Center only accepts Mississippi residents. Consult with your advisor for an appropriate schedule.

PHYSICAL THERAPY CURRICULUM (BIOP)

Major Advisor: Professor Don Downer
Office: 224 Harned Hall

Mississippi State University does not provide training in physical therapy but does offer the background work necessary to transfer to a professional school. In their admission requirements professional schools differ, some requiring two years of pre-professional study, some three, and others four. The courses listed below satisfy the requirements of the Mississippi Medical Center in Jackson, where most Mississippi State University students pursue their professional training. Forty hours of observation are also required. Upon successful completion of the pre-professional and professional work, students are awarded the Ph.D. degree by the professional school. Students wishing to apply to the University of Mississippi Medical Center should do so by January preceding the September they wish to enter. The University of Mississippi Medical Center only accepts Mississippi residents.

Admission requirements:

1. provide evidence of observation in a minimum of two physical therapy clinical departments or practices for a total of 40 hours (additional hours and sites are recommended)
2. have a baccalaureate degree
3. submit an official report of GRE scores. The report must include verbal, quantitative and analytical scores
4. return all application materials to the Office of Student Services and Registrar by the admissions deadline, and
5. complete the following prerequisite course requirements:
   - two Physics courses with labs
   - two advanced physical or biological sciences
   - one statistics course (from senior institution)

Department of PHYSICS and ASTRONOMY (PH)

Major Advisors: Patrick Lestrange, Mark Novotny and Jeffry A. Winger
Office: Hilbun Hall

Physics plays a basic role in all science and engineering disciplines. Physics is concerned with the study of the structure of matter, the nature of radiation, and the interaction of radiation and matter. Among the major branches are optical, laser, atomic, nuclear, molecular particle, condensed matter, bio-, astro-, plasma and computational physics. The B.S. program in physics provides an excellent, broadly based course of study with electives that allow the student to pursue his/her special interests in other subjects. The B.S. degree provides the necessary training for either employment in industry or government, or continued study at the graduate level.

The department also has a Physics/Pre-Medical curriculum for those students who wish to compete for admission to medical and dental schools. An applied physics curriculum is available for those who wish to work in research and development or pursue graduate work in applied physics, engineering physics or some branch of engineering. In addition, the department offers the Master of Science in physics and the Ph.D. in engineering physics. Information may be obtained by writing the Department of Physics and Astronomy, P.O. Box 5167, Mississippi State, MS 39762, www.msstate.edu/Dept/Physics/

A minor in physics requires 12 hours of physics at the 3000 level or above. These courses should be selected in consultation with a physics advisor.

The following is a recommended physics B.S. curriculum. Requirements for graduation are 124 hours with a GPA of at least 2.0. In addition, the student is required to maintain at least a C average in all physics courses.

University and College Core

English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Foreign Language (6 hours)
2 semesters one Foreign Language - see advisor
Humanities (6 hours)  
3 hours Literature - see University/A&S Core  
3 hours History - see University/A&S Core  
Math (6 hours)  
See Major Core  
Fine Arts (3 hours)  
See A&S Requirements  
Natural Sciences (9-12 hours)  
See Major Core  
Social Sciences (6 hours)  
See A&S requirements  

Major Core  
Some substitutions for required courses are possible for double majors. Student should check for prerequisites for all courses. Consult advisor.

PH 1063 Desc Astronomy  
PH 2213 Physics I  
PH 2223 Physics II  
PH 2233 Physic III  
PH 3613 Modern Physics  
PH 4113 Elec Circuits  
PH 4143 Inter Lab  
PH 4213 Inter Mechanics I  
PH 4333 Elec Fields I  
PH 4413 Thermal Physics  
PH 4513 Inter Optics  
PH 4512 Mod Physics Lab  
PH 4713 Intro Quantum Mechanics  

Physics Electives - 6 hours; 3 hours must be from:  
PH 4223 Inter Mechanics II  
PH 4333 Elec Fields II  
PH 4723 Applications of Quantum Mech  
CH 1213 Chemistry I  
CH 1211 Lab  
CH 1223 Chemistry II  
CH 1221 Lab  
MA 1713 Calculus I  
MA 1723 Calculus II  
MA 2733 Calculus III  
MA 2743 Calculus IV  
MA 3113 Intro to Linear Algebra  
MA 3253 Differential Equations I  
MA 3353 Differential Equations II  

Oral Communication Requirement  
CO 1003 Fundamentals of Public Speaking  

Writing Requirement  
GE 3513 Tech Writing  

Computer Literacy  
CSE 1233 Comp Prog with C (recommended) OR  
CSE 1213 Comp Prog with Fortran  
CSE 1284 Intro to Comp Programming  

Science and Math Electives  
9 hours Consult advisor  

General Electives  
6 hours Consult advisor  

Total hours needed for major: 124  
(31 hours must be A&S 3000/4000 level.)  

Physics/Pre-Medical Curriculum  
For this curriculum the required physics courses for the physics major are reduced by 6 hours of physics electives. The recommended use of these 6 hours and 15 elective hours follows (check with Pre-medical advisor):  
CH 4513 Organic Chemistry I  
CH 4511 Organic Chemistry I Lab  
CH 4523 Organic Chemistry II  
CH 4521 Organic Chemistry II Lab  
BCH 3613 Elem Biochemistry OR  
BIO 1504 Principles of Zoology  
BIO 3304 General Microbiology  

Applied Physics Curriculum  
For this curriculum the required physics courses for the physics major are reduced by 6 hours of physics electives. The recommended use of these 6 hours and 15 elective hours follows:  
PH 4333 Elec Fields II  
ECE 3324 Electromagnetics II  
18 hours Technical electives; consult advisor  

DEPARTMENT of POLITICAL SCIENCE and PUBLIC ADMINISTRATION (PS/PPA)  

The Department of Political Science offers a Bachelor of Arts degree (B.A.) for individuals who have an interest in politics and who seek careers in the law, in federal, state, or local government (either administrative or elective), in the diplomatic service, with international organizations in the business world, or in teaching. The Department also offers a Master of Arts degree in Political Science (M.A.), a National Association of Public Affairs and Administration Accredited graduate professional degree in Public Administration (M.P.P.A.) and a Ph.D. in Public Policy and Administration which prepare men and women for careers in the public service. Interested students should consult the undergraduate or graduate coordinator.

Students pursuing the B.A. degree in Political Science are required to complete PS 1113, PS 4464, EC 1033 or EC 2113, and three of the following introductory Political Science courses: PS 1313, PS 1513, PS 2403 and PS 2703. They must also complete a minimum of seven upper-division elective courses in Political Science (totaling at least 21 credits); of these seven courses, at least one must be completed in each of three of the four subfields of the discipline as displayed in the “Part III: Description of Courses” portion of this Bulletin (American Politics, International Politics, Political Theory, and Comparative Politics).

Political Science majors who wish to teach social studies in Mississippi may become certified by combining the Political Science major with appropriate courses in the College of Education; in Mississippi, it is not necessary to major in secondary education in order to become certified to teach. At the same time, majors in secondary education who plan to become social science teachers should consider a second major, or a minor in Political Science.

Students not majoring in Political Science may wish to select a minor. A minor consists of a minimum of 18 hours of course work in Political Science at least nine of which must be at the 3000 level or above. Interested nonmajors should speak with the undergraduate coordinator to formulate a suitable program of study.

The John C. Stennis Scholarship in Political Science is awarded each spring to at least two graduating high school seniors and/or community college graduates who are Mississippi residents, and who plan to major in Political Science at Mississippi State University. These scholarships carry a stipend of $2,000 per year for four years or until graduation, whichever comes sooner. The Stennis Scholarships are awarded to academically outstanding students who demonstrate the desire and potential to become actively involved as leaders in the political and governmental affairs of the community, state, or nation.

Students not majoring in Political Science may wish to select a minor. A minor consists of a minimum of 18 hours of course work in Political Science at least nine of which must be at the 3000 level or above. Interested nonmajors should speak with the undergraduate coordinator to formulate a suitable program of study.

The Haley Barbour Scholarship is awarded each spring to one Political Science major, with two years of college remaining, who evidences a determination to become involved in the political life of the nation. The Barbour Scholarship carries a stipend of $1,500 per year for a maximum of 4 years.
of two years, typically the recipient’s junior and senior years. Political Science majors may be nominated by faculty for the Barbour Scholarship or make application on their own. For further information and application forms, consult the Head of the Department of Political Science, P.O. Box PC, Mississippi State, MS 39762 or telephone 662-325-2711.

The following is a typical course of study for Political Science majors, but students should consult with their advisors in order to develop a program which is best for them. For more information contact: Dr. Diane Wall at 662-325-7864 or dew1@ps.msstate.edu.

University and College Core

English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Foreign Language (9 hours)
3 semesters one Foreign Language - see advisor

Humanities (18 hours)
3 hours Literature - see University Core
3 hours History - see University Core
3 hours Philosophy Elective - Consult advisor
9 hours Humanities Electives
Must be from 2 different areas - see A&S Core

Mathematics (6 hours)
MA 1313 College Algebra
3 hours above college algebra

Fine Arts (3 hours)
See A&S Core List

Natural Sciences (9-12 hours)
3-4 hours Physical Sciences w/lab (CH, GG, PH)*
3-4 hours Biological Sciences w/lab (BIO, EPP, PO)*
3-4 hours Natural Science Elective**

Social Sciences (18 hours)**
6 hours See University Core
12 hours Social Sciences Electives

Major Core
PS 1113 American Government****

Introductory PS Courses (9 hours)
Choose 3 of the following (one counts as a Social Science req):
PS 1313 Introduction to International Relations
PS 1513 Comparative Government
PS 2403 Introduction to Political Theory
PS 2703 Introduction to Public Policy

PS Upper Division Electives (21 hours)
(See advisors for selection)*+

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Writing Requirement
PS 4464 Political Analysis

Computer Literacy
PS 4464 Political Analysis

General Electives (18 hours)

Total hours needed for major: 124
(31 hours must be A&S upper division)

* Transfer students receive the stipend for two years or until graduation, which ever comes sooner.

** Consult advisor.

*** Must be from 2 different areas and must cross 4 disciplines over the 18 hours. Only one Economics - EC 1033 or EC 2113, can be chosen. See advisor.

**** Also counts as Social Science Requirement.

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PRE-PERSONAL PROGRAMS

PRE-LAW CURRICULUM (LAW)

Faculty Advisors
Associate Professor Diane E. Wall; Office: 189 Bowen Hall
Associate Professor Matthew W. Little; Office: 316 Lee Hall

Most directors of law school admissions indicate that a wide variety of majors from various colleges are appropriate for admission to their law school. Since there is no formal pre-law curriculum, a course of study is designed to prepare students for law school in conjunction with the student’s formal major. Essentially, it will provide students contemplating a career in law with a broad-based program of study that focuses on improvement of the student’s skills in oral communication, writing, and analytical reasoning.

Students interested in careers in law are encouraged to speak with a Pre-Law advisor and to participate in various law-related programs such as law school visitations, the Pre-Law Society, and Distinguished Jurist Day. Your Pre-Law advisor will provide guidance on the law school admissions test (LSAT), law school application process, and on selecting the best law school for you. LSAT and law school applications are available in room 189 Bowen Hall. For additional information contact Dr. Diane Wall at 662-325-7864 or dew1@ps.msstate.edu.

There is no set curriculum but the following are suggested basic courses for a person interested in law school. See your pre-law advisor for additional course suggestions based on your career interest and major.

BL 2413 Legal Environment of Business
EN 4223 Principles of Legal Writing
LSK 2013 Speed Reading
PHI 1113 Introduction to Logic
PS 3063 Constitutional Powers
PS 3073 Civil Liberties
PS 4183 Judicial Process
PST 3213 Psychology of Abnormal Behavior
SO 3603 Criminology

PRE-MEDICAL and PRE-DENTAL CURRICULA (MED) (DENT)

Pre-Medical and Pre-Dental Advisory Committee:
Professor Don Downer; Office: 224 Harned Biology Building
Professor John A. Boyle; Office: 402 Dorman
Associate Professor Steve Elder; Office: 214 Ag Engineering

Preference is given to persons who have completed four years of study, majored in a specific discipline, and earned a bachelor’s degree. The curriculum for admission to professional school includes one academic year each of English, biological science, inorganic chemistry, organic chemistry, mathematics, physics and advanced science. The Pre-Medical advisors can provide detailed information about requirements of various schools.

PRE-NURSING CURRICULUM (BION)

Major Advisor: Professor Don Downer
Office: 224 Harned Hall

UMC and MUW have slightly different admission requirements, so course selection will vary during the sophomore year depending upon which professional school the student plans to attend. Students should consult the advisor for details. A minimum grade of C and a minimum composite score of 21 on the ACT is required for admission. Application for professional school is normally made during the fall preceding the year admission is desired. Consult your advisor for developing an appropriate schedule of classes.
PRE-OPTOMETRY CURRICULUM (BIOO)

Major Advisor: Professor Don Downer
Office: 224 Harned Hall

Requirements for admission to the various optometry schools differ. Students should check the specific requirements of the professional schools to which they plan to apply. Pre-Optometry students should plan to take the Optometry College Admission Test (OCAT) during the sophomore or junior year. Consult your advisor for developing an appropriate schedule of classes.

PRE-PHARMACY CURRICULUM (CHPH)

Major Advisor: Professor Svein Saebo
Office: 1115 Hand Lab

The pre-pharmacy program is intended for students who wish to attend the School of Pharmacy at the University of Mississippi. No degree will be granted from Mississippi State University, and there are thus no university or college requirements. The courses listed below will satisfy the requirements for the School of Pharmacy at the University of Mississippi. Most pharmacy schools have similar requirements. However, students who wish to attend other pharmacy schools should check the specific requirements for that school.

Required Courses (45 hours)

CH 1213 Chemistry I
CH 1211 Investigations in Chemistry I
CH 1222 Chemistry II
CH 1221 Investigations in Chemistry II
CH 4513 Organic Chemistry I
CH 4511 Organic Chemistry Lab I
CH 4523 Organic Chemistry II
CH 4521 Organic Chemistry Lab II

Note: CH 1213,1223,4513, and 4523 must be taken in that order; the labs CH 1211, 1221, 4511, and 4521 should be taken in that order. A lab may be taken after the corresponding class has been completed.

EN 1103 English Composition I
EN 1113 English Composition II
CO 1003 Fundamentals of Public Speaking
EC 2123 Microeconomics
ST 2113 Intro to Statistics
MA 1504 Principles of Zoology
CH 2014 Human Physiology

Electives (18 hours)

Social and Behavioral Electives (6 hours)

At MSU EC 2113 Microeconomics is a prerequisite for the required core course EC 2123 (see above), and EC 2113 will count as one social science elective. In addition to EC 2113, one course from either Psychology, Sociology, Political Science, or Anthropology is required.

Humanities and Fine Arts Electives (9 hours)

At least 3 credit hours required in each of the two main areas. Humanities should be chosen from the following areas: English Literature, Foreign Language, History, Religion, or Philosophy

General Electives (3 hours)

Any course with college credit other than algebra or trigonometry

IMPORTANT NOTE: This adds up to a total of 66 credit hours, but the minimum requirement for admission to School of Pharmacy is 68 credit hours. The reason for this discrepancy is that the physics requirement at the University of Mississippi is 8 credit hours (2 times 4). MSU only offers 3 credit hours physics courses, and the School of Pharmacy has decided to accept MSU students with only 6 credit hours in physics. However, a total of 68 credit hours is still required. The 2 additional credit hours can be made up either by taking General Physics III, which is recommended by the School of Pharmacy, or a general elective (any course with college credit). If a student completes General Physics III and therefore has received credit for nine hours of physics, the additional credit hour will count toward satisfying the general elective requirement.

Department of PSYCHOLOGY (PSY)

Major Advisor: Professor Stephen Klein
Office: 110 Magruder

Mississippi State University offers majors leading to the B.A. or B.S. degree, and the M.S. and Ph.D. degrees. Undergraduate students wishing to major in psychology must have a minimum 2.0 GPA on all college work attempted prior to entering the major. Transfer students also must have a minimum 2.0 GPA to be admitted to the psychology major. Students must earn a grade of C or higher in all PSY courses applied toward the psychology major requirements.

The Bachelor of Arts and Bachelor of Science degree programs in psychology are designed to provide training either for immediate employment or for advanced training in psychology or related fields. Many careers in psychology require advanced study beyond the bachelor’s degree, but there are also career opportunities at the bachelor’s level. The B.A. program requires a minimum of 120 hours. The B.S. program requires a minimum of 124 hours. Either program will prepare students for immediate employment or for advanced training; the difference is in the specific requirements for the degree. (See curriculum listings below.)

A bachelor’s degree in psychology prepares graduates to pursue:

• master’s or doctoral study in psychology, such as clinical or counseling psychology, cognitive psychology, social psychology, experimental psychology, forensic psychology, etc.

• graduate school in related areas such as guidance, counseling, educational psychology, rehabilitation, social work, criminology, law school, management, marketing, etc.

• admission to medical, nursing, or physical therapy school with a psychology major and all necessary science courses.

• immediate employment in private business or government (e.g., working with the mentally ill or the mentally challenged, social work, personnel work, quality control jobs, management training, marketing research, sales, etc.).

Bachelor of Arts in Psychology

The Bachelor of Arts degree program in psychology trains students in the field of psychology while providing exposure to a broad range of courses in the humanities and social sciences. Foreign language proficiency at the third-semester level is required.

University and College Core

English Composition (6 hours)

EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Foreign Language (9 hours)

3 semesters one Foreign Language - see advisor

Mathematics (6 hours)

MA 1313 College Algebra
MA 1323 Trigonometry OR
ST 2113 Stats for Beh Sci (or higher math)

Fine Arts (3 hours)

See A&S Core List

Natural Sciences (9-12 hours)

3-4 hours Physical Sciences w/lab (CH, GG, PH)*
3-4 hours Biological Sciences w/lab (BIO, EPP, PO)*
3-4 hours Natural Science Elective**

Social Sciences (18 hours)***

PSY 1013 General Psychology
3 hours Advanced PSY course
12 hours See A&S Requirements

Major Core

PSY 1021 Careers in Psychology
PSY 3103 Intro Psychological Statistics
PSY 3314 Experimental Psychology
Choose two of the following:

- PSY 3213: Psychology of Abnormal Behavior
- PSY 3623: Social Psychology
- PSY 3803: Developmental Psychology
- PSY 4203: Theories of Personality

Choose one of the following:

- PSY 3343: Psychology of Learning
- PSY 3713: Cognitive Psychology

Choose one of the following:

- PSY 4403: Biological Psychology
- PSY 4423: Sensation and Perception

3 hours, One unused course from the groups above
12 hours, PSY Upper Division Electives (See advisor)

Oral Communication Requirement

CO 1003: Fundamentals of Public Speaking

Satisfied by successful completion of PSY 3314

Writing Requirement

Satisfied by successful completion of PSY 3314

Computer Literacy

Satisfied by successful completion of PSY 3314

General Electives

Consult advisor

Total hours needed for major: 120

30 hours must be A&S upper division work

* See University Core.

** Consult advisor.

*** Must be from 2 different areas and must cross 4 disciplines over the 18 hours (6 hours from the Social Science core and 12 hours of SS electives). Only one Economics allowed. See advisor.

+ PSY Upper Division courses should be chosen from: PSY 3003, PSY 3023, PSY 3073, PSY 3203, PSY 3213, PSY 3363, PSY 3413, PSY 3503, PSY 4000 (for 3 credits; taken only once), PSY 4103, PSY 4123, PSY 4223, PSY 4323, PSY 4333, PSY 4343, PSY 4353, PSY 4523, PSY 4643, PSY 4653, PSY 4713, PSY 4733, PSY 4743, PSY 4983, PSY 4990 (for at least 3 credits), one 5000- or 6000-level EPY course or COE 4023 (if no EPY course is used). One or more of these electives could also come from: PSY 3213, PSY 3623, PSY 3803, PSY 4203, PSY 3343, PSY 3713, PSY 4403 and PSY 4423 if not already used to meet previous requirements.

Bachelor of Science in Psychology

The Bachelor of Science degree program in psychology allows students to specialize somewhat in their training while still ensuring adequate exposure to the humanities and social sciences. Foreign language proficiency at the second-semester level is required. Students in the B.S. program must complete a six-course theme in an area of their choice. A theme may be selected set of courses relating to an identifiable interest or career. Students should consult a PSY major advisor for details on completing a concentration or certificate, such as criminal justice, gerontology, etc. Courses used to meet other requirements in the psychology major, with the exception of the additional science requirement (see below) cannot also be used in the theme. Students’ themes are worked out with their advisors and require careful advanced planning. All themes must be approved by the advisor at the time that student enters the B.S. program.

If changes in themes are needed, they may be made subsequently with the advisor’s approval.

If the theme does not include nine credits from approved natural and social science departments, then there is an additional science requirement of nine total credits coming from one or more of these departments that must be taken as electives; these cannot be credits already used to meet other requirements for the psychology major, including the University core and the College of Arts & Sciences common curriculum requirements. Approved natural and social science departments (and applicable course prefixes) are BIO, CH, PH, GG, AN, GR, PS, PSY and ŠÓ. Most themes in psychology already contain sufficient natural or social sciences to satisfy this requirement without further coursework.

University and College Core

English Composition (6 hours)

- EN 1103: English Comp I OR
- EN 1163: Accelerated Comp I
- EN 1113: English Comp II OR
- EN 1173: Accelerated Comp II

Foreign Language (6 hours)

- 3 semesters, one Foreign Language - see advisor

Humanities (6 hours)

- 3 hours, Literature - see University Core
- 3 hours, History - see University Core

Mathematics (6 hours)

- MA 1313: College Algebra

MA 1323: Trigonometry OR

ST 2113: Stats for Beh Sci (or higher math)

Fine Arts (3 hours)

See A&S Core List

Natural Sciences (9-12 hours)

- 3-4 hours, Physical Sciences w/lab (CH, GG, PH)*
- 3-4 hours, Biological Sciences w/lab (BIO, EPP, PO)*
- 3-4 hours, Natural Science Elective**

Social Sciences Electives (6 hours)***

PSY 1013: General Psychology

3 hours, See Univ/A&S Core

Major Core

PSY 1021: Careers in Psychology

PSY 3103: Intro Psychological Statistics

PSY 3314: Experimental Psychology

PSY 4403: Biological Psychology

Choose two of the following:

- PSY 3213: Psychology of Abnormal Behavior
- PSY 3623: Social Psychology
- PSY 3803: Developmental Psychology
- PSY 4203: Theories of Personality

Choose one of the following:

- PSY 3343: Psych Learning
- PSY 3713: Cognitive Psychology

Choose one of the following:

- PSY 4423: Sensation and Perception
- PSY 4223: Drug Use and Abuse

3 hours, One unused course from the groups above
12 hours, PSY Upper Division Electives +

Theme Electives (18 hours)

- Consult advisor for details

Additional Science Requirement

Consult advisor for details

Oral Communication Requirement

CO 1003: Fundamentals of Public Speaking

Satisfied by successful completion of PSY 3314

Writing Requirement

Satisfied by successful completion of PSY 3314

General Electives

Consult advisor

Total hours needed for major: 124

31 hours must be A&S 3000/4000 work

* See University Core.

** Consult advisor.

*** Must be from 2 different areas.

+ PSY Upper Division courses should be chosen from: PSY 3003, PSY 3023, PSY 3073, PSY 3203, PSY 3213, PSY 3363, PSY 3413, PSY 3503, PSY 4000 (for 3 credits; taken only once), PSY 4103, PSY 4123, PSY 4223, PSY 4323, PSY 4333, PSY 4343, PSY 4353, PSY 4523, PSY 4643, PSY 4653, PSY 4713, PSY 4733, PSY 4743, PSY 4983, PSY 4990 (for at least 3 credits), one 5000- or 6000-level EPY course or COE 4023 (if no EPY course is used). One or more of these electives could also come from: PSY 3213, PSY 3623, PSY 3803, PSY 4203, PSY 3343, PSY 3713, PSY 4403 and PSY 4423 if not already used to meet previous requirements.

For the 18-hour minor in Psychology, at least nine hours must come from the list of core PSY courses, while the remainder may come from the list of PSY electives. Students should consult a PSY major advisor to plan a minor program that will complement their major studies and career interests.

For a Psychology concentration in the B.S.I.S program of study, at least half of the classes (six hours for the 12-hour concentration or nine hours for the 18-hour concentration) must come from the list of core PSY courses while the remainder may come from the list of PSY electives. All of these must be upper-division courses. Students should consult the undergraduate coordinator in the Psychology Department to plan a concentration that will complement their career interests.

PUBLIC RELATIONS

See Department of COMMUNICATION

112 MISSISSIPPI STATE UNIVERSITY
Anthropology is the study of humans as biological and cultural beings. Its subfields include archaeology, biological anthropology, cultural anthropology, and linguistics. Students majoring in anthropology may undertake course work in all four subfields, with concentrations offered in archaeology and cultural and biological anthropology.

Anthropology is particularly broad major, designed for students who are preparing for employment with research organizations, or museums, for administrative and research positions with state or federal governments (such as state highway departments and the National Park Service), and with human service agencies or organizations that involve work in foreign countries. The undergraduate major in anthropology also prepares students for graduate training in professional fields such as planning, law, and public administration, as well as for further graduate training in anthropology leading to college and university teaching and research positions.

A student wishing to pursue a program leading to a Bachelor of Arts with a major in anthropology is required to complete the program of study outlined on this page. Students are encouraged to take elective courses in related fields which will strengthen their academic training and job skills. These may include courses in human anatomy, soils, geology, and land surveying.

Students are eligible for membership in the Alpha chapter of Lambda Alpha, the national anthropology honorary. In order to be considered, a student must have at least a 2.50 overall GPA, with a 3.00 GPA in anthropology courses, and have earned a minimum of 12 semester hours credit in anthropology or sociology, with at least six of these in anthropology. Part-time jobs are available for anthropology majors through the Department of Sociology, Anthropology, and Social Work and through the Cobb Institute of Archaeology.

The Anthropology faculty and staff are housed in the Cobb Institute of Archaeology. There are other archaeologists in the Institute, including specialists in the Middle East and Southeastern U.S. Facilities include archaeology laboratories, darkroom, drafting room, and museum. The museum houses artifacts from Mississippi and the Middle East, including replicas of large-scale relief sculptures and statues from Assyria and Egypt.

Anthropology may be used as a minor field of study at both the undergraduate and graduate levels. Twelve hours, (nine hours must be 3000 level or above) in addition to AN 1103, constitute an undergraduate minor. Requirements for an anthropology minor at the graduate level will be established in consultation with the anthropology major advisors. Courses taken for an undergraduate or graduate minor must be taught by anthropology faculty.

**University and College Core**

- **English Composition (6 hours)**
  - EN 1103 English Comp I OR
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II

- **Foreign Language (9 hours)**
  - 3 semesters one Foreign Language - see advisor

- **Humanities (18 hours)**
  - 3 hours Literature - see University Core
  - 3 hours History - see University Core
  - 3 hours Philosophy - See A&S requirements
  - 9 hours Humanities Elective - Consult Advisor

- **Mathematics (6 hours)**
  - MA 1313 College Algebra
  - ST 2113 Stats for Behavioral Sciences

- **Fine Arts (3 hours)**
  - See A&S Core List

- **Natural Sciences (9-12 hours)**
  - 3-4 hours Physical Sciences w/lab (CH, GG, PH)*
  - 3-4 hours Life Science w/ lab (BIO)
  - 3-4 hours Natural Science Elective**

- **Social Sciences (18 hours)**
  - 6 hours See University Core
  - 12 hours Social Sciences Electives +/-

- **Major Core**
  - AN 1143 Intro to Cultural Anthropology
  - AN 1343 Intro to Biological Anthropology
  - AN 1543 Intro to Archaeology
  - 21 hours Anthropology Upper Div Electives - see advisor
  - 3 hours Anthropology lower or upper division Elective

- **Oral Communication Requirement**
  - AN 4123 Anthropological Theory

- **Writing Requirement**
  - AN 4123 Anthropological Theory

- **Computer Literacy**
  - AN 4143 Ethnographic Methods OR
  - AN 3513 Artifact Analysis

**General Electives (12-15 hours) Consult advisor**

**Total hours needed for major: 123**

- 31 hours must be 3000/4000 A&S work
- * See University Core.
- ** See Consult advisor.
- +/- Must be from 2 different areas and must cross 4 disciplines over the 18 hours. Only one Economics allowed. Consult advisor.

**SPECIAL REQUIREMENTS**

- Before enrolling in any social work courses, it is the responsibility of the student to consult with their social work advisor regarding any prerequisites for social work classes.

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5. Adhere to the National Association of Social Workers Code of Ethics.

University and College Core

English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Foreign Language (6 hours)
2 semesters one Foreign Language - see advisor

Humanities (18 hours)*
3 hours Literature - see University Core
3 hours History - see University Core
PHI 1103 Introduction to Philosophy OR
PHI 1113 Introduction to Logic
3 hours Literature Elective
3 hours History Elective
3 hours Humanities Elective

Mathematics (6 hours)
MA 1313 College Algebra OR
MA 1303 Quantitative Algebra
ST 2113 Stats for Behavioral Sciences

Fine Arts (3 hours)
See A&S Core List

Natural Sciences (9-12 hours)
BIO 1004 Anatomy and Physiology
3-4 hours Physical Sciences w/lab (CH, GG, PH)**
3-4 hours Natural Science Elective*

Social Sciences (18 hours)
SO 1003 Intro to Sociology
PS 1113 American Government
SW 3003 Populations at Risk
PSY 1013 General Psychology
EC 2113 Prin of Macroeconomics
AN 1103 Intro to Anthropology OR
AN 1143 Intro to Cultural Anthropology

Major Core

(See advisor for course sequencing)
SW 2303 Social Welfare Policy I
SW 2313 Intro SW/Soc Welfare
SW 3232 Social Welfare Policy II***
SW 3013 Human Behavior & Social Environment***
SW 3023 Human Behavior & Social Environment II***
SW 4613 Child Welfare Service
SW 3213 Research Methods in Social Work***
SW 4623 Social Work with the Aged OR
SW 4633 Social Work in Health Care OR
SW 4643 Social Work Services in Schools

Students must successfully complete a formal admissions process prior to taking the following courses:
SW 3513 SW Practice I***
SW 3523 SW Practice II***
SW 3533 SW Practice III***

Field Work includes full-time placement for one semester in a supervised agency setting:
SW 4916 Field Work Pract***
SW 4926 SW Field Work Pract II***

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Writing Requirement
SW 4713 SW Senior Seminar***

Computer Literacy
TKT 1273 Computer Applications

General Electives
3 hours Consult advisor

Total hours needed for major: 124

* Consult advisor.
** See University Core.
*** Course has prerequisite. Check course description in back of this catalog or consult advisor.

SOCIOMETRY (SM)

Major Advisor: Professor James Jones
Office: 293 Bowen Hall

The following degree programs are offered: Bachelor of Arts, Master of Science, and Doctor of Philosophy.

Sociology is the scientific study of social life in all of its manifold interrelationships. With an interest in understanding human behavior, sociologists study such special areas as deviant behavior, social organization, stratification, population, community, social institutions, race and ethnic relations, social problems, theory and methods of research.

Sociology majors are well prepared to enter many rewarding positions in the work force right out of college or further graduate training in law, business, community planning, architecture, medicine, politics or academics. Opportunities for employment include, but are not restricted to entry-level positions in administration, advertising, banking, counseling (family planning, career, substance abuse, etc.) health services, journalism, group and recreation work, marketing and market research, sales, teaching, criminal justice, social services and social research. In addition, sociology provides training that other liberal arts majors do not, such as in the basics of human interaction and relationships, and basic training for research analyst positions (in statistics and research methods, which include computer applications, for example).

Students are eligible for membership in the Mississippi Alpha chapter of Alpha Kappa Delta, the International Sociology Honor Society. To be considered for membership, a student must be an officially declared sociology major or demonstrate a serious interest in sociology, must be at least a junior, have at least a 3.00 overall GPA, and must have maintained a 3.00 GPA in sociology courses.

To earn a Bachelor of Arts degree with a major in sociology, a student is required to take 36 hours of sociology.

Sociology Major with a Specialization Course Requirements

The sociology major consists of a sequence of five levels of courses ranging from introductory to the more advanced and capstone courses. Students are expected to complete courses in the lower levels before taking courses in the next higher levels. For example, students should complete Level 1 courses before completing Level II courses, etc. The lower courses are prerequisites for the more advanced level courses.

Selecting a specialization. There are two types of courses to complete at Level IV, specialization and elective courses. With the assistance of their advisor, students will select the specialization that best fits with their post-graduate plans. Each specialization is described below.

Population and Environment Specialization. Students planning to pursue a career in some aspect of business or in some government agencies may want to consider selection this specialization since these courses will focus on information and skills needed in the economic sector of society.

Family and Gender Studies Specialization. Students planning to work for private or government agencies that provide personal or social services to various populations in society will want to consider this specialization. The topics covered and the skills developed in these courses will provide much needed background information and understanding for working with persons and groups.

Socio-Economic Development Specialization. This specialization was developed for students that anticipate working in the area of socio-economic development at the community, state or national levels. The knowledge and background necessary to work effectively in various private and public organizations/agencies that focus on social and/or economic development is provided. Courses in this area focus on knowledge of the social forces and processes operating in specific environments that may facilitate or inhibit development and foster the ability to analyze relevant information and data.

General Sociology Specialization. Often students wish to obtain a more traditional liberal arts major by selecting courses that interest them personally. This specialization is the logical choice for these students.

Sociology Minor

To earn a minor in sociology, a student must take 18 hours of undergraduate sociology courses. SO 1003, 2203, and 3213 are required. The other three SO courses must be the 2000 level or above and include at least one 4000 level SO course.

Students who wish to major or minor in the department should plan their programs with the departmental major advisor as soon as possible after entering the University and should consult with their advisor before each registration period. Programs are arranged individually to combine
the most varied advantages consistent with the student’s interest and purposes. Persons interested in secondary school teaching may elect sufficient courses in the College of Education to satisfy certification requirements for teaching social studies.

**University and College Core**

**English Composition (6 hours)**
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

**Foreign Language (9 hours)**
- 3 semesters one Foreign Language - see advisor

**Humanities (18 hours)**
- 3 hours Literature - see University Core
- 3 hours History - see University Core
- 3 hours Philosophy - see advisor
- 9 hours Humanities Electives - Must be from 2 different areas - see A&S Core

**Mathematics (6 hours)**
- MA 1313 College Algebra
- ST 3123 Statistics

**Fine Arts (3 hours)**
- See A&S Core List

**Natural Sciences (9-12 hours)**
- 3-4 hours Physical Sciences w/lab (CH, GG, PH)*
- 3-4 hours Biological Sciences w/lab (BIO, EPP, PO)*
- 3-4 hours Natural Science Elective**

**Social Sciences (18 hours)**
- SO 1003 Intro to Sociology
- PS 1113 American Government
- EC 2113 Microeconomics OR
- EC 2123 Microeconomics
- 3 hours See University Core
- 6 hours Social Science courses

**Major Core - Courses in the major are sequenced by level.**

**Level I: Intro to the discipline - see social sciences requirement**

**Level II: Sociology Substantive Core (6 hours)**
- SO 2203 Cultural/Racial Minorities

Choose one of the following:
- SO 3003 Social Inequality
- SO 3013 Society and the Individual
- SO 3053 Organizations in Modern Society

**Level III: Tools and Skills (6 hours)**
- SO 3103 Social Theory
- SO 3213 Intro Social Research

**Level IV Courses: Specialization and Elective Courses (21 hours)**

**Specialization: Take any three courses in one of the Specializations A-D below for a total of 9 hours.**

**A. Population & Environment**
- SO 4113 Social Organization & Change
- SO 4123 Poverty Analysis
- SO 4173 Environment & Society
- SO 4403 Sociology of Gender
- SO 4703 Population Problems & Processes

**B. Family and Gender Studies**
- SO 3323 Contemporary Woman
- SO 4203 Family in the U.S.
- SO 4223 Comparative Family
- SO 4403 Sex Roles & Gender
- SW 4613 Child Welfare
- SO 4703 Population Problems & Processes

**C. Socio-Economic Development**
- SO 3303 Rural Sociology
- SO 4123 Poverty Analysis
- SO 4173 Environment & Society
- SO 4403 Urban Sociology
- SO 4703 Population Problems & Processes
- SO 4733 Community: Organization & Relationships

**D. General Sociology**

Select any three 3000 or 4000 level sociology courses, excluding any not listed above. At least of two of these courses must be 4000 level.

**Electives:** Select four 3000 or 4000 level sociology courses (12 hours). Students are encouraged to take additional courses in their specializations, if offered before the student graduates.

**Level V: Capstone (3 hours)**
- SO 4803 Social Research Practice

**Research paper in area of specialization expected.**

**Oral Communication Requirement**
- CO 1003 Fundamentals of Public Speaking

**Writing Requirement**
- Satisfied by completion of SO 3103 Social Theory

**Computer Literacy**
- Satisfied by completion of SO 3213 Intro to Social Research

**General Electives (18 hours)**
- Consult advisor

**Total hours needed for major: 123**

(31 hours must be 3000/4000 from A&S)

* Consult advisor.

**Consult advisor.**

*** Must be from 2 different areas and must cross 4 disciplines over the 18 hours. Only one Economics allowed. See advisor.

**** Students are encouraged to take additional courses in their specialization if offered before the student graduates.

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**Criminal Justice and Corrections Certificate**

**Program Director:** Dr. Peter B. Wood
**Office:** 294 Bowen Hall

The Criminal Justice and Corrections Certificate Program is administered through the Department of Sociology, Anthropology, and Social Work. Participation in this program is available to all departmental majors, as well as those majoring in any other fields (e.g., psychology, political science, computer science, or business).

Criminal Justice and Corrections is an ever expanding field of study. It involves the study of crime, crime control, and the administration of justice. This includes the study of the structure, functions, and decision processes of all administering components within the system. Components of the system include such things as: Law Enforcement; Criminal Courts; Juvenile Court; Jails; Prisons; Probation; Community-Based Corrections; Parole System. Criminal Justice and Corrections is also inherently linked to the broader study of crime, delinquency, deviant behavior, and social pathology.

The mission or the Criminal Justice and Corrections Certificate Program is to prepare students for challenging careers in the criminal justice/corrections professions. Underlying our mission is a strong commitment to providing students with a solid theoretical foundation of relevant issues, as well as equally important practical information and experiences germane to their professional development. Key in achieving this is our two stage curriculum format where students receive both traditional classroom instruction and experiential training through an internship program. Thus, the Criminal Justice and Corrections Program is designed to provide a broad-based education for students interested in the field of crime and justice studies and to prepare students to assume leadership roles with crime and justice.

**University and College Core**

**English Composition (6 hours)**
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

**Foreign Language (9 hours)**
- 3 semesters one Foreign Language - see advisor

**Humanities (18 hours)**
- 3 hours Literature - see University Core
- 3 hours History - see University Core
- 3 hours Philosophy - Choose one of the following:
  - PHI 1103 Introduction to Philosophy OR
  - PHI 1113 Introduction to Logic OR
- 9 hours Humanities Electives - Must be from 2 different areas - see A&S Core
Mathematics (6 hours)
MA 1313 College Algebra
ST 2113 Stats for Behavioral Sciences
Fine Arts (3 hours)
See A&S Core List

Natural Sciences (9-12 hours)
3-4 hours Physical Sciences w/lab (CH, GG, PH)*
3-4 hours Biological Sciences w/lab (BIO, EPP, PO)*
3-4 hours Social Science Elective**

Social Sciences (18 hours)
6 hours See University/A&S Core
PSY 1013 General Psychology
AN 1143 Cultural Anthropology
6 hours Social Sciences Electives*** - see Univ. Core

** Major Core
SO 1003 Intro to Sociology****
SO 2203 Cultural/Racial Minorities
SO 3213 Intro Social Research
SO 3103 Social Theory*++
SO 4803 Social Research Practice
SO 3603 Criminology
SO 4233 Juvenile Delinquency
SO 4513 Correctional Systems
COR 3103 Criminal Justice System
COR 3310 Field Work I (6 hours)
COR 3320 Field Work II (6 hours)
6 hours COR Electives #

*** Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Writing Requirement
Satisfied by successful completion of SO 3103


Free Electives
3-9 hours Consult advisor

Total hours needed for major: 124
* See University Core.
** Consult advisor.
*** Must not be Sociology or CJ/COR courses. With Social Science Core, must cross 4 disciplines over the 12 hours. Only one Economics allowed. See advisor.
**** Satisfies Core Social Science requirement.
**+ Satisfies Social Science Electives.
# Choose two of the following: SO 3313 Deviant Behavior, SO 3503 Violence in the U.S., SO 3343 Gender, Crime, and Justice, PS 4185 Judicial Processes**++; PSY 4213 Psychology of Abnormal Behavior**++; PSY 4223 Drug Use and Abuse**++; SW 4623 Child Welfare Services, AN 4313 Forensic Anthropology, SO 4990 Special Topics in Sociology, CSE 4273 Intro to Computer Crime & Forensics

Criminal Justice and Corrections Certificate with a major other than Sociology (33 hours)
The Criminal Justice and Corrections Certificate can also be earned in combination with any other degree program from any College. Specific Criminal Justice and Corrections Certificate requirements are:

Required Courses (27 hours)
SO 2203 Racial and Ethnic Minorities
COR 3103 Criminal Justice System
SO 3603 Criminology
SO 4233 Juvenile Delinquency
SO 4513 Correctional Systems
COR 3310 Field Work I (6 hours)
COR 3320 Field Work II (6 hours)

Choose two of the following:
AN 4313 Forensic Anthropology
CSE 4273 Intro to Computer Crime & Forensics
SO 3313 Deviant Behavior
SO 3343 Gender, Crime and Justice
SO 3503 Violence in the U.S.
SO 4990 Special Topics in Sociology*
PS 4183 Judicial Processes
PSY 4213 Psychology of Abnormal Behavior
PSY 4223 Drug Use and Abuse
SW 4623 Child Welfare Services

* SO 4990 Special Topics may be offered from periodically to cover timely issues in Sociology, such as Policing and Law Enforcement Systems, White Collar Crime or Law and Society. Consult an advisor or the major class schedule for the availability of these courses each semester.

* Approved Courses
SO/AN/WS 1173 Introduction to Gender Studies
SO/AN 3323 Contemporary Woman

Electives (see above)
HS 3303 Consumer Economics in Counseling
HS 4313 Family Resource Management
HI 4273 Women in American History
PHI 4313 Feminist Interpretation of Western Social and Political Philosophy
PS 3033 Gender and Politics
PSY 3203 Psychology of Gender Differences
SO 4403 Sociology of Gender

Additional Electives
Choose only one - approved by the Women’s Studies Advisor
EDF 3333 Social Foundations of Education
HS 3573 Historic Costume
HS 4403 Introduction to Gerontology
HS 4513 Social Psychological Aspects of Clothing
SO 4203 The Family in the United States
3 hours Directed Ind Study (from a WS faculty member)

Other Additional Elective courses may be appropriate depending on course content and instructor; please contact the Women’s Studies Advisor with questions concerning other options.
College of Business and Industry

SARA M. FREEDMAN, Dean
Louis M. Capella, Associate Dean for Internal Affairs

The College of Business and Industry, organized in 1915, is the oldest college of business in the state and one of the oldest in the South. In 1979, the Department of Accounting was designated as the School of Accountancy in answer to a need for attention to the unique requirements of the growing profession of accountancy.

This college permits students to major in any of the following programs: Accounting, Banking and Finance, Information Systems, Economics, General Business Administration, GBA-Furniture Management Track, GBA-International Business/Foreign Languages (double degree), Management, Management of Construction and Land Development, Marketing, Marketing-Transportation, Real Estate and Mortgage Appraisal Financing, Risk Management, Insurance and Financial Planning, and Marketing-Professional Golf Management. The College offers degree programs that lead to bachelor’s, master’s and doctoral degrees. Distance learning through interactive classrooms and Internet courses is another avenue available to pursue course work for College of Business and Industry students. Minors are available in most program areas.

MISSION

The College of Business and Industry mission is to provide outstanding academic programs to develop the business skills and expertise of our students to enable them to assume leadership roles in a global economy, to foster an environment that encourages the development, dissemination, and application of new knowledge, and, in the spirit of our land-grant heritage, to work with the business community and policy makers of our state and region to develop opportunities for the future.

ACCREDITATION

The undergraduate, masters, and doctoral business programs are accredited by AACSB International (The Association to Advance Collegiate Schools of Business). The School of Accountancy is separately accredited at the undergraduate and masters levels by AACSB International.

ORGANIZATION

The administrative units of the College of Business and Industry consist of the School of Accountancy and the Departments of Finance and Economics; Management and Information Systems; and Marketing, Quantitative Analysis, and Business Law. In addition to these units, the college includes the Office of Graduate Studies in Business, the Division of Business Research, the Division of Business Services and the College of Business and Industry Academic Advising Center. The administrators of these units are as follows:

Unit | Name |
---|---|
School of Accountancy | Danny Hollingsworth, Director |
Finance and Economics | Paul Grimes, Head |
Mgt & Info Systems Dept | Garry D. Smith, Head |
Mkt, Quan Analysis & BL | Brian Engelland, Head |
Graduate Studies | Barbara Spencer, Director |
Division of Business Research | |
Division of Business Services | |
Computing Services | |
International Bus Strategy | J.P. Shim, Director |
Cooperative Education | Sonny Fisher, Director |
Small Business Develop Ctr | |
Research & Tech | |
International Business | John Lox, Director |
The Division of Business Services | |
Center for Economic Educ. | Paul Grimes, Director |
Professional Golf Mgt | Stephen LeMay, Director |
Center for Economic Educ. |
and Financial Literacy | |
Graduate Studies | |
Computing Facilities | |
Center for Economic Educ. | |
and Financial Literacy | |

SUPPORT SERVICES

COBI Academic Advising Center
Coordinator: Vergie Bash

Admissions/Advancement Coordinator: Emily Keith
112 McCool Hall: 325-9082

The College of Business and Industry (COBI) Academic Advising Center provides centralized advising resources to students (current, prospective, and alumni), parents, faculty, and support staff. The Academic Advising Center maintains the official records of COBI students (Accounting majors should see the Director of Accountancy). The Center represents the Dean on all academic paperwork such as transfer evaluations, off-campus requests, withdrawals, overload requests, degree audits, change of majors, and correspondence course approvals.

Employment Service

The College of Business and Industry endeavors, in cooperation with the Career Center (located at 300 Montgomery Hall), to arrange employment interviews for graduating seniors. Former graduates seeking employment or change of position are urged to keep the Career Center informed as to availability.

Computing Facilities

The College of Business and Industry is committed to providing experience and training on a variety of computer platforms that are commonly used in the modern business community.
needs of the College are served by a large-scale local area network composed of more than 300 IBM compatible computers. These systems are linked through a Novell network to College-wide servers that provide access to educational software, administrative databases and research facilities.

The College uses electronic mail as one of its primary communication methods; many professors use e-mail to enhance the classroom experience. All students receive their own personal electronic mail accounts.

COBI is directly connected to the Internet, a world-wide network linking many educational, government, and commercial groups. In addition, a number of research databases are provided to aid in statistical analysis and other class projects. Lexis/Nexis, CompuStat and CRSP are a few of the available databases.

The Ron J. and Carol M. Ponder Lab is a state of the art facility used by students for the completion of computer-related assignments. The Leo Seal Electronic Classroom is reserved by professors to illustrate computer-related concepts in the classroom. In addition, other more specialized computer labs exist, and presentation systems help to augment classroom demonstrations. The College of Business and Industry also offers a computer security analysis lab, used in classes to help prepare students for the decision making required of professionals in business today.

Rules for Scheduling Classes

The normal load for an undergraduate student in a regular semester is 15-18 credit hours. Mississippi State University has established undergraduate student course limits based on cumulative and MSU grade point averages. (See Item III, A-7 Student Load in the Introduction Section.)

Admission

Admission into the College of Business and Industry for Transfer Students - Students wishing to transfer into the College of Business and Industry from another institution or from another major at MSU must meet certain grade point average requirements. Juniors and seniors must have a minimum 2.5 overall and MSU grade point average; and sophomores must have a minimum 2.5 overall and MSU grade point average; and freshmen must have a minimum 2.0 overall grade point average to be admitted into the College of Business and Industry.

Junior/Senior Screen - A student in the College of Business and Industry must achieve a 2.5 overall GPA and a 2.5 MSU GPA within a 54 to 70 hour window to continue as a business student. Students who do not meet the junior-senior screen (COBI or transfer) will not be permitted to register for 4000 level business classes.

SCHOOL of ACCOUNTANCY

Major Advisor: Professor Danny Hollingsworth, Director
Office: 381 McCool Hall

The School of Accountancy is a professional school whose mission is to prepare students for successful careers in accountancy. Such career preparation includes a wide range of professional accounting activities, general education, and broad training in business administration. This program of study gives students the basic preparation for positions in all areas of accounting including, but not limited to, public, private, and governmental accounting. It also (1) requires students to take a planned and coordinated non-business program designed to increase their cultural appreciation and give them a broad knowledge of world affairs and (2) permits the election of additional non-business courses according to the interests of the individual student.

The accounting program is accredited by the AACSB (The International Association for Management Education) as part of the overall accreditation of the College of Business and Industry as well as the separate and additional accreditation of accounting programs.

Certification

The Bachelor of Accountancy Degree (BACC) from the School of Accountancy, Mississippi State University, is recognized by those states requiring the baccalaureate degree as a minimum, as fulfilling all the educational requirements for eligibility to sit for the Certified Public Accountant (CPA) examination. It is also recognized as meeting educational requirements to sit for the Certificate in Management Accountant (CMA) and the Certified Internal Auditor (CIA) examinations. Graduates are encouraged to seek professional certification in one or more areas by passing these examinations.

The American Institute of Certified Public Accountants (AICPA) which prepares and grades the CPA examination, has urged the requirement of five years of academic preparation and has reflected this in the CPA examination. Students who aspire to become certified public accountants should consider the Master of Professional Accountancy or Master of Taxation programs herein described, in addition to the BACC.

Admission

Pre-Accountancy (PACC) - All students desiring to major in accounting will be admitted into Pre-Accountancy in the School of Accountancy at Mississippi State University. Admission to the University is equivalent to admission to Pre-Accountancy. International students need a 575 TOEFL score to be admitted to Pre-Accountancy.

Bachelor of Accountancy (BACC) Candidate - Requirements for admission as a candidate for the BACC degree are listed below. Students will not be allowed to take 4000 level accounting courses and may only take two 3000 level courses if they have not been admitted to the School of Accountancy.

1. A student must complete 60 hours or more of college credit earned toward the BACC degree.
2. A student must complete the pre-accountancy core with a 2.6 GPA on all college work attempted and a 2.6 GPA on the 18 hours of pre-accountancy core.
3. A student must complete Principles of Financial Accounting and Principles of Managerial Accounting with at least a “B” in each of the two courses.

Graduation

Bachelor of Accountancy (BACC) - Requirements for a BACC Degree from the School of Accountancy are listed below. It is the student’s responsibility to complete the requirements of the BACC curriculum before applying for a degree.

1. A student must be a BACC candidate and complete the required curriculum and a minimum of 124 semester hours.
2. A student must achieve at least a 2.5/4.00 GPA in upper-division business, economics, and statistics courses.
3. A student must achieve at least a 2.5/4.00 GPA in upper-division accounting subjects with at least a “C” in each accounting course. A student who makes less than a C in an upper-division accounting course must repeat that course the next regular semester that the student is enrolled and the course is offered. Students will be permitted to repeat an upper-division accounting course only once in an effort to make a “C” in the course. If they make less than a “C” in two attempts in a specific course, they will no longer be able to continue in the accounting program.
4. A student must achieve an overall and MSU GPA of at least 2.0 on a 4.0 scale.

BACC Program of Study

University Core

English Composition (6 hours)
EN 1103 English Composition I or
EN 1163 Accelerated Composition I
EN 1113 English Composition II or
EN 1173 Accelerated Composition II

Mathematics & Statistics (9 hours)
MA 1313 College Algebra
MA 1613 Calculus for Business and Life Sciences
3 hours See Major Requirements

Natural Science (6 hours)
2 courses with labs from University Core

Humanities (6 hours)
Refer to University Core

Fine Arts (3 hours)
Refer to University Core

Social/Behavioral Sciences (6 hours)
PS 1113 American Government
3 hours See University Core (excluding: AEC and EC)

Accounting Major Requirements

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking
The School of Accountancy offers two graduate programs in Accounting - Master of Professional Accountancy (MPA) and Master of Taxation (MTX). Additional information can be found in the Graduate Bulletin.

**Admission**

An applicant to the MPA program should hold a bachelor’s degree from a fully recognized four-year institution of higher learning that enjoys unconditional accreditation by appropriate regional accrediting agencies. In addition, the applicant for the MPA degree must take the Graduate Management Admission Test (GMAT). Generally, regular admission to the MPA program requires a 510 GMAT score, a GPA of 3.0/4.0 over the last 60 hours of baccalaureate work and acceptable recommendation letters. When a student is deficient in one of the criteria cited, the student’s application, nevertheless, may be considered for admission based on the strength of the materials contained in the student’s application. However, reasonable minimum levels of performance must be achieved in both the applicant’s GPA and GMAT scores.

**Graduation**

Master of Professional Accountancy (MPA) and Master of Taxation (MTX) - Requirements for an MPA or MTX degree from the School of Accountancy are listed below.

1. A student must complete the required curriculum and a minimum of 30 graduate semester hours.
2. A student must achieve an overall GPA of at least 3.0/4.0 on graduate work attempted with no more than six hours of “C” grades.
3. A student must achieve a 3.0/4.0 GPA on graduate accounting work attempted.
4. A student must pass an end-of-program final examination.

**MPA Program of Study**

Master of Professional Accountancy Program (MPA) - Candidates must complete 30 hours of course work at the graduate level. At least 24 of the 30 hours must be taken from courses offered exclusively for graduate credit (8000 level).

**Required courses** (15 hours):
- ACC 6023 Adv Accounting (If not taken as an undergraduate)............3
- ACC 6063 Income Tax II (If not taken as an undergraduate)...........3
- ACC 8013 Seminar in Fin Acc Theory...........................................3
- ACC 8023 Advanced Managerial Accounting...............................3
- ACC 8033 Business Assurance Services.......................................3

**Accounting Electives** (6 hours):
- ACC 6043 Municipal and Governmental Accounting.....................3
- ACC 6053 International Accounting...........................................3
- ACC 4063 Income Tax II.............................................................3
- ACC 8023 Advanced Managerial Accounting...............................3
- ACC 8033 Business Assurance Services.......................................3

**Concentration**

In lieu of the above electives, a student may elect a concentration in systems by taking the following three courses:
- ACC 8043 Fraud Examination.....................................................3
- BIS 8213 Advanced Systems Development and Administration.........3
- BIS 8313 Advanced Database Design Administration....................3

**Non-accounting Electives (9 hours)**

The curriculum is available to students who hold a baccalaureate degree in any recognized field of study from a regionally accredited institution. The candidate’s combined undergraduate program must include the same course and GPA requirements as required of anyone who receives the BACC degree. A minimum or 32 semester hours of upper division work must be earned in residence at Mississippi State University after the first degree has been conferred. Consult the Academic Coordinator, School of Accountancy, P.O. Drawer EF, Mississippi State, MS 39762 or email: sac@cobilan.msstate.edu for specific details.
MTX Program of Study
Master of Taxation (MTX) Program - Candidates for the MTX degree must complete 30 hours of course work at the graduate level including a core of 15 hours of taxation, as described below: At least 24 of the 30 hours must be taken from courses offered exclusively for graduate credit (8000 level).

Required Tax Courses (15 hours):
- ACC 8063 Research in Tax Practice and Procedures
- ACC 8073 Taxation of Corporations & Shareholders
- ACC 8083 Federal Estate and Gift Taxation
- ACC 8093 Fed. Taxation of Partnerships, Corps, Trusts, & Estates
- Elective - any 8000 level tax course

Other Required Courses (6 hours)
- ACC 8013 Seminar in Financial Accounting Theory
- ACC 8033 Business Assurance Services

Electives (9 hours)
- Graduate level Business or Accounting courses

Consult the Director, School of Accountancy, P.O. Box EF, Mississippi State, Mississippi 39762 for further information or E-mail: sac@cobilan.msstate.edu.

BACHELOR of BUSINESS ADMINISTRATION DEGREE PROGRAMS

Graduation Requirements
The admission/readmission requirements for the Bachelor of Business Administration degree are described in Part I, Section II of this catalog. In addition to the University’s minimum requirements, the following requirements must be met for students applying for graduation:
- Pass 124-154 applicable hours
- Take a minimum of 62 semester hours from a senior college
- Take a minimum of 32 upper level business hours at MSU
- Complete the last 32 hours in residence at MSU
- Have at least a:
  - 2.50 GPA on all upper level business courses attempted
  - 2.00 GPA on all upper level business courses attempted, and
  - 2.00 GPA on all course work attempted.
- Have no more than two D’s in upper level business courses. In excess of two D’s will have to be repeated with a grade of C or better.
- It is the student’s responsibility to be sure that he/she has fulfilled the requirements of the particular curriculum before applying for a degree. Students must complete a graduation audit in the COBI Academic Advising Center prior to graduation.

COLLEGE-WIDE DEGREE COURSE REQUIREMENTS
The College of Business and Industry requires each student to take a planned and coordinated Arts & Sciences foundation designed to increase cultural appreciation and to give a broad knowledge of world affairs. Each program also permits the election of additional courses, according to the interests of the individual student. The total number of credits earned in the Arts & Sciences foundation program and other non-business courses shall not be less than 52 semester hours.

INTERNATIONAL BUSINESS PROGRAM
A Five-Year Double Degree Program: B.B.A. in General Business Administration & B.A. in Foreign Languages
John O. Lux, Director
Office: 355-356 McCool Hall

Major Advisors - Business Administration: Professors Capella and S. Taylor; Associate Professor Addy; Assistant Professor Rezek
Major Advisors - Foreign Languages: Professor Emplaincourt; Associate Professors Jordan and Robbins-Herring; Assistant Professors Lestrade and Rice
300 Lee Hall

The International Business Program provides students with an academic background and work experience to help ensure success in the marketplace. Students receive a double degree at graduation reflecting the dual concentration in Business: B.B.A. (with an international focus + a specific discipline like Marketing or Finance); and in the Arts: B.A. (language and cultural proficiency). This is additional to the first two years of study developing abilities in writing, math, sciences, and computer literacy.

The hallmark of this program is a work internship, an outside the country work experience of a full summer or one semester duration (generally taken the last of the 4th year or beginning of the 5th year). This work is ideally reflective of the student’s specific business discipline and language proficiency area. The student who selects to separate the work and abroad experience must petition the IB committee for approval. Minimum acceptable levels are 1. WORK: 10 continuous weeks of international tasks and responsibilities, 2) ABROAD: 6 continuous weeks in one location for cultural immersion. An International Business Co-Op Work program offers 3 semesters paid international work experience in concert with pursuing the academic degrees.

The total number of semester credit hours (SCH) will be 154 for most students. The program has five main components:
1. A core of basic skills, including courses in writing, mathematics, sciences, and communication (30 SCH);
2. A core of humanities and social science courses selected to fit the special needs of international business major, emphasizing both the history and culture of other societies and the ways these societies relate to our own (27 SCH);
3. Intensive training to develop proficiency in one foreign language and its associated cultures and literatures (37);
4. A thorough grounding in business techniques and practices, including 33 SCH of general business courses, 12 SCH of international business courses, and 12 SCH in one of six functional/discipline emphasis in business (accounting, banking and finance, information systems*, economics, management, marketing*, or risk management, insurance and financial planning*).
5. A one-semester internship program with an international business (3 SCH).

Students interested in following this recommended course of study should notify the Department Head of Foreign Languages and the Director of International Business Academic Programs. Students must have the Director’s written approval to join the International Business Program. Students must meet all graduation requirements for the College of Business and Industry and the College of Arts & Sciences. This includes having no more than two Ds in upper level courses or in upper level Foreign Language courses. In excess of two Ds will require course(s) to be repeated with a grade of C or better. International Business students must have an overall and previous semester GPA of 2.5 to be eligible for internship and study abroad.

* Information Systems, Insurance, & Marketing functional emphasis areas will need an additional 3 credits in their program; for those taking the CPA exam, other coursework will be required.

University Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Mathematics (9 hours)
- MA 1313 College Algebra
- MA 1613 Calculus for Business and Life Sciences I

Science (6 hours)
- Life Science and Lab (BIO prefix)
- Physical Science and Lab (CH, GG, OR PH prefix)

Math/Science Elective (3 hours)
- ST 2113 Statistics for the Beh Sciences OR
- ST 3123 Intro to Statistical Inferences

Humanities (6 hours)
- EN 2273 World Literature I OR
- EN 2283 World Literature II
- HI 1173 World History Since 1500 OR
- HI 1223 Modern Western World

Fine Arts (3 hours)
Choose from the following:
- ARC 1013 Architectural Appreciation
ECONOMICS

Economics is the scientific study of how people and institutions make choices concerning the use of society’s scarce resources. Applied to business, economics is primarily concerned with the decision-making of households and firms within a market context. The importance of economic analysis is recognized by its being the only social science in which a Nobel Prize is awarded. The B.B.A. in economics provides the analytical skills and empirical background needed to understand the dynamic problems facing businesses in the ever-changing economic environment. Career opportunities available to an economics graduate include management, research, and instructional positions with corporations, banks, economic development agencies, trade organizations, governments, and educational institutions.

An economics major or minor also helps prepare the student for graduate professional training in business, public administration, and law. The flexibility of the economics major is reflected in relatively high starting salaries and lifetime earnings of economists. Undergraduates at Mississippi State University may pursue an economics major through either the College of Business and Industry (B.B.A degree) as described here or through the College of Arts and Sciences (B.A. degree) as described previously in this bulletin.

Students seeking the B.B.A. with a major in economics are required to complete all College of Business and Industry and university common core requirements. Majors are required to take MA 1613 Calculus for Business and Life Sciences I and are encouraged to take MA 1623 Calculus for Business and Life Sciences II. Elective courses should be chosen with the advisor’s approval and used to enhance the student’s overall program.

The economics faculty offers a minor in economics through the College of Arts and Sciences. This minor is open to any student regardless of major or college of enrollment. A minor in economics is attained by selecting, in consultation with the economics minor advisor, at least 15 hours of major or college of enrollment. A minor in economics is attained by selecting, in consultation with the economics minor advisor, at least 15 hours of economics course work. Three hours of courses from finance (FIN) or agricultural economics (AEC) may be applied to the economics major.

Career opportunities available to a student with a minor in economics include management, research, and instructional positions with corporations, banks, economic development agencies, trade organizations, governments, and educational institutions.

Academic advising and career counseling are available from the economics faculty for both majors and minors. Students interested in the study of economics should contact the Department of Finance and Economics, 326 McCool Hall. Any student who completes 12 credit hours of economics with at least a 3.0 GPA and has an overall GPA of 3.0 or higher is eligible for membership in Omicron Delta Epsilon, the international honor society in economics.

University Core

- English Composition (6 hours)
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II

- Mathematics (9 hours)
  - MA 1313 College Algebra
  - MA 1613 Calculus for Business and Life Sciences I
  - BQA 2113 Business Statistical Methods I

Science (6 hours)

- 2 Lab Sciences from University Core

Humanities (6 hours)

- See University Core

Fine Arts (3 hours)

- See University Core

Social/Behavioral Sciences (6 hours)

- PS 1113 American Government
  - 3 hours See University Core excluding: AEC and EC

Total hours needed for major: 154
College Core
BQA 3123 Business Statistical Methods II
ACC 2013 Principles of Financial Accounting
ACC 2023 Principles of Managerial Accounting
EC 2113 Principles of Macroeconomics
EC 2123 Principles of Microeconomics
BL 2413 Legal Environment of Business
BIS 3233 Intro to Management Info Systems
FIN 3113 Financial Systems
FIN 3123 Financial Management
MKT 3013 Principles of Marketing
MGT 3114 Principles of Management and Production
GB 4853 Business Policy

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement
BIS 1012 Intro to Business Information Systems

Writing Requirement
MGT 3213 Organizational Communications

Major Core
International Elective - Elect one of the following:
EC 3513 Economic Systems of the World
EC 4303 Theory of Economic Development
EC 4323 International Economic Relations

Required Courses:
EC 3113 Intermediate Macroeconomics
EC 3123 Intermediate Microeconomics
EC 4643 Economic Forecasting and Analysis

Upper Division EC electives - 9 hours (see advisor for options)
Non-business electives - 12 hours (see advisor for options)
Free electives - 10 hours

Total hours needed for major: 124

BANKING and FINANCE

The Banking and Finance major requires 124 credit hours and leads to a Bachelor of Business Administration degree. For some specialization, students may choose from a list of electives. All Banking and Finance majors must complete an internship which provides field experience prior to graduation. (A Special Topics course may be arranged for students in which an internship is unavailable.) The degree plan also allows students to supplement their studies with a variety of business and non-business electives. By carefully selecting these elective courses, students may develop a program of study that fits their interests and career preparation needs. In order to maximize the benefits of their degree, students are strongly encouraged to work closely with a faculty advisor in securing an internship and developing their personal program of study.

The career opportunities for Banking and Finance majors are varied and challenging. The program prepares graduates for decision-making positions in both the public and private sectors. Many graduates accept positions within the banking industry, including commercial banks and federal and state bank regulating agencies. Recent graduates have also found careers with major corporations and private enterprises throughout the United States. Banking and Finance majors may pursue a wide variety of rewarding careers. MSU graduates can be found working as: Bank Examiners, Financial Managers, Bank Officers, Financial Planners, Management Consultants, Financial Analysts, Investment Managers, Credit Analysts, Loan Officers, and Pension Fund Managers. These career opportunities require an in-depth knowledge of finance and a solid foundation in analytical and communications skills. The opportunities for Banking and Finance majors are excellent; graduates, with the proper preparation, have only to choose which career path to follow.

Banking and Finance minors and double majors are available for both business and non-business majors. For specifics, see below.

University Core
English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Mathematics (9 hours)
MA 1313 College Algebra
MA 1613 Calculus for Business and Life Sciences I
BQA 2113 Business Statistical Methods I

Science (6 hours)
2 Lab Sciences from University Core

Humanities (6 hours)
See University Core

Fine Arts (3 hours)
See University Core

Social/Behavioral Sciences (6 hours)
PS 1113 American Government and Politics

College Core
BQA 3123 Business Statistical Methods II
ACC 2013 Principles of Financial Accounting
ACC 2023 Principles of Managerial Accounting
EC 2113 Principles of Macroeconomics
EC 2123 Principles of Microeconomics
BL 2413 Legal Environment of Business
BIS 3233 Intro to Management Info Systems
FIN 3113 Financial Systems
FIN 3123 Financial Management
MKT 3013 Principles of Marketing
MGT 3114 Principles of Management and Production
GB 4853 Business Policy

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement
BIS 1012 Intro to Business Information Systems

Writing Requirement
MGT 3213 Organizational Communications

Major Core
FIN 3723 Financial Markets
FIN 4223 Intermediate Financial Management
FIN 4423 Investments
FIN 4923 International Financial Management
FIN 4243 Senior Seminar in Finance
1 hour Internship
9 hours Major Electives - Choose from list*
Non-business electives - 15 hours (see advisor for options)
Free electives - 3 hours

Total hours needed for major: 124

* These courses are to be selected in consultation with your finance advisor. They may be taken along with Junior-Senior Core Courses. FIN 4233, FIN 4433, FIN 4733, FIN 3513, FIN 4723.

Double Major. Students with another B.B.A Major* who desire a Double Major in Banking and Finance must take the following 18 hours beyond the 124 hours required for the first major. For additional depth, they may choose from the listed optional courses.

Required Courses for Double Major
FIN 3723 Financial Markets
FIN 4423 Investments
FIN 4223 Intermediate Financial Mgt
FIN 4923 International Financial Mgt
FIN 4723 Bank Management
FIN 4243 Senior Seminar in Finance

Optional Finance Courses
ACC 3203 Financial Statement Analysis
FIN 4233 Working Capital Mgt
FIN 4733 Advanced Bank Mgt
FIN 4433 Security Analysis and Portfolio Mgt

Minor Option for students with a Business School Major who desire to Minor in Banking and Finance. The following four courses are required:
FIN 3723 Financial Markets
FIN 4423 Investments
FIN 4223 Intermediate Financial Management
FIN 4923 International Financial Management

* Non-Business School Majors wishing to pursue a second degree in a Business Administration field, please consult the MSU Bulletin or the COBI Advisement Center.

Minor for students with a Business School Major who desire to Minor in Banking and Finance. The following four courses are required:
FIN 3723 Financial Markets
FIN 4423 Investments
FIN 4223 Intermediate Financial Management
FIN 4923 International Financial Management
Minor Option for students with a Non-business School Major
who desire to Minor in Banking and Finance. The following six courses are required:

- FIN 3113 Financial Systems
- FIN 3123 Financial Management
- FIN 3723 Financial Markets
- FIN 4423 Investments
- FIN 4223 Intermediate Financial Management
- FIN 4923 International Financial Management

**REAL ESTATE and MORTGAGE APPRAISAL FINANCING**

This major prepares the student for employment opportunities in real estate brokerage appraisal, mortgage loan divisions of commercial and federal banks, and mortgage banking firms, as well as self-employment in the real estate industry.

**University Core**

- English Composition (6 hours)
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II
- Mathematics (9 hours)
  - MA 1313 College Algebra
  - MA 1613 Calculus for Business and Life Sciences I
  - BQA 2113 Business Statistical Methods I
- Science (6 hours)
  - 2 Lab Sciences from University Core
- Humanities (6 hours)
  - See University Core
- Fine Arts (3 hours)
  - See University Core
- Social/Behavioral Sciences (6 hours)
  - PS 1113 American Government and
  - 3 hours from University Core excluding: AEC and EC

**College Core**

- BQA 3123 Business Statistical Methods II
- ACC 2013 Principles of Managerial Accounting
- ACC 2023 Principles of Managerial Accounting
- EC 2113 Principles of Macroeconomics
- EC 2123 Principles of Microeconomics
- BL 2413 Legal Environment of Business
- BIS 3233 Intro to Management Info Systems
- FIN 3113 Financial Systems
- FIN 3123 Financial Management
- MKT 3013 Principles of Marketing
- MGT 3114 Principles of Management and Production
- GB 4853 Business Policy

**Oral Communication Requirement**

- CO 1003 Fundamentals of Public Speaking

**Computer Literacy Requirement**

- BIS 1012 Intro to Business Information Systems

**Writing Requirement**

- MGT 3213 Organizational Communications

**Major Core**

- 3 hours International Elective (see advisor for options)
- REM 3333 Principles of Real Estate
- REM 3253 Real Property Evaluation
- REM 3353 Real Estate Finance
- REM 4253 Mortgage Financing
- BL 4253 Real Estate Law

Choose two of the following:

- ACC 3203 Financial Statement Analysis
- FIN 3723 Financial Markets
- FIN 4223 Intermediate Financial Mgt
- FIN 4423 Investments
- MGT 3223 Entrepreneurship
- MKT 4113 Personal Selling
- INS 3203 Property and Casualty Insurance
- EC 4313 Regional Economics

Non-business electives - 15 hours See advisor for options
Free electives - 4 hours

**Total hours needed for major: 124**

**MANAGEMENT of CONSTRUCTION and LAND DEVELOPMENT**

This major is designed to meet the needs of the student interested in managing a business that is associated with real property and the subsequent planning, financing, and development of the land and the eventual construction of buildings. The graduate may expect to seek employment from a broad range of employers including builders, developers, and financial organizations.

**University Core**

- English Composition (6 hours)
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II
- Mathematics (9 hours)
  - MA 1313 College Algebra
  - MA 1613 Calculus for Business and Life Sciences I
  - BQA 2113 Business Statistical Methods I
- Science (6 hours)
  - 2 Lab Sciences from University Core
- Humanities (6 hours)
  - See University Core
- Fine Arts (3 hours)
  - See University Core
- Social/Behavioral Sciences (6 hours)
  - PS 1113 American Government and
  - 3 hours from University Core excluding: AEC and EC

**College Core**

- BQA 3123 Business Statistical Methods II
- ACC 2013 Principles of Financial Accounting
- ACC 2023 Principles of Managerial Accounting
- EC 2113 Principles of Macroeconomics
- EC 2123 Principles of Microeconomics
- BL 2413 Legal Environment of Business
- BIS 3233 Intro to Management Info Systems
- FIN 3113 Financial Systems
- FIN 3123 Financial Management
- MKT 3013 Principles of Marketing
- MGT 3114 Principles of Management and Production
- GB 4853 Business Policy

**Oral Communication Requirement**

- CO 1003 Fundamentals of Public Speaking

**Computer Literacy Requirement**

- BIS 1012 Intro to Business Information Systems

**Writing Requirement**

- MGT 3213 Organizational Communications

**Major Core**

- 3 hours International Elective (see advisor for options)
- EG 1143 Graphic Communication
- ABE 1073 Agricultural Mechanics
- ABE 4383 Building Construction
- BL 4253 Real Estate Law
- LA 3713 Landscape Contracting I OR
- LA 4744 Landscape Contracting IV*
- LA 4724 Landscape Contracting II
- LA 4733 Landscape Contracting III
- REM 3333 Principles of Real Estate
- REM 3253 Real Property Evaluation
- REM 3353 Real Estate Finance

Major Elective - 3 hours (see advisor for options)
Non-business Electives - 6 hours (see advisor for options)

**Total hours needed for major: 124**

* If LA 4744 is chosen instead of LA 3713, 5 hours of non-business electives are required.
**RISK MANAGEMENT, INSURANCE and FINANCIAL PLANNING**

This program offers the student a broad study of subjects related to the career fields of Risk Management, Insurance and Financial Planning, with emphasis on the professional educational requirement of these career fields.

**University Core**

English Composition (6 hours)
- EN 1103 English Comp I OR EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR EN 1173 Accelerated Comp II

Mathematics (9 hours)
- MA 1313 College Algebra
- MA 1613 Calculus for Business and Life Sciences I
- BQA 2113 Business Statistical Methods I

Science (6 hours)
- 2 Lab Sciences from University Core

Humanities (6 hours)
- See University Core

Fine Arts (3 hours)
- See University Core

Social/Behavioral Sciences (6 hours)
- PS 1113 American Government and 3 hours from University Core excluding: AEC and EC

**College Core**

BQA 3123 Business Statistical Methods II
- ACC 2013 Principles of Financial Accounting
- ACC 2023 Principles of Managerial Accounting
- EC 2113 Principles of Macroeconomics
- EC 2123 Principles of Microeconomics
- BL 2413 Legal Environment of Business
- BIS 3233 Intro to Management Info Systems
- FIN 3113 Financial Systems
- FIN 3123 Financial Management
- MKT 3013 Principles of Marketing
- MGT 3114 Principles of Management and Production
- GB 4853 Business Policy

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement
- BIS 1012 Intro to Business Information Systems

Writing Requirement
- MGT 3213 Organizational Communications

**Major Core**

3 hours International Elective (see advisor for options)
- INS 3103 Principles of Insurance
- INS 4503 Enterprise Risk Management

Choose 3 of the following:
- INS 3203 Property and Casualty Insurance
- INS 3303 Life and Health Insurance
- INS 3403 Financial Planning
- INS 3413 Intro to Personal Financial Planning
- INS 3503 Employee Benefits
- BL 3223 Law of Commercial Transactions
- BL 4233 Legal Theories of Risk Dist & Loss Allocation

Choose 2 of the following:
- ACC 4013 Income Tax I
- FIN 3723 Financial Markets
- FIN 4423 Investments
- MKT 4113 Personal Selling
- REM 3333 Principles of Real Estate

Non-business electives - 15 hours (see advisor for options)
Free electives - 4 hours

Total hours needed for major: **124**

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**GENERAL BUSINESS ADMINISTRATION (GBA)**

The curriculum in General Business Administration is designed for students who desire a general rather than a specialized program in business. GBA advisors are located in the COBI Academic Advising Center. Students are encouraged to make appointments with advisors, as they are not always available on a walk-in basis.

General Business Administration majors must complete 12 hours from one major area and 6 hours from two additional major areas selected from the list below, for a total of 24 hours.

- Accounting
- Information Systems
- Insurance
- Finance
- Marketing
- International Business
- Real Estate
- Legal Environ of Business
- Management
- Transportation
- Economics

**University Core**

English Composition (6 hours)
- EN 1103 English Comp I OR EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR EN 1173 Accelerated Comp II

Mathematics (9 hours)
- MA 1313 College Algebra
- MA 1613 Calculus for Business and Life Sciences I
- BQA 2113 Business Statistical Methods I

Science (6 hours)
- 2 Lab Sciences from University Core

Humanities (6 hours)
- See University Core

Fine Arts (3 hours)
- See University Core

Social/Behavioral Sciences (6 hours)
- PS 1113 American Government and 3 hours from University Core excluding: AEC and EC

**College Core**

BQA 3123 Business Statistical Methods II
- ACC 2013 Principles of Financial Accounting
- ACC 2023 Principles of Managerial Accounting
- EC 2113 Principles of Macroeconomics
- EC 2123 Principles of Microeconomics
- BL 2413 Legal Environment of Business
- BIS 3233 Intro to Management Info Systems
- FIN 3113 Financial Systems
- FIN 3123 Financial Management
- MKT 3013 Principles of Marketing
- MGT 3114 Principles of Management and Production
- GB 4853 Business Policy

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement
- BIS 1012 Intro to Business Information Systems

Writing Requirement
- MGT 3213 Organizational Communications

**Major Core**

3 hours International Elective (see advisor for options)
- INS 3103 Principles of Insurance
- INS 4503 Enterprise Risk Management

Choose 3 of the following:
- INS 3203 Property and Casualty Insurance
- INS 3303 Life and Health Insurance
- INS 3403 Financial Planning
- INS 3413 Intro to Personal Financial Planning
- INS 3503 Employee Benefits
- BL 3223 Law of Commercial Transactions
- BL 4233 Legal Theories of Risk Dist & Loss Allocation

Choose 2 of the following:
- ACC 4013 Income Tax I
- FIN 3723 Financial Markets
- FIN 4423 Investments
- MKT 4113 Personal Selling
- REM 3333 Principles of Real Estate

Non-business electives - 15 hours (see advisor for options)
Free electives - 3 hours

Total hours needed for major: **124**
Furniture Management Concentration (GBAF)

Program Coordinator & Academic Advisor: G. Stephen Taylor
Office: 3109 McCool Hall

The General Business Administration - Furniture Management Concentration prepares students for careers in furniture and related industries. In this unique program, students take general business coursework along with specialized classes in furniture production and interior design. They also have the opportunity to enhance their education with hands-on experience through participation in cooperative education or internships at many furniture companies throughout Mississippi and the nation.

Required courses are intended to provide students with managerial and technical skills needed for effective performance in the furniture industry. Elective courses can then be chosen to develop additional knowledge in areas of interest (for example, human resource management, production, marketing, or furniture design and construction). GBAF students take nine hours of Furniture electives to complete their furniture option. Appropriate upper-level business courses are then taken to develop business knowledge in areas of interest. In addition electives from other colleges may be chosen to build particular skills. (For a list of eligible courses, consult the GBAF advisor). Finally, to help students prepare for their career, students may engage in an internship or a cooperative education experience with a furniture manufacturer.

University Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Mathematics (9 hours)
- MA 1313 College Algebra
- MA 1613 Calculus for Business and Life Sciences I
- BQA 2113 Business Statistical Methods I

Science (6 hours)
- 2 Lab Sciences from University Core
- See University Core

 Humanities (6 hours)
- See University Core
- Fine Arts (3 hours)
- See University Core

 Social/Behavioral Sciences (6 hours)
- PS 1113 American Government
- 3 hours from University Core excluding: AEC and EC

College Core

- BQA 3123 Business Statistical Methods II
- ACC 2013 Principles of Financial Accounting
- ACC 2023 Principles of Managerial Accounting
- EC 2113 Principles of Macroeconomics
- EC 2123 Principles of Microeconomics
- BL 2413 Legal Environment of Business
- BIS 3233 Intro to Management Info Systems
- FIN 3113 Financial Systems
- FIN 3123 Financial Management
- MKT 3013 Principles of Marketing
- MGT 3114 Principles of Management and Production
- GB 4853 Business Policy

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement
- BIS 1012 Intro to Business Information Systems

Writing Requirement
- MGT 3213 Organizational Communications

Major Core

- 3 hours International Elective (see advisor for options)
- FP 1103 Wood Technology and Products
- FP 4223 Furniture Production I
- FP 4233 Furniture Production II
- MGT 3333 Field Studies in Entrepreneurship
- 6 hours Management Electives (see advisor for options)
- 6 hours Supporting Area Electives (see advisor)

Non-business electives - 10 hours (see advisor for options)

Free electives - 6 hours

Total hours needed for major: 124

General Business Administration Minor

A minor in General Business Administration will help non-business students prepare for entrance into the world of business. Students will become familiar with basic concepts and techniques necessary for analyzing business environments, making sound business decisions and planning one’s career. Academic advising is available in the Academic Advising Center, 221 McCool Hall.

A minimum of 21 hours must be taken to obtain a GBA minor. A minimum of 12 hours must be taken at MSU to receive the GBA minor.

Note that some choices require others as prerequisites.

ELECT SEVEN from:
- BL 2413 Legal Environment of Business
- ACC 2013 Principles of Financial Accounting
- ACC 2023 Principles of Managerial Accounting
- EC 2113 Principles of Macroeconomics
- EC 2123 Principles of Microeconomics
- FIN 3123 Financial Management
- MKT 3013 Principles of Marketing
- MGT 3114 Principles of Management and Production
- BIS 3123 Management Information Systems
- BQA 2113 Business Statistical Methods I
- BQA 3123 Business Statistical Methods II
- MGT 3413 Production Management

Department of MANAGEMENT
AND INFORMATION SYSTEMS

Major Advisor: Dr. Garry Smith
Office: 3103 McCool Hall

Students in the Department of Management and Information Systems may elect to major in either Management or Information Systems. Both majors offer excellent job opportunities and can help graduates to achieve their potential in business firms or other organizations.

MANAGEMENT (MGT)

Regardless of one’s chosen career, future responsibilities will very likely require a knowledge of management concepts. While an organization can acquire more capital, and technology becomes more common and cost-effective, the only true sustainable source of competitive advantage for an organization is people, and how these resources are managed. Management adds value by encouraging employee involvement, creativity, motivation and loyalty. A student may choose to take electives emphasizing human resource management or general management/entrepreneurship.

A student chapter of the Society for Human Resource Management (SHRM), the leading voice of the human resource profession, is active. SHRM provides education and information services, conferences, and seminars, government and media representation, online services and publications to more than 165,000 professional and student members throughout the world. As a student member of SHRM, you will learn about the “real world” of human resource management through publications and educational opportunities. You will also participate in activities that will build your knowledge of the HR field while helping you to develop valuable leadership and organizational skills.

The following course of study is designed to prepare the student for careers in the field of Management.

University Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Mathematics (9 hours)
- MA 1313 College Algebra
- MA 1613 Calculus for Business and Life Sciences I
- BQA 2113 Business Statistical Methods I

Science (6 hours)
- 2 Lab Sciences from University Core
The purpose of the Information Systems major is to prepare students to solve business problems where the solution normally involves the use of a computer. Thus, the student must have a strong foundation in computer concepts, systems analysis and design, programming and quantitative skills. Since the student will be expected to solve business-related problems, he/she must have a broad background and understanding of the business environment including such topics as accounting, economics, law, management, production, marketing, finance, and communications.

A student chapter of Association for Information Technology Professionals is active and provides students with the opportunity to keep abreast of current developments in the field of management information systems through professional speakers, social activities, and field trips.

**University Core**
- English Composition (6 hours)
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II
- Mathematics (9 hours)
  - MA 1313 College Algebra
  - MA 1613 Calculus for Business and Life Sciences I
  - BQA 2113 Business Statistical Methods I
- Science (6 hours)
  - 2 Lab Sciences from University Core
- Humanities (6 hours)
  - See University Core
- Fine Arts (3 hours)
  - See University Core
- Social/Behavioral Sciences (6 hours)
  - PS 1113 American Government and
  - 3 hours from University Core excluding: AEC and EC

**Institutional Electives**
- 3 hours from University Core excluding: AEC and EC

**Major Core**
- 6 hours Computer-related electives
- 6 hours Computer Science Engineering (CSE) electives

**Human Resources Emphasis**
- MGT 4523 Advanced Human Resource Mgt
- MGT 4543 Compensation Mgt
- MGT 4553 Collective Bargaining

**General Management/Entrepreneurship Emphasis**
- MGT 323 Entrepreneurship
- MGT 4533 Advanced Human Resource Mgt
- MGT 4543 Compensation Mgt
- MGT 4553 Collective Bargaining
- MGT 4613 Cross-Cultural Management

**Total hours needed for major:** 124
Department of MARKETING,
QUANTITATIVE ANALYSIS and BUSINESS LAW

Major Advisors: Professors Ronald Taylor and Cynthia Webster;
Associate Professors Brian Engelland, Melissa Moore and Rob Moore;
Assistant Professors Subra Chakrabarty, Jason Lueg
and Nicole Ponder-Lueg; Instructor Michael Goree
Office: 301 McCool Hall

This department offers major (Marketing) and two concentrations (Professional Golf Management and Transportation). In addition, the department offers marketing, quantitative analysis and business law courses to support other programs in the college and across campus.

MARKETING

Marketing consists of three significant interlocking activities: (1) understanding consumers along with their wants and unfulfilled needs; (2) developing improved products and services that meet the identified needs of consumers; and (3) communicating the benefits of the improved products and services through advertising, public relations, promotion and effective salesmanship. Courses offered within this unit prepare students to provide marketing leadership and assume a variety of career paths, including field sales, brand management, marketing communications, store management, procurement, logistics, and small business.

University Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Mathematics (9 hours)
- MA 1313 College Algebra and
- MA 1613 Calculus for Business and Life Sciences
- BQA 2113 Business Statistical Methods I

Science (6 hours)
- 2 Lab Sciences from University Core

Humanities (6 hours)
- See University Core

Fine Arts (3 hours)
- See University Core

Social Sciences
- PS 1113 American Government
  3 hours Introductory course in AN, PSY or SO

College Core

BQA 3123 Business Statistical Methods II
ACC 2013 Principles of Financial Accounting
ACC 2023 Principles of Managerial Accounting
EC 2113 Principles of Macroeconomics
EC 2123 Principles of Microeconomics
BL 2413 Legal Environment of Business
BIS 3233 Intro to Management Info Systems
FIN 3113 Financial Systems
FIN 3123 Financial Management
MKT 3013 Principles of Marketing
MGT 3114 Principles of Management and Production
GB 4853 Business Policy

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement
- BIS 1012 Intro to Business Information Systems

Writing Requirement
- MGT 3213 Organizational Communications

Major Core

3 hours International Elective (see advisor for options)

- MKT 4413 Consumer Analysis and Behavior
- MKT 4533 Marketing Research
- MKT 4813 Marketing Management

Choose four of the following:
- MKT 3213 Retailing
- MKT 4113 Personal Selling
- MKT 4123 Advertising
- MKT 4213 Internet Marketing

Non-business electives - 13 hours (see advisor for options)

Free electives - 6 hours (see advisor for options)

Total hours needed for major: 124

** To be selected with the advice and approval of advisor

A Marketing minor is offered to both Business and Non-Business students. A minor in Marketing is attained by taking the following courses: MKT 3013, MKT 4413, and four from MKT 3213, MKT 3933, MKT 4113, MKT 4123, MKT 4413, MKT 4213, MKT 4533, MKT 4613 or TR 4313. Students interested in this minor should contact a Marketing advisor.

Professional Golf Management Concentration

Director: Dr. Stephen A. LeMay
Office: 350 McCool Hall; Phone: 662-325-3161

The Professional Golf Management Program (PGM) is the second oldest PGM program sanctioned by the Professional Golfer’s Association of America (PGA). The Program prepares graduates for careers as Class A PGA Professionals at country clubs, resorts, and public golf facilities. The PGA Program is a demanding four and one half year curriculum. The PGA Professional must have a broad assortment of marketing, management and other business-related abilities to be effective in the golf profession today.

The program leads to a bachelor’s degree in business administration with a major in marketing. In addition to the requirements for a degree in marketing, students must complete courses in turf management, food management, landscape architecture, human resource management; and all PGA PGM requirements. Students must also complete a minimum of 16 months (five semesters) of co-op under the guidance of the MSU Cooperative Education Program. These work experiences are under the tutelage of Class A PGA Professionals throughout the country. Students are required to be continuously enrolled at MSU as full-time students or in the MSU Cooperative Education Program according to their co-op schedule. Those who complete the program thus earn a prestigious degree and reach the threshold of PGA Class A membership.

PGA Certification. PGA Class A certification (membership) requires: completion of all PGM academic and co-op requirements; passing the PGA playing ability test; and completion of all PGA PGM requirements.

PGM Graduation Requirements. Students must complete the last semester in school (not on co-op). They must also pass PGA Playing Ability Test and complete all three levels of the PGA PGM training program.

PGM Admission Procedures. The PGM Program has a limited enrollment. The current enrollment limit is 250; however, this number is subject to decrease based on the placement outlook and PGM and Co-op budget constraints. The number of students admitted each year is determined by graduation and attrition of the previous year. Students are admitted once per year for entrance in the fall semester. The deadline for completed applications is May 1 each year.

Entrance Requirements

Freshmen:
- Meet MSU regular admission requirements
- Have a USGA Handicap of 8 or less

Transfer Students:
- 2.75 GPA with maximum of 64 applied semester hours
- Have a USGA Handicap of 8 or less

Non-Citizen:
- The MSU PGM Program is sanctioned by PGA of America to educate and train graduates to become PGA Members. Admission to the MSU PGM Program is restricted to students who are U.S. Citizens or Resident Aliens.

University Core
- See Marketing Requirements

College Core
- See Marketing Requirements

College Core
Major Core
- MKT 2211 PGM Level I Seminar
- MKT 2221 PGM Level II Seminar
- MKT 3213 Retailing
- MKT 4413 Consumer Analysis & Behavior
- MKT 4533 Marketing Research
- MKT 4235 Golf Merchandising Management
- MGT 3513 Intro to Human Resource Mgt
- FSH 3283 Foodservice Systems
- PSS 4414 Turf Management
- LA 3603 Design of the Golf Environment
- 3 hours International Elective (see advisor for options)

Non-business electives - 3 hours (see advisor for options)

Total hours needed for major: 124

Co-op Work

PGM students must complete a minimum of 16 months (five semesters) of co-op work with Class A PGA professionals at country clubs, public golf courses, golf resorts, or other golf facilities. A 2.50 cumulative GPA on all work and on all work at MSU are required in order to participate in the PGM co-op program.

PGA PGM

PGM students will complete all PGA PGM requirements including testing, which will be conducted on the Mississippi State University campus by officials of the PGA. An initial lab fee and a semester lab fee is charged students each semester on campus to cover the PGA PGM seminars, tests, workshops and playing privileges at the MSU Golf course. A typical schedule of classes and co-ops are as follows:

FRESHMAN YEAR
- Fall: School - 16 hours
- Spring: School - 16 hours
- Summer: Co-op

SOPHOMORE YEAR
- Fall: School - 17 hours
- Spring: School - 16 hours
- Summer: Co-op

JUNIOR YEAR
- Fall: Co-op
- Spring: School - 18 hours
- Summer: School - 12 hours

SENIOR YEAR
- Fall: School - 18 hours
- Spring: Co-op
- Summer: Co-op
- Fall: School - 15 hours (Graduation)

Transportation Concentration

Transportation continues to play a major role in the national and international economy. As businesses continue to focus on logistics and transportation improvements, job opportunities for graduates in the transportation concentration increase. The curriculum in the transportation concentration will acquaint the student with the issues, perspectives, and techniques associated with transportation and logistics theory and practice. It offers in-depth treatment of distribution, supply, warehousing, inventory control, and operations in the modes of transportation.

University Core
See Marketing Requirements

College Core
See Marketing Requirements

Major Core
- 3 hours International Elective (see advisor for options)
- TR 3323 International Logistics
- TR 4233 International Transportation
- TR 4313 Physical Distribution Management
- TR 4333 International Supply Chain Management
- MKT 4413 Consumer Analysis and Behavior
- MKT 4533 Marketing Research
- MKT 4813 Marketing Management

Non-business electives - 13 hours (see advisor for options)

Free electives - 6 hours

Total hours needed for major: 124

THE B.B.A. as a DOUBLE DEGREE and as a SECOND BACCALAUREATE DEGREE

A double degree is available in the College of Business and Industry for students pursuing a professional degree in a non-business area or accounting field at MSU. These programs require that a student satisfy the normal graduation requirements in the non-COBI area first, as well as the following work. The required graduation grade point average in upper business course work is 2.50. Students are not allowed more than two D’s in upper level business courses. Students must apply for and confirm both degrees at the same time. Students must establish a double degree record in the COBI Academic Advising Center in 221 McCool.

The second degree curriculum is available to students who hold a baccalaureate degree in any non-business or accounting field of study from a regionally accredited institution. The combination of the first degree and the following second degree program must include the current university core courses and the courses listed below. A minimum of 32 semester hours upper business work must be earned in residence at Mississippi State University after the first degree has been conferred. Students must establish a second degree record with the COBI Academic Advising Center.

Required Courses

- ACC 2013 Prin of Financial Accounting
- ACC 2023 Prin of Managerial Accounting
- BIS 1012 Intro Business Computer Systems
- BIS 3233 Management Information Systems
- BL 2413 Legal Environment of Business
- BQA 2113 Business Statistical Methods I
- BQA 3123 Business Statistical Methods II
- EC 2113 Prin of Macroeconomics
- EC 2123 Prin of Microeconomics
- FIN 3113 Financial Systems
- FIN 3123 Financial Management
- MGT 3114 Principles of Management
- MGT 3213 Organizational Communications
- MKT 3013 Principles of Marketing
- 3 hours International Elective
- GB 4853 Bus Policy (Graduating Semester only)

Major Courses: 21+ hours

Total: 69+ hours

PREPARATION for the STUDY of LAW

Major Advisors: Professors James A. Bryant and William D. Eshee;
Associate Professor Pearson Liddell
Office: 301 McCool Hall

Each year a number of graduates of the College of Business and Industry enter law school. Although there is no formal pre-law curriculum, most law schools advise pre-law students to seek a wide background of study. The curriculum in the College is good preparation for the study of law because it offers the opportunity to study the arts, the humanities, science, and mathematics, in addition to business and economic disciplines which constitute the background for understanding the study of most legal problems. Because many areas of law practice deal with business, a background in business is very useful to the practicing attorney. In addition, if a person should decide not to pursue a legal career, there are many opportunities available in business. A professor of business law—in-law advisor—is available for providing information about the legal professional, assistance in choosing courses, and guidance concerning law school admissions.
**GRADUATE PROGRAMS in BUSINESS ADMINISTRATION**

Barbara Spencer, Director of Graduate Studies in Business and Professor of Management
Office: 247 McCool Hall

The College of Business and Industry offers six graduate programs in business administration, namely, the Master of Business Administration (MBA), The Master of Science in Information System (MSIS), the Master of Science in Business Administration (MSBA) with a major in Finance, Master of Professional Accountancy (MPA), Master of Taxation (MTX), and the Doctor of Philosophy in Business Administration (Ph.D.). An M.A. in Economics and a Ph.D. in Applied Economics are additional graduate programs offered in the College.

Admission requirements for graduate programs in business include an acceptable history of previous academic work and a satisfactory score on the Graduate Management Admission Test (GMAT). Required background for admission to graduate course-work includes a general knowledge of the functions of business, introductory calculus, statistics, and proficiency in computer usage.

Details concerning these graduate programs can be found in the Graduate Bulletin. Students who are interested in pursuing any of these programs should communicate with the Director of Graduate Studies in Business, P. O. Box 5288, Mississippi State, MS 39762. For further information, call 662-325-1891.
College of Education

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GENERAL INFORMATION
The faculty of the College of Education is committed to fulfilling the following three major functions: (1) to provide undergraduate and graduate professional preparation for teachers, administrators, school service personnel, and others who assume education-related positions in settings other than schools; (2) to collaborate with school personnel, educational agencies, professional groups, and others interested in the evaluation and improvement of educational opportunities, programs, and services; and (3) to promote and conduct experimental and other research studies designed to improve educational practice and to advance educational theory.

Non-teaching concentrations are also available in educational psychology, fitness management, industrial technology, sports communication, office systems and technologies, and trade and technical studies.

In addition to being accredited by the National Council for Accreditation of Teacher Education and the Southern Association of Colleges and Schools, the College of Education is a member of the American Association of Colleges and Teachers of Education. It is the objective of this College to provide excellence in education while at the same time exhibiting a friendly attitude toward students. The teacher education programs are approved by the Mississippi State Department of Education, thereby enabling graduates to satisfy the certification requirements for the State of Mississippi.

ADMINISTRATIVE ORGANIZATION
The College of Education consists of five departments: Counseling, Educational Psychology, and Special Education; Curriculum and Instruction; Kinesiology; Music Education; and Instructional Systems, Leadership, and Workforce Development.

Counseling, Educational Psychology, and Special Education.
The Department of Counseling, Educational Psychology, and Special Education prepares individuals at the undergraduate and graduate levels to function in a variety of professional settings that include K-12 schools, community counseling centers, human services agencies, business settings, rehabilitation agencies, community colleges, four-year colleges, and universities. The department offers the Bachelor’s degree, Master of Science degree, Educational Specialist Degree, the Doctor of Education, and the Doctor of Philosophy degree. Special areas of interest in the department are psychometry, educational psychology, school psychology, special education, community counseling, school counseling, vocational rehabilitation counseling, college counseling, and student affairs administration in higher education.

Curriculum and Instruction. This department is responsible for instruction in all professional courses of a general nature, and in professional courses that deal specifically with teaching in Elementary Education and in the secondary fields of English language arts, social studies, mathematics, science, foreign languages, and speech. In addition to organizing and administering the curricula for educating teachers in the fields of elementary education and secondary education, the department is responsible for the direction and immediate supervision of trainees in these fields.

Through the Department of Curriculum and Instruction, the Bachelor of Science, Master of Science, Master of Arts in Teaching, Educational Specialist, Doctor of Education, and Doctor of Philosophy degrees are offered. The department also offers areas of emphasis in elementary and secondary education for the Educational Specialist degree and in elementary and secondary education for the Doctor of Education and the Doctor of Philosophy degrees.

Kinesiology. This department offers the Bachelor of Science degree in Physical Education with concentration areas in Fitness Management, Clinical Exercise Physiology, Sports Communication, and Teaching/Coaching.

Music Education. This department offers the Bachelor’s degree in Music Education, with concentrations in Vocal and Instrumental Music Education. The Maroon Band and the University chorus, both of which are university-wide organizations, are integral parts of this department. The department also offers a Bachelor of Arts degree in Music for non-teaching majors.

Instructional Systems, Leadership, and Workforce Development.
Mississippi State University is a designated institution for the preparation of vocational-technical education personnel. State and federal funds are made available, through cooperation with the State Office of Vocational and Technical Education, for the partial support of the program.

It is the responsibility of the Department of Instructional Systems, Leadership, and Workforce Development to provide teacher/coordinator/administrator preparation in vocational areas including adult, business, industrial arts, and trade and technical studies. The department also provides undergraduate preparation of personnel interested in the following occupations: industrial technology and information technology services. Job opportunities in these areas are very promising.

The Master of Science degree is offered in Technology and in Workforce Educational Leadership. The department also offers an area of emphasis in Technology for the Educational Specialist, Doctor of Education, and Doctor of Philosophy degrees. The Master of Science in Instructional Technology degree is offered. This computer-based instructional technology program of study meets the educational needs of persons who have personal and professional interests in planning for and utilizing technology.

In addition, the department provides programs in Educational Leadership. Programs are designed to prepare administrators, supervisors, teachers, and other educational personnel for positions of leadership in: (1) school district offices; (2) elementary, middle, or secondary schools; and (3) community college administrative positions. The department offers the Master of Science degree, the MAT in Community College Teachings, the Educational Specialist degree, the Doctor of Education and Doctor of Philosophy degrees.

SERVICES
The Learning Center. The Learning Center (TLC) is an academic support unit for students, staff, and faculty at Mississippi State University whose primary purpose is to help students achieve and maintain successful academic standing. Through courses and tutoring in TLC, students are encouraged to acquire valuable study habits by assistance with proven strategies that help them develop into more effective and efficient learners. Some specific areas of service are reading comprehen-
sion and rate, vocabulary development, spelling, grammar, composition, mathematics, conversational English, time management, note taking, assessment of current study habits and learning styles, as well as assistance with preparation for professional examinations. In addition, The Learning Center assists in orientation and transfer students in orientation to the university.

The Learning Center has a state-of-the-art teaching computer laboratory, housed in the College of Education, as well as a general computer lab available to students, faculty and staff. With prior scheduling, technical assistance and short courses are provided in the Learning Center in relation to all materials, equipment, and technology needs. The Learning Center makes available and assists in the preparation of instructional resource materials and provides selected multimedia equipment for classroom use. For further information, see The Learning Center in Part I of this bulletin.

The Rehabilitation Research and Training Center on Blindness and Low Vision. The Rehabilitation Research and Training Center on Blindness and Low Vision is the only national center that focuses on increasing the employability of persons who are blind or severely visually impaired.

Teaching Internship. Partner School Districts in proximity to Mississippi State University are used to provide practicum and teaching internship laboratory experiences for those enrolled in the teacher education program. Such experiences are supervised jointly by the faculties of the K-12 schools and the faculty of the College of Education.

Early Childhood Institute. The Early Childhood Institute is dedicated to providing leadership in improving the quality of the care and education of children from pre-kindergarten through third grade. The institute is committed to working with local and state agencies to build community and school partnerships that focus on family involvement in children’s education.

Center for Educational Partnerships. This Center’s mission is to provide educational outreach services to the public schools of Mississippi. Services include, but are not limited to, curriculum development, technical consultation, and educational research. The Center provides assistance to public schools through the following units: Writing / Thinking Institute, Mississippi World Class Teaching Program, America Reads, The Program of Research and Evaluation for Public Schools (PREPS), and the Educational Design Institute.

REQUIREMENTS

for Teacher Education Students

A four-phase admission procedure is designed to assure a logical progression through the total professional teacher education process.

Enrollment in the College of Education (Phase I - pertains to Teacher Education majors in the College of Education only): Phase I identifies students who have enrolled in Teacher Education programs prior to being admitted into Teacher Education. This early identification will provide the necessary counseling, screening, and advising for students aspiring to become teachers. To enroll in the College of Education, students must be admitted to Mississippi State University; hold an appointment with an assigned advisor in the College of Education and become familiar with the current College of Education Undergraduate Handbook, curriculum check sheet, and the current university catalog; select a major within a department that has a basic teacher preparation program; and complete Phase I (enrollment in the College of Education) Admission Form for Teacher Education Majors with their faculty advisors. The student must meet with the advisor to complete the phase form. The faculty advisor is responsible for submitting this form to the office of the Dean of the College of Education.

Admission to Teacher Education (Phase II - including Teacher Education majors in the College of Agriculture and Life Sciences and the College of Arts and Sciences): To be admitted to teacher education and enroll in upper level professional education courses, students must complete Phase II by achieving a minimum of 44 semester credit hours (excluding developmental, remedial or intermediate courses) with a 2.5 GPA and a 2.5 overall GPA. (A minimum of 44 semester credit hours general education core with a 2.75 GPA is required for Elementary Education majors.) Students in Teacher Education programs must have a “C” or better in all professional education courses, in all courses in their academic major and concentration areas, and completed no more than half of their hours at a community college, satisfied residence requirements, and have a 2.0 overall GPA at Mississippi State University.

The student must also submit two letters of recommendation from the organization where the student worked or volunteered.

It is important that students keep the originals of their Praxis I test scores in a safe place since they will be required to show these originals to their faculty advisor in order to be admitted into Teacher Education. Students should request that ETS send a copy of their scores to Mississippi State University (Code R1480). Students attending the Meridian campus should have their scores sent to both Mississippi State University (Code R1480) and the Meridian campus (Code R3336). Students are encouraged to take the PRAXIS I exam by the end of the second semester of their freshman year.

Students should begin the application to teacher education during preregistration or orientation. Confidential recommendations must be sent to the Dean of the College of Education, P. O. Box 9710, Mississippi State, MS 39762. The Dean’s office will issue admission cards within five days after admission approval. All students must satisfy Phase II requirements before registering for upper level professional education courses. The Admission to Teacher Education card will admit students to professional sequence courses. Instructors of professional education courses will check for verification that students have been officially admitted to Teacher Education. Students who have not been admitted to Teacher Education may not register for restricted professional education courses. The student must meet with the advisor to complete the phase form. The faculty advisor is responsible for submitting the Phase II form to the Dean’s office, 309 Allen Hall.

Admission to Teaching Internship (Phase III - including Teacher Education majors in the College of Agriculture and Life Sciences and the College of Arts and Sciences): A student must complete Phase III by submitting an Application for Teaching Internship form to the Director of Clinical/Field-Based Instruction and Licensure one semester prior to teaching internship. To be eligible for teaching internship, the student must have been admitted to Teacher Education, obtained a minimum of a 2.5 GPA in the major teaching field or concentration, and maintained an overall GPA of 2.5 or higher at the time of application. Final eligibility (2.5 GPA in major and 2.5 GPA overall) is determined through screening at the end of the semester prior to teaching internship. The student must also have completed all professional education and methods courses with a minimum grade of “C” prior to teaching internship.

No course work other than the 15 teaching internship/semester hours can be taken during the teaching internship semester.

Students seeking a degree in Teacher Education and an educator license are expected to schedule teaching internship during the last semester of the senior year. As a general rule, graduate students seeking admission to teacher education and teaching internship are expected to meet the same requirements as undergraduate students prior to their teaching internship experience. All student teacher placements and other communications with local schools are directed through the Office of Clinical/Field-Based Instruction and Licensure.

Exit Requirements (Phase IV): To be eligible for graduation, students in Teacher Education programs must have a “C” or better in all professional education courses, all courses in their majors and concentration areas, and completed no more than half of their hours at a community college, satisfied residence requirements, and have a 2.0 overall GPA at Mississippi State University.

For more detailed information about teacher admission procedures, see the current College of Education Undergraduate Handbook. (www.educ.msstate.edu) Application forms are available in the student’s academic department and in the office of the Dean of the College of Education (Allen 309).

TEACHER EDUCATION POLICIES

“D” Policy. Students in Teacher Education must make grades of C or better in all professional education courses, in all courses in their academic major and concentration areas, in freshman composition, and algebra (or higher math). All other majors should check with their advisors for the policy for non-teaching majors.

Probation/Dismissal for Teacher Education Students. After the completion of 60 hours, Teacher Education students (admitted or admitted) whose overall GPA falls below 2.50 will be placed on academic probation. This policy refers to transfer students as well. Teacher Education students whose GPA is below 2.50 after a semester of probation will be dismissed from teacher education. If their GPA later improves to 2.5, they may re-enroll or reappear for admission.
TEACHER LICENSURE

In accordance with statutory provisions, the Mississippi Department of Education, Jackson, Mississippi, has adopted the rules and regulations on issuing and renewing teaching licenses which are set forth in the guidelines for Mississippi Educator Licensure, August 2001. The licensure program is applicable to all teacher licenses. Satisfactory completion of any teaching curriculum offered by the College of Education will enable the graduate to apply for a teaching license in Mississippi, but this institution can neither waive any licensure requirements nor authorize substitutions for mandatory courses. Mississippi State University has submitted and received approval for its programs. Consequently, students who plan to transfer from other universities or another college to the College of Education should consult with the Director of Clinical/Field-Based Instruction and Licensure or an advisor in the College of Education to ascertain the general education, professional education, and specialization education courses which must be completed to obtain a teaching license in the field or fields of their choice. Since teacher licenses are issued by the Mississippi Department of Education only and not by the teacher education institutions, applications for licensure and original test scores must be filed with the Mississippi Department of Education by the applicant. Information concerning teacher licensure can be obtained from the Office of Clinical/Field-Based Instruction and Licensure.

As part of securing a Mississippi teacher’s license, students must have taken the Principles of Learning and Teaching (PLT) test, the Specialty Area test and attained the required minimum scores. Students must request that ETS send a copy of their scores to Mississippi State University (Code R1480). Students attending the Meridian campus should have their scores sent to both Mississippi State University (Code R1480) and to the MSU Meridian campus (Code R3336). It is very important that students keep the originals of all their test scores in a safe place since they will need the originals of these scores when they apply for a Mississippi educator’s license.

CRIMINAL RECORDS BACKGROUND CHECKS for PUBLIC SCHOOL EMPLOYEES

Mississippi Senate Bill 2658 requires school districts to conduct Criminal Records Background Checks of all new employees. Under Senate Bill 2658, “a student teacher is not required to be fingerprinted and checked because a student teacher is not an employee of the school district. However, a student teacher may be checked at the discretion of the local school district.”

STUDENT CODE of CONDUCT VIOLATIONS

Any violations of the Mississippi State University Student Code of Conduct as delineated in the student handbook, The Bulldog, and at http://www.msstate.edu/dept/students/doas.htm, including academic misconduct, may place completion of the student’s degree/licensure program in jeopardy.

CURRICULA

Organization. All curricula in the College of Education are organized on the lower- and upper-division basis. The lower division consists of the first two years and corresponds to the community college level. The upper division consists of the last two years, normally the junior and senior years.

Selection of Teaching Fields. Students who enroll in the teacher education program in the College of Education are expected to pursue a program of work which will enable them to qualify for a teaching license in the field of their choice.

Degree Program Modifications. Because of forthcoming changes in teacher licensure requirements, COE degree programs and concentrations in teacher education will be modified. Appropriate programmatic changes for graduation, licensure, and accreditation will be made as this process evolves. These teacher education program changes will become applicable as students are officially admitted to programs and/or as new graduation requirements are adopted. For updated degree program modifications, please check with your departmental office.

Sequence of Courses. Students should schedule their courses in consultation with their faculty advisor.

Directed Individual Study Courses. A directed individual study course is an experience designed to further the educational and/or career development of an individual that is equal to or greater than the equivalent for a regularly scheduled course. This experience should be used only in special circumstances as deemed appropriate by the faculty coordinator, student’s advisor, and department head. Unless otherwise designated by the student’s advisor and department head, the experience shall be limited to 3 credit hours of undergraduate work. Every student should make an agreement with the faculty of record to fulfill the course objectives and outcomes specified in the course syllabus. This policy applies to students entering MSU Fall 2001 and thereafter.

Degree Programs in Education

Master’s Degrees. The following departments within the College of Education offer curricula leading to the degree of Master of Science in education: Counseling, Educational Psychology, and Special Education; Curriculum and Instruction; Kinesiology; Instructional Systems, Leadership and Workforce Development. You should check with specific departments for information on the concentrations offered by these departments. The Master of Arts in Teaching is offered for secondary teachers by the Department of Curriculum and Instruction and for Community College Teachers by the Department of Instructional Systems, Leadership, and Workforce Development.

Educational Specialist Degree. The Educational Specialist degree is a planned program of a minimum of 30 semester hours above the Master’s degree under the direction of a major advisor. It is designed to broaden leadership training by providing courses in other fields and disciplines supplementary to the basic core in the major field. It is offered with program emphases in Agricultural and Extension Education, Counselor Education, Elementary Education, School Administration, School Psychology, Secondary Education, Special Education, and Technology.

Doctoral Degrees. The Doctor of Education and Doctor of Philosophy degree programs are offered with program emphases in Agricultural and Extension Education, School Administration, Counselor Education, School Counseling, Technology, Elementary Education, Secondary Education, Curriculum and Instruction, and Community College Leadership. Minors may be taken in various related disciplines.

For more information on graduate programs in Education, see the Graduate Bulletin. A copy may be secured by writing to the Office of Office of Graduate Studies, P.O. Box 39, Mississippi State, Mississippi 39762.

College of Education Conceptual Framework

All programs in the College of Education at Mississippi State University use a conceptual framework involving four specific areas of study: General, Professional/Pedagogical, Specialty, and the World of Practice studies. Each of these areas of study builds upon the development of educators/professionals who are dedicated to the continual improvement of their own as well as their students’ educational experiences at all academic levels.

Undergraduate programs incorporate the essential characteristics of an effective educator/professional stated in the conceptual framework: knowledge, collaboration, reflection, and practice. Graduate programs emphasize research, reflection, and performance-based outcomes. Candidates’ abilities to use technology and to work with diverse populations are important skills addressed in the Conceptual Framework and fostered in all undergraduate and graduate education programs in the College of Education.
Department of COUNSELING, EDUCATIONAL PSYCHOLOGY, and SPECIAL EDUCATION

Major Advisor: Thomas Hosie
Office: 508 Allen Hall

The Department of Counseling, Educational Psychology, and Special Education prepares individuals at the undergraduate and graduate levels to function in a variety of professional settings that include K-12 schools, community counseling centers, human services agencies, business settings, rehabilitation agencies, community colleges, four-year colleges, and universities. The department offers the Bachelor’s degree, Master of Science degree, the Educational Specialist degree, the Doctor of Education, and the Doctor of Philosophy degree. Special areas of interest in the department are psychometry, educational psychology, school psychology, special education, community counseling, school counseling, vocational rehabilitation counseling, and student development counseling in higher education.

1. Undergraduate Degree. The B.S. degree in Educational Psychology is a non-teaching option. This program provides students with a general background of psychological topics and principles as they relate to education. Additionally, students complete an emphasis or a minor. Students who enroll in this program pursue a diversity of careers. Some of the vocational areas for which this program can prepare students are as follows: child care centers, seminary, the armed services (ROTC students), business settings, mental health agencies, and graduate work in counselor education, educational psychology, and school psychology. Students majoring in Educational Psychology have to earn a grade of “C” or better on all courses in the 43 hour curriculum.

   The B.S. Degree in Special Education is a teacher preparation program, which prepares individuals to teach children and youth with mental retardation, learning disabilities, and other exceptionalities. The program also enables graduates to attain endorsements in areas of specialization. Applicants must meet admission requirements and follow procedures for College of Education teacher majors. These regulations are provided in the beginning portion of The College of Education section of this Bulletin.

2. Graduate Degrees. The Department offers M.S., Ed.S., Ed.D., and Ph.D. degrees in Counselor Education with areas of emphasis in four concentrations: Community Counseling, Rehabilitation Counseling, School Counseling, and Student Affairs in Higher Education with a track in College Counseling and Student Affairs Administration. The department also offers M.S. and Ph.D. degrees in Educational Psychology and a Specialist degree in School Psychology. Preparation in Educational Psychology can be obtained in the concentration areas of School Psychometry and general Educational Psychology at the Master’s (M.S.) level; School Psychology at the specialist (Ed.S.) level; and in the areas of general Educational Psychology (college teaching) and School Psychology at the doctoral (Ph.D.) level. In addition, M.S. and Ed.S. Degrees are offered in the area of Special Education. Because of the increasing use of computer technology, students in all degree programs are strongly encouraged to acquire computer competency skills.

   3. Student Retention Procedures: Professions engaged in protection of the public health and welfare charge their members with the responsibility of monitoring potential new members. Therefore, the Counselor Education and Educational Psychology faculty believe a component of their responsibility to their students, their professions, and the eventual consumers of services provided by graduates, is the necessity to monitor not only students’ academic progress but also the personal characteristics of students that will affect their performance in therapy. These characteristics should be of a quality so as to NOT interfere with the students’ professionalism or helping capacity. Accordingly, the department has adopted a policy outlining student retention procedures. This policy is printed in the Department of Counselor Education and Educational Psychology Graduate Program Handbook.

   4. Financial Assistance for Graduate Students. A limited number of scholarships are available for master’s degree students in Rehabilitation Counseling. Many students hold assistantships in the Department, the Division of Student Affairs, the Office of Housing and Residence Life, the Bureau of Educational Research and Evaluation, and the Rehabilitation Research and Training Center on Blindness and Low Vision.

   Educational Psychology (EPY) (Non-teaching Option)

   University Core

   English Composition (6 hours)
   EN 1103 English Comp I OR
   EN 1163 Accelerated Comp I
   EN 1113 English Comp II OR
   EN 1173 Accelerated Comp II

   Mathematics (6 hours)
   MA 1313 College Algebra
   3 hours Math above College Algebra excluding:
   MA 1413, 1423, 1433

   Science (6 hours)
   BIO 1123 Animal Biology with lab
   3 hours Lab science from University Core

   Math/Science Elective (3 hours)
   Math above College Algebra excluding MA 1413, 1423, 1433

   Humanities (6 hours)
   3 hours History course
   3 hours Literature course

   Fine Arts (3 hours)
   See University Core

   Social Sciences (6 hours)
   SO 1003 Intro to Sociology
   3 hours University Core course excluding EPY prefixes

   Major Core

   PSY 1013 General Psychology
   EPY 2513 Human Growth & Development
   EPY 3543 Adolescent Psychology
   EPY 3503 Principles of Ed Psych
   EPY 3553 Giftedness and Creativity
   EPY 4033 Applied Learning Theory
   EPY 4053 Psych & Educ of Mentally Retarded
   EPY 4073 Personality Adjustment
   EPY 4214 Psych & Ed Statistics
   EPY 4313 Measurement & Evaluation
   COE 4023 Intro to Counseling
   EIX 3213 Psych & Ed of Excep Child
   EPY 4513 Research Methods in EPY
   PSY 3623 Social Psychology

   Human/Cultural Diversity Elective - choose one:
   SO 2203 Cultural and Racial Minorities
   SO 1203 Society and the Individual
   SO 1103 Contemp. Social Problems
   SO 3323 Contemporary Woman
   SO 3333 Society and Religion
   AN 2203 Cultural and Racial Minorities
   AN 3113 Societies of the World

   Oral Communication Requirement
   CO 1003 Fundamentals of Public Speaking

   Computer Literacy
   See advisor for computer literacy requirements.

   Writing Requirement
   EPY 3513 Writing in the Behavioral Sciences

   Additional Requirements
   3 hours History course
   3 hours Literature course

   General Electives*
   6-12 hours

   * In addition to the University and Major cores above, a choice of one emphasis (see below) and 6-12 hours of electives are required for the degree total to reach 124 hours.

   ** Note: Issues of entering grade point average and other requirements are being considered for admission into the Educational Psychology program for those students entering the program in the fall of 2003. Refer to the Department’s Undergraduate Handbook.
Corrections Emphasis

Required Courses
- COR 3103 The Criminal Justice System
- SO 2203 Cultural and Racial Minorities
- SO 3603 Criminology
- SO 4513 Correctional Systems
- SO 4233 Juvenile Delinquency

Electives - Choose two of the following:
- AN 4313 Human Identification
- SO 2203 Cultural and Racial Minorities
- SO 4503 Violence in the U.S.
- PS 4183 Judicial Process
- PSY 4213 Psychology of Abnormal Behavior
- PSY 4223 Drug Use and Abuse
- SW 4613 Child Welfare Services
- 6 hours Selected SO courses

Total hours needed for major: 124

Additionally, students are encouraged to complete the 12 hours of field work (COR 3310 and COR 3320) in order to receive the corrections certificate.

Human Development Child and Family Studies Emphasis

Required Courses
- HS 2803 Prenatal and Infant Development
- HS 2813 Child Development I
- HS 3803 Child Care Procedures
- HS 4803 Art of Parenting (Jr. Standing)
- HS 4853 The Family: A Transactional Approach

Electives - Choose two of the following:
- HS 4403 Introduction to Gerontology
- HS 3813 Child Development II
- HS 3823 Designing Child Programs
- HS 4333 Family Public Policy
- HS 4843 Family Interaction
- HS 4863 Consumer Aspects of Aging
- FNH 4253 Human Nutrition

Total hours needed for major: 124

Counselor Education Emphasis

Required Courses
- COE 3313 Rehabilitation Services
- COE 4903 Developmental Counseling and Mental Health
- COE 4013 Facilitative Skills Development
- COE 4743 Gender Issues in Counseling OR
- PSY 3203 Psychology of Gender Differences
- COE 4713 Issues in Aging OR
- PSY 4983 Psychology of Aging

Electives - Choose one of the following:
- EPY 4113 Behavioral and Cognitive Interventions
- COE 4363 Introduction to Sign Language
- PSY 3213 Psychology of Abnormal Behavior
- PSY 4223 Drug Use and Abuse
- COE 4353 Adapt Tech and Disability
- 3 hours Special Topics elective* or Peer Counselors**
- COE 4513 Paraprofessionals in Student Affairs**
- Other relevant courses may be added with advisor approval.

Total hours needed for major: 124

* Special Topics courses in a variety of subjects are offered periodically by the department and may satisfy this requirement. Consult advisor for approval of a Special Topics course.
** Requires application and invitation to participate.

Physical Education Emphasis

Required Courses
- PE 1223 Personal Health
- PE 4233 Biomechanics
- PE 3213 Emergency Health Care
- PE 3133 Adaptive Physical Education
- PE 3223 Motor Development
- PE 3303 Physiology of Exercise

Total hours needed for major: 124

Psychology with Applied/Industrial/Human Resource Emphasis

Required Courses
- PSY 3553 Motivation
- PSY 4253 Industrial Psychology
- MGT 3114 Principles of Management & Production
- MGT 3513 Intro to Human Resources Management
- MGT 3213 Organizational Communications I

Electives - Choose two of the following:
- MGT 3413 Production Management
- MGT 4543 Compensation Management
- MGT 4533 Advanced Human Resource Management
- MGT 4213 Organizational Communications II
- PSY 4123 Quant Techniques in Psy Using Computers

Total hours needed for major: 124

SPECIAL EDUCATION (EXED)

Major Advisors: Lynne Arnault, Kent Coffey, Sandy Devlin, and John Obringer; Licensure Advisor: Frank Elrod
Office: 310 Allen Hall

The program in Special Education is designed to prepare teachers to teach children and youth with mental retardation, learning disabilities, and other areas of exceptionality. The curriculum in special education is designed to meet the requirements for the endorsements in the areas of specialization.

Some students may wish to obtain licensure in the areas of special education and elementary education.

University Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Mathematics (6 hours)
- MA 1313 College Algebra OR
- MA 1303 Quantitative Reasoning
- 3 hours MA Elective (see University Core)**

Natural Science (6 hours)
- Natural Science w/lab (see University Core)
- Natural Science w/lab (see University Core)

Math/Science Elective (3 hours)
- 3 hours See University Core

Humanities (6 hours)
- 6 hours See University Core

Fine Arts (3 hour)
- 3 hours See University Core

Social/Behavioral Sciences (6 hours)
- PSY 1013 General Psychology
- 3 hours Social/Behavioral Elective (see University Core)

Elective (3 hours)
- 3 hours See University Core

Major Core
- EDF 4243 Planning for the Diversity of Learners*
- EDF 3333 Social Foundations of Education
- EPY 2513 Human Growth and Development
- EPY 3253 Evaluating Learning*
- EPY 4053 Psychology of the Mentally Retarded
- RDG 3113 Foundations of Literacy*
- EDX 3203 Intro to Learning Disabilities
- EDX 3213 Psychology of Exceptional Child
- EDX 3223 Intro to Emotional/Behav Disorder
- EDX 3233 Contingency Management
- EDX 4113 Diagnostic/Pres Methods for Early-Age*

* Residence Hall advisors only.
EDX 4123 Diag/Pres Methods for Elementary Students*
EDX 4133 Diag/Pres Methods for Secondary Students*
EDX 4353 Assist Tech in Special Education
EDX 4413 Working with Parents
EDX 4887 Internship in EXED*  
EDX 4898 Internship in EXED*  
PE 3213 Emergency Health Care
15 hours 5 Collateral Core Electives
3 hours Reading Elective*

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement
Satisfied by successful completion of EDX 4353, 4413 and 4133

Writing Requirement
Satisfied by successful completion of EDX 4353, 4413 and 4133

Total hours needed for major: 123

* Requires admission to Teacher Education.
** If MA 1113 is taken, MA 1123 must be also taken. If a course in math higher than College Algebra is elected, the student must choose one additional math or science course.

Department of CURRICULUM and INSTRUCTION

Interim Department Head: Professor Linda Coats  
Office: 310 Allen Hall

Please refer to “Degree Program Modifications” statement located under “CURRICULA” in the College of Education section of this catalog.

This department offers curricula in Elementary Education (pre-school, elementary, and middle school), and in the academic areas of high school teaching (English, foreign language, mathematics, science, social studies, and speech).

ELEMENTARY EDUCATION (ELED)

Major Advisors: Devon Brenner, LeAnne Campbell, Terry Jayroe, Margaret Pope, Debra Prince, Jeanne Swafford, Nicole Thompson, Renarta Tompkins and Nancy Verhoek-Miller  
Office: 310 Allen Hall

The Elementary Education program is designed to prepare teacher candidates and encourage the professional development of teachers and other school personnel. The undergraduate program prepares students for certification in Elementary Education through coursework and experiences that focus on subject matter knowledge, foundations of education, pedagogy and practice, and field experiences in pre-K through 8th grade classrooms. The junior year includes two mini-blocks of courses: one that emphasizes teaching of early childhood (pre-K – 3rd grade), and one that emphasizes teaching at the middle levels (grades 4-8). The senior year includes the senior methods block – four co-requisite courses with extensive field experiences that prepare graduates for the teaching of subject matter. The Elementary Education curriculum culminates in the teaching internship, a semester-long field experience in public schools. Persons interested in an Elementary Education degree are advised to obtain a copy of the advising worksheet, available in 310 Allen Hall or from any elementary education advisor.

Programs offered on the graduate level include the Master of Science Degree, Educational Specialist, and the Doctor of Education and Doctor of Philosophy Degrees.

University Core

Educational Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Mathematics (12 hours)
MA 1313 College Algebra
MA 1413 Structure of Real Number System
MA 1423 Problem Solving & Real Numbers
MA 1433 Informal Geometry & Measurement

Science (6 hours)
BIO 1001 Biological Laboratory
BIO 1033 Biological Science
PH 1011 Physical Science Lab
PH 1013 Physical Science Survey

Humanities (6 hours)
EN Elective (see University Core)

Additional Core

People interested in an Elementary Education degree are advised to obtain a copy of the advising worksheet, available in 310 Allen Hall or from any elementary education advisor.

Total hours needed for major: 123

* Requires admission to Teacher Education.
** Two subject matter concentrations of 21 hours each are required. See advisor.
*** See advisor and Elementary Education advising worksheet for Early Childhood requirements.

SECONDARY EDUCATION

It is the purpose in the secondary education area to educate students to teach the academic subjects in grades 7-12, inclusive; to furnish professional courses and experiences for those desiring to teach the following subject areas; and to collaborate with the other schools of the University in matters of teacher education.

Licensure for a secondary education degree includes grades 7-12 in the following content areas; English, Speech, Foreign Language, Mathematics, Science, and Social Studies.

Through its graduate program in secondary education, including in-service education, the department furnishes additional professional courses and experiences for teachers, principals, supervisors, and superintendents; and offers consultative services to school boards and school systems in need of such services.

Degrees offered on the graduate level include Master of Education, Educational Specialist and the Doctor of Education and Doctor of Philosophy.
ENGLISH EDUCATION (ENED)
Major Advisor: Missy Hopper; Office: 310 Allen
The curriculum in English Language Arts is offered to prepare students to teach English Language Arts in high schools and middle schools. A minimum of 42 hours in English beyond freshman composition is required for a major.

University Core
English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II
Mathematics (6 hours)
MA 1313 College Algebra
ST 2113 Stats for Behav Sci or MA higher than Algebra
Science (6 hours)
BIO 1023 Plants and Humans
BIO 1123 Animal Biology with Lab
PH 1013 Physical Science Survey
PH 1011 Physical Science Lab
Math/Science Elective (3 hours)
See University Core
Humanities (6 hours)
HI 1063 Early US History
HI 1073 Modern US History
Fine Arts (3 hours)
3 hours See University Core
Social/Behavioral Sciences (6 hours)
PSY 1013 General Psychology
SO 1003 Intro to Sociology
Major Core
EDS 3411 Practicum in Secondary Ed
EDF 3333 Social Foundations of Ed
EDX 3213 Psych and Education of Except Child & Youth
RDG 3513 Developing Reading Strategies*
EDE 3343 Teaching Adolescent Lit*
EPY 3143 Human Development/Learning*
EDF 4243 Planning for the Diversity of Learners*
EPY 3253 Evaluating Learning*
EDS 3673 Secondary Lang Arts Education*
EDS 4673 Methods of Teaching Lang Arts*
EDS 4873 Sem in Managing Sec. Class*
EDS 4886 Teaching Internship in Second Ed*
EDS 4896 Teaching Internship in Second Ed*
Content Area
EN 2213 English Literature I
EN 2223 English Literature II
EN 2243 American Literature I
EN 2253 American Literature II
EN 2273 World Literature I OR
EN 2283 World Literature II
EN 2203 Intro to Literature
EN 3423 Descriptive English Grammar
EN 4503 Shakespeare I OR
EN 4513 Shakespeare II
EN 4413 History of English Lang OR
EN 4403 Intro to Linguistics
EN 4323 Lit Crit Plato to Present OR
EN 4353 20th Century Criticism
CO 1403 Mass Media OR
CO 1503 Theatre OR
EN 2434 Literature and Film
EN 3414 Advanced Comp OR
EN 3303 Creative Writing
6 hours EN Electives - 4000 level
Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking
Computer Literacy Requirement
Satisfied by successful completion of EDS 4673 and EDF 4243
Writing Requirement
Satisfied by successful completion of EN 3413 or EN 3303
Total hours needed for major: 124

FOREIGN LANGUAGE EDUCATION (FLED)
Major Advisor: William A. Person; Office: 310 Allen Hall
This curriculum is offered for the education of prospective teachers of foreign languages. A minimum of 32 semester hours in one language is required as the first teaching field. A second teaching field requires 18 hours in the second language.
Students should consult the Foreign Language Department if they have questions pertaining to courses in Foreign Languages.

University Core
English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II
Mathematics (6 hours)
MA 1313 College Algebra
3 hours MA higher than College Algebra (see Univ Core)
Science (6 hours)
BIO Science with lab (see University Core)
Physical Science with lab (see University Core)
Math/Science Elective (3 hours)
See University Core
Humanities (6 hours)
EN Lit Sequence (World, Eng or Am) See University Core
EN Lit Sequence (World, Eng or Am) See University Core
Fine Arts (3 hours)
See University Core
Social/Behavioral Sciences (6 hours)
PSY 1013 General Psychology
SO 1003 Intro to Sociology
Major Core
EDF 4243 Planning for Diversity of Learners*
EDF 3333 Social Foundations
EPY 3143 Human Development/Learning*
EPY 3253 Evaluating Learning*
EDX 3213 Psy & Ed of Exceptional Child
RDG 3513 Rdg Strat Second School*
EDS 3411 Practicum in Secondary Ed*
EDS 4673 Methods of Teaching Lang Arts*
EDS 4873 Sem in Managing Sec. Class*
EDS 4886 Teaching Internship in Second Ed*
EDS 4896 Teaching Internship in Second Ed*
Content Area
6 hours FLF/FLS/FLG or FLL w/lab
18 hours FLF/FLS/FLG or FLL
8 hours FLF/FLS/FLG or FLL (adv w/lab)
General Core
6 hours History Sequence (Western, World, US) see University Core
PS 1113 American Government
Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking
Computer Literacy Requirement
TKT 1273 Computer Applications or other approved course
Total hours needed for major: 123
* Admission to Teacher Education Required

* Requires admission to Teacher Education.
# Mathematics Education (MAED)

Major Advisor: Dana Franz; Office: 310 Allen Hall

This curriculum is offered for the education of prospective teachers of mathematics in grades 7-12. A minimum of 36 semester hours of mathematics is required.

## University Core

### English Composition (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>EN 1103</td>
<td>English Comp I OR</td>
</tr>
<tr>
<td>EN 1163</td>
<td>Accelerated Comp I</td>
</tr>
<tr>
<td>EN 1113</td>
<td>English Comp II OR</td>
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<tr>
<td>EN 1173</td>
<td>Accelerated Comp II</td>
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</tbody>
</table>

### Mathematics (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA 1713</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MA 1723</td>
<td>Calculus II</td>
</tr>
</tbody>
</table>

### Science (9 hours)

- 3 hours Biological Science w/lab (see University Core)
- 6 hours Physical Science (Calculus-based PH or CH 1213 or higher)

### Humanities (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI 1063</td>
<td>Early US History</td>
</tr>
<tr>
<td>HI 1073</td>
<td>Modern US History</td>
</tr>
</tbody>
</table>

### Fine Arts (3 hours)

See University Core

### Social/Behavioral Sciences (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 1013</td>
<td>General Psychology</td>
</tr>
<tr>
<td>SO 1003</td>
<td>Intro to Sociology</td>
</tr>
</tbody>
</table>

### Additional Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS 1113</td>
<td>American Government</td>
</tr>
</tbody>
</table>

6 hours EN Literature Electives (see University Core)

### Oral Communication Requirement

Satisfied by successful completion of EDS 3653

### Computer Literacy Requirement

Satisfied by successful completion of EDS 3653

### Writing Requirement

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>EDF 3413</td>
<td>Writing for Thinking</td>
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</table>

### Major Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 4243</td>
<td>Planning for Diversity of Learners*</td>
</tr>
<tr>
<td>EDF 3333</td>
<td>Social Foundations of Ed</td>
</tr>
<tr>
<td>EDS 3411</td>
<td>Practicum in Secondary Ed*</td>
</tr>
<tr>
<td>EDS 3213</td>
<td>Exceptional Child and Youth</td>
</tr>
<tr>
<td>EPY 3143</td>
<td>Human Development/Learning*</td>
</tr>
<tr>
<td>EPY 3253</td>
<td>Evaluating Learning*</td>
</tr>
<tr>
<td>RDG 3513</td>
<td>Developing Reading Strategies*</td>
</tr>
<tr>
<td>EDS 3633</td>
<td>Secondary Mathematics Edu*</td>
</tr>
<tr>
<td>EDS 4653</td>
<td>Methods of Teaching Science*</td>
</tr>
<tr>
<td>EDS 4873</td>
<td>Sem in Managing Sec. Class*</td>
</tr>
<tr>
<td>EDS 4886</td>
<td>Teaching Internship in Second Ed*</td>
</tr>
<tr>
<td>EDS 4896</td>
<td>Teaching Internship in Second Ed*</td>
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</tbody>
</table>

### Content Area

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA 2733</td>
<td>Calculus III</td>
</tr>
<tr>
<td>MA 2743</td>
<td>Calculus IV</td>
</tr>
<tr>
<td>MA 3053</td>
<td>Foundations of Math</td>
</tr>
<tr>
<td>MA/ST 3113</td>
<td>Intro to Statistical Inference</td>
</tr>
<tr>
<td>MA 3113</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MA 3163</td>
<td>Modern Algebra</td>
</tr>
<tr>
<td>MA 3253</td>
<td>Differential Equations I</td>
</tr>
<tr>
<td>MA 3463</td>
<td>Foundations of Geometry</td>
</tr>
<tr>
<td>MA 3513</td>
<td>History of Math</td>
</tr>
<tr>
<td>MA 4523</td>
<td>Intro to Probability</td>
</tr>
</tbody>
</table>

Total hours needed for major: 124

* Requires admission to Teacher Education.

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# Biology Education (BIED)

Major Advisors: Burnette Hamil; Office: 310 Allen Hall

The Biology Education Curriculum is designed in accordance with the recommendations of the National Science Teachers Association and the National Science Education Standards for prospective teachers at the secondary level (grades 7-12). Courses designed for nonscience majors will not count toward a degree in any area of science education.

## University Core

### English Composition (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>EN 1103</td>
<td>English Comp I OR</td>
</tr>
<tr>
<td>EN 1163</td>
<td>Accelerated Comp I</td>
</tr>
<tr>
<td>EN 1113</td>
<td>English Comp II OR</td>
</tr>
<tr>
<td>EN 1173</td>
<td>Accelerated Comp II</td>
</tr>
</tbody>
</table>

### Mathematics (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA 1313</td>
<td>College Algebra</td>
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</table>

### Science (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ST 3113</td>
<td>Intro to Statistical Inference</td>
</tr>
</tbody>
</table>

### Humanities (6 hours)

See University Core

### Fine Arts (3 hours)

See University Core

### Social/Behavioral Sciences (6 hours)

See University Core

### Major Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 4243</td>
<td>Planning for Diversity of Learners*</td>
</tr>
<tr>
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<td>Evaluating Learning*</td>
</tr>
<tr>
<td>EDS 3653</td>
<td>Secondary Science Ed.*</td>
</tr>
<tr>
<td>EDS 4653</td>
<td>Methods of Teaching Science*</td>
</tr>
<tr>
<td>EDS 4873</td>
<td>Sem in Managing Sec. Class*</td>
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<tr>
<td>EDS 4886</td>
<td>Teaching Internship in Second Ed*</td>
</tr>
<tr>
<td>EDS 4896</td>
<td>Teaching Internship in Second Ed*</td>
</tr>
<tr>
<td>RDG 3513</td>
<td>Develop. Reading Strategies*</td>
</tr>
<tr>
<td>PE 1223</td>
<td>Personal Health</td>
</tr>
</tbody>
</table>

### Content Area - choose 51 hours from the following:+

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BIO 1203</td>
<td>Plant Biology</td>
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<tr>
<td>BIO 1504</td>
<td>Principles of Zoology w/lab</td>
</tr>
<tr>
<td>BIO 2103</td>
<td>Cell Biology</td>
</tr>
<tr>
<td>BIO 3103</td>
<td>Genetics I or</td>
</tr>
<tr>
<td>BIO 4133</td>
<td>Human Genetics</td>
</tr>
<tr>
<td>BIO 3104</td>
<td>Ecology</td>
</tr>
<tr>
<td>BIO 3304</td>
<td>General Microbiology</td>
</tr>
<tr>
<td>BIO 3504</td>
<td>Comparative Anatomy</td>
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<tr>
<td>BIO 4113</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>CH 1213</td>
<td>Chemistry I</td>
</tr>
<tr>
<td>CH 1211</td>
<td>Invest in Chemistry</td>
</tr>
<tr>
<td>CH 1223</td>
<td>Chemistry II</td>
</tr>
<tr>
<td>CH 1221</td>
<td>Invest in Chemistry</td>
</tr>
<tr>
<td>CH 2503</td>
<td>Elem Organic Chemistry</td>
</tr>
<tr>
<td>BCH 3613</td>
<td>Elem Biochemistry</td>
</tr>
</tbody>
</table>

6 hours BIO/Science Elective

3 hours Botany (3000-4000 level)

### Oral Communication Requirement

Satisfied by successful completion of EDS 3653

### Computer Literacy Requirement

Satisfied by successful completion of EDS 3653

### Writing Requirement

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 3013</td>
<td>Writing for Biologists or</td>
</tr>
<tr>
<td>EDF 3413</td>
<td>Writing for Thinking</td>
</tr>
</tbody>
</table>

Total hours needed for major: 124

* Requires Admission to Teacher Education.

+ At least 21 hours of BIO courses must be 3000-4000 level.
### CHEMISTRY EDUCATION (CHED)

**Major Advisors:** Burnette Hamil; Office: 310 Allen Hall

The Chemistry Education Curriculum is designed for prospective secondary teachers (7-12) in accordance with the recommendations of the NSTA and NSES.

No grades of "D" will be accepted. Courses designed for nonscience majors will not be accepted.

#### University Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 1103 English Comp I OR EN 1163 Accelerated Comp I</td>
<td>6 hours</td>
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<tr>
<td>EN 1113 English Comp II OR EN 1173 Accelerated Comp II</td>
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</tr>
</tbody>
</table>

#### Mathematics (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MA 1313 College Algebra</td>
<td></td>
</tr>
<tr>
<td>MA 1713 Calculus I</td>
<td></td>
</tr>
</tbody>
</table>

#### Science (9 hours)

- See Content Area
- Humanities Electives (6 hours)
- Fine Arts (3 hours)
- Social/Behavioral Sciences (6 hours)

#### Major Core

<table>
<thead>
<tr>
<th>Course</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 4243 Planning for the Diversity of Learners*</td>
<td></td>
</tr>
<tr>
<td>EDF 3333 Social Foundations of Ed</td>
<td></td>
</tr>
<tr>
<td>EDS 3411 Practicum in Secondary Ed*</td>
<td></td>
</tr>
<tr>
<td>EDX 3213 Exceptional Child and Youth</td>
<td></td>
</tr>
<tr>
<td>EPY 3143 Human Development/Learning*</td>
<td></td>
</tr>
<tr>
<td>EPY 3253 Evaluating Learning*</td>
<td></td>
</tr>
<tr>
<td>EDS 3653 Secondary Science Education*</td>
<td></td>
</tr>
<tr>
<td>EDS 4653 Methods of Teaching Science*</td>
<td></td>
</tr>
<tr>
<td>EDS 4873 Sem in Managing Sec. Class*</td>
<td></td>
</tr>
<tr>
<td>EDS 4886 Teaching Internship in Second Ed*</td>
<td></td>
</tr>
<tr>
<td>EDS 4896 Teaching Internship in Second Ed*</td>
<td></td>
</tr>
<tr>
<td>RDG 3513 Developmental Reading Strategies*</td>
<td></td>
</tr>
<tr>
<td>PE 1223 Personal Health</td>
<td></td>
</tr>
</tbody>
</table>

#### Content Area

<table>
<thead>
<tr>
<th>Course</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 1213 Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CH 1211 Investigations in Chemistry</td>
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<tr>
<td>CH 1223 Chemistry II</td>
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<tr>
<td>CH 1221 Investigations in Chemistry</td>
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<tr>
<td>CH 2314 Analytical Chem I</td>
<td></td>
</tr>
<tr>
<td>CH 4213 Adv Inorganic Chemistry</td>
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</tr>
<tr>
<td>CH 4212 Adv Inorganic Chem Lab</td>
<td></td>
</tr>
<tr>
<td>CH 4353 Analytical Chem II</td>
<td></td>
</tr>
<tr>
<td>CH 4413 Physical Chemistry I</td>
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<tr>
<td>CH 4411 Physical Chemistry Lab</td>
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</tr>
<tr>
<td>CH 4423 Physical Chemistry II</td>
<td></td>
</tr>
<tr>
<td>CH 4421 Physical Chemistry II Lab</td>
<td></td>
</tr>
<tr>
<td>CH 4513 Organic Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CH 4511 Organic Chem Lab</td>
<td></td>
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<tr>
<td>CH 4523 Organic Chemistry II</td>
<td></td>
</tr>
<tr>
<td>CH 4521 Organic Chem Lab</td>
<td></td>
</tr>
<tr>
<td>PH 1063 Descriptive Astronomy</td>
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<tr>
<td>PH 2213 Physics I</td>
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<tr>
<td>PH 2223 Physics II</td>
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<tr>
<td>PH 2233 Physics III</td>
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<tr>
<td>BCH 4603 General Biochemistry</td>
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<tr>
<td>MA 1723 Calculus II</td>
<td></td>
</tr>
<tr>
<td>MA 2733 Calculus III</td>
<td></td>
</tr>
</tbody>
</table>

#### Oral Communication Requirement

Satisfied by successful completion of EDF 4243

#### Computer Literacy Requirement

Satisfied by successful completion of EDF 4243

#### Writing Requirement

Satisfied by successful completion of EDF 4243

**Total hours needed for major: 124**

* Requires admission to teacher education.

### PHYSICS EDUCATION (PHED)

**Major Advisor:** Burnette Hamil; Office: 310 Allen Hall

The Physics Education Curriculum is designed for prospective physics teachers at the secondary level in accordance with the recommendations of the NSTA and the NSES. The following concentration in physics is outlined to meet the requirements for licensure. Courses designed for nonscience majors will not be accepted.

#### University Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 1103 English Comp I OR EN 1163 Accelerated Comp I</td>
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</tr>
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</tr>
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</table>

#### Mathematics (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MA 1713 Calculus I</td>
<td></td>
</tr>
<tr>
<td>MA 1723 Calculus II</td>
<td></td>
</tr>
</tbody>
</table>

#### Science (9 hours)

- See Content Area
- Humanities Electives (6 hours)
- Fine Arts (3 hours)
- Social/Behavioral Sciences (6 hours)

#### Major Core

<table>
<thead>
<tr>
<th>Course</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 4243 Planning for the Diversity of Learners*</td>
<td></td>
</tr>
<tr>
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<tr>
<td>EDS 3411 Practicum in Secondary Ed*</td>
<td></td>
</tr>
<tr>
<td>EPY 3143 Human Development/Learning*</td>
<td></td>
</tr>
<tr>
<td>EPY 3253 Evaluating Learning*</td>
<td></td>
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<td></td>
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<tr>
<td>EDS 4653 Methods of Teaching Science*</td>
<td></td>
</tr>
<tr>
<td>EDS 4873 Sem in Managing Sec. Class*</td>
<td></td>
</tr>
<tr>
<td>EDS 4886 Teaching Internship in Second Ed*</td>
<td></td>
</tr>
<tr>
<td>EDS 4896 Teaching Internship in Second Ed*</td>
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<tr>
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<tr>
<td>PE 1223 Personal Health</td>
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</tr>
</tbody>
</table>

#### Content Area

<table>
<thead>
<tr>
<th>Course</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PH 1063 Descriptive Astronomy</td>
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<tr>
<td>PH 2213 Physics I</td>
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</tr>
<tr>
<td>PH 2223 Physics II</td>
<td></td>
</tr>
<tr>
<td>PH 2233 Physics III</td>
<td></td>
</tr>
<tr>
<td>PH 3063 Astrophysics</td>
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<tr>
<td>PH 3613 Modern Physics</td>
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<tr>
<td>PH 4113 Electronic Circuits</td>
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<tr>
<td>PH 4143 Intermediate Laboratory</td>
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<td>PH 4213 Intermediate Mechanics</td>
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<tr>
<td>PH 4323 Electromagnetic Fields I</td>
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<tr>
<td>PH 4413 Thermal Physics</td>
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</tr>
<tr>
<td>PH 4513 Intermediate Optics</td>
<td></td>
</tr>
<tr>
<td>PH 4713 Intro to Quant Mechanics</td>
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</tr>
<tr>
<td>CH 1213 Chemistry I</td>
<td></td>
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<td>CH 1211 Investigations in Chem I</td>
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<td>CH 1223 Chemistry II</td>
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<tr>
<td>CH 1221 Investigations in Chem II</td>
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<tr>
<td>MA 2733 Calculus III</td>
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</tr>
<tr>
<td>MA 2743 Calculus IV</td>
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</tr>
</tbody>
</table>

**Total hours needed for major: 124**

* Requires admission to teacher education.
SOCIAL STUDIES EDUCATION (SSED)

Major Advisor: Susie Burroughs; Office: 310 Allen Hall

The Social Studies Education curriculum is designed in accordance with the recommendations of the National Council for the Social Studies. With a minimum of 54 hours required in history and the social sciences, the program of study provides a broad-based preparation for prospective social studies teachers of grades 7-12.

University Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Mathematics (6 hours)
- MA 1313 College Algebra
- MA 1113 College Algebra
- MA higher than College Algebra

Science (6 hours)
- Biological Science w/lab (see University Core)
- Physical Science w/lab (see University Core)

Math/Science Elective (3 hours)
- See University Core

Humanities (6 hours)
- See University Core

Fine Arts (3 hours)
- See University Core

Social/Behavioral Sciences (6 hours)
- PSY 1013 General Psychology
- PS 1113 American Government

Major Core

EDF 4243 Planning for the Diversity of Learners*
EDF 3333 Social Foundations of Ed
EDS 3411 Practicum in Secondary Ed*
EDX 3213 Exceptional Child and Youth
EPY 3143 Human Development/Learning*
EPY 3253 Evaluating Learning*
RDG 3513 Developing Reading Strategies*
EDS 4643 Methods of Teaching Social Studies*
EDS 4873 Sem in Managing Sec. Class*
EDS 4886 Teaching Internship in Second Ed*

Content Area

EC 2113 Prin of Macroeconomics
EC 2123 Prin of Microeconomics
GR 1114 Elements of Physical Geography or approved GR elective
GR 1123 Intro to World Geography
HI 1063 Early US History
HI 1073 Modern US History
HI 1163 World History before 1500
HI 1173 World History since 1500
HI 3333 Mississippi History
3 hours HI elective (3000 level or above)
3 hours HI, PS, EC, or GR Elective (3000 level or above)
3 hours HI, PS, EC, or GR Elective (3000 level or above)
3 hours HI, PS, EC, GR, PSY or SO Elective (3000 level or above)
HI 4403 The Ancient Near East OR
HI 4903 The Far East
PS 1113 American Government
PS 1513 Comparative Government

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement
- TKT 1273 Computer Applications or other approved course

Writing Requirement
- Satisfied by successful completion of EDS 4643

Total hours needed for major: 124

* Admission to Teacher Education required

SPEECH EDUCATION (SPED)

Major Advisor: William A. Person; Office: 310 Allen Hall

This curriculum is offered for the education of prospective teachers of speech. A minimum of 38 semester hours of Speech is required.

University Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I OR
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II OR

Mathematics (6 hours)
- MA 1313 College Algebra
- MA higher than College Algebra (see University Core)

Science (6 hours)
- Biological Science w/lab (see University Core)
- Physical Science w/lab (see University Core)

Math/Science Elective (3 hours)
- See University Core

Humanities (6 hours)
- EN Lit Sequence - World, Eng, or Am (see University Core)
- EN Lit Sequence - World, Eng, or Am (see University Core)

Fine Arts (3 hours)
- CO 1503 Intro to Theatre

Social/Behavioral Sciences (6 hours)
- PSY 1013 General Psychology
- PS 1113 American Government

Major Core

EDF 4243 Planning for the Diversity of Learners*
EDF 3333 Social Foundations of Ed
EDX 3213 Exceptional Child and Youth
EPY 3143 Human Development/Learning*
EPY 3253 Evaluating Learning*
RDG 3513 Developing Reading Strategies*
EDS 3411 Practicum in Secondary Ed*
EDS 4673 Methods of Teaching Language Arts*
EDS 4873 Sem in Managing Sec. Class*
EDS 4886 Teaching Internship in Second Ed*
EDS 4886 Teaching Internship in Second Ed*

Content Area

CO 1223 Communication Theory
CO 1403 Introduction to Mass Media
CO 2013 Voice and Articulation
CO 2213 Small Group Communication
CO 2253 Interpersonal Communication
CO 2333 TV Production
CO 2413 Introduction to News Writing and Reporting
CO 2503 Acting
CO 2524 Stagecraft and Lighting OR
CO 2544 Makeup and Costuming
CO 2613 Intro to Oral Interpretation
CO 3833 Interviewing
CO 4253 Elements of Persuasion
CO 4524 Directing OR
CO 2574 Summer Theatre Workshop OR
CO 1513 Theatre Practicum

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement
- Satisfied by successful completion of EDS 4673

Writing Requirement
- Satisfied by successful completion of EDS 4673

Elective
- 3 hours HI Sequence Elective (Western, World, or US) (see University Core)

Total hours needed for major: 123

* Requires admission to Teacher Education.
Department of Kinesiology

Interim Department Head: Professor Joseph A. Chromiak
Office: 216 McCarthy Gym
Undergraduate Coordinator: Ben Abadie
Office: 237 McCarthy Gym

The Department of Kinesiology offers four undergraduate concentrations: Teaching/Coaching Education (TCED), Fitness Management (FMGT), Clinical Exercise Physiology (CLEP), and Sport Communications (SPCO).

Community college transfer hours not to exceed 62 semester hours may be applied to the Physical Education degree program.

All concentrations require the specified course requirements cited within the University Core and major core listings below. Specified area content courses vary among the four concentrations and are listed following the core section. Pre-Occupational Therapy and Pre-Physical Therapy curricula have different core and program requirements. Students electing to pursue Pre-OT or Pre-PT should consult their advisor.

University Core

English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Mathematics (6 hours)
MA 1313 College Algebra
ST 2113 Introduction to Statistics or Math above MA 1313

Science (9 hours)
BIO 1123 Animal Biology with lab
BIO 1004 Anatomy and Physiology with lab
BIO 1023 Plants and Humans (Req for TCED & SPCO)
CH 1043 General Chemistry (Req for FMGT & CLEP)

Humanities (6 hours)
3 hours HI 1063 or HI 1073 (or other sequence)
3 hours Literature - EN 2203, 2213, 2223, 2243 or 2253

Fine Arts (3 hours)
PE 1123 History and Apprec. of Dance

Social Sciences (6 hours)
PSY 1013 General Psychology
SO 1203 Marriage and Family (Req for TCED)
EC 2113 Prin of Macroeconomics (Req for FMGT)
SO 1003 Intro to Sociology

Major Core

PE 3303 Exercise Physiology I
PE 3213 Emergency Health Care

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement
TKT 1273 Computer Applications or other approved course
(not required for TCED)

Writing Requirement
EDF 3413 Writing for Thinking (TCED, CLEP and FMGT)
CO 3423 Feature Writing (SPCO)

Choose one of the following concentrations:

Teaching/Coaching Concentration

Major Advisors: K. Randell Foxworth, Debbie Funderburk, Paul Rakavina and Glen Young

The teaching coaching concentration requires 124 semester hours of prescribed courses to complete the Bachelor of Science in Physical Education. The curriculum is designed to meet the need of students interested in becoming physical education teachers and coaches. The teaching block courses must be included in the on-campus requirement of 32 semester hours of junior and senior courses. Students who complete the program will be eligible for teacher licensure by the Mississippi Department of Education.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 1112</td>
<td>Teaching Team Sports</td>
</tr>
<tr>
<td>PE 1122</td>
<td>Teaching Individual and Dual Sports</td>
</tr>
<tr>
<td>PE 1132</td>
<td>Teaching Lifetime Activities</td>
</tr>
<tr>
<td>PE 1142</td>
<td>Teaching Rhythms</td>
</tr>
<tr>
<td>PE 1223</td>
<td>Personal Health</td>
</tr>
<tr>
<td>PE 1313</td>
<td>Intro to Physical Education</td>
</tr>
<tr>
<td>PE 3133</td>
<td>Adapted Physical Education</td>
</tr>
<tr>
<td>PE 3153</td>
<td>Methods of Elementary Physical Education</td>
</tr>
<tr>
<td>PE 3183</td>
<td>Psychology of Sport and Exercise</td>
</tr>
<tr>
<td>PE 3223</td>
<td>Motor Development and Movement</td>
</tr>
<tr>
<td>PE 4163</td>
<td>Prin &amp; Meth of Secondary Health &amp; PE*</td>
</tr>
<tr>
<td>PE 4173</td>
<td>Tests and Measurements*</td>
</tr>
<tr>
<td>PE 4233</td>
<td>Biomechanics</td>
</tr>
<tr>
<td>PE 4853</td>
<td>Motor Learning and Skill Analysis*</td>
</tr>
<tr>
<td>PE 4883</td>
<td>School Health Education*</td>
</tr>
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</table>

Choose two of the following (4 hours):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>PE 3422</td>
<td>Coaching Football</td>
</tr>
<tr>
<td>PE 3432</td>
<td>Coaching Basketball</td>
</tr>
<tr>
<td>PE 3452</td>
<td>Coaching Softball and Baseball</td>
</tr>
</tbody>
</table>

Professional Education Courses- 30 hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>EDF 3333</td>
<td>Social Foundations in Ed</td>
</tr>
<tr>
<td>EPY 3143</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>EDX 3213</td>
<td>Psychology &amp; Ed of Except Child &amp; Youth</td>
</tr>
<tr>
<td>EDF 4243</td>
<td>Planning for the Diversity of Learners*</td>
</tr>
<tr>
<td>EPY 3253</td>
<td>Evaluating Learning*</td>
</tr>
<tr>
<td>PE 4873</td>
<td>Professional Seminar in PE &amp; Athletics*</td>
</tr>
<tr>
<td>PE 4886</td>
<td>Teaching Internship in Physical Education*</td>
</tr>
<tr>
<td>PE 4896</td>
<td>Teaching Internship in Physical Education*</td>
</tr>
</tbody>
</table>

Total hours needed for major: 124

Fitness Management Concentration

Major Advisor: Ben Abadie

The fitness management concentration provides a basic understanding of the science behind physical fitness and the knowledge to implement effective fitness programs. This concentration also provides students a basic preparation in business to meet the economic challenges within the profession. The students are prepared to work as fitness instructors, exercise specialists, and directors or managers of wellness and fitness centers in hospitals and corporate settings.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 2013</td>
<td>Principles of Financial Accounting</td>
</tr>
<tr>
<td>EC 2123</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>HS 2293</td>
<td>Individual and Family Nutrition</td>
</tr>
<tr>
<td>MGT 3513</td>
<td>Intro to Human Resource Mgt</td>
</tr>
<tr>
<td>MKT 3013</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>MKT 4123</td>
<td>Advertising</td>
</tr>
<tr>
<td>PE 1213</td>
<td>Intro to Exercise Science</td>
</tr>
<tr>
<td>PE 1223</td>
<td>Personal Health</td>
</tr>
<tr>
<td>PE 2003</td>
<td>Foundations of Health Education</td>
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<tr>
<td>PE 3173</td>
<td>Measurement &amp; Eval. in Exercise Science</td>
</tr>
<tr>
<td>PE 3183</td>
<td>Psychology of Sport &amp; Exercise</td>
</tr>
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<td>PE 3273</td>
<td>Athletic Training</td>
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<tr>
<td>PE 3623</td>
<td>Exercise Physiology II</td>
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<tr>
<td>PE 4113</td>
<td>Fitness Programs and Testing Procedures</td>
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<td>PE 4133</td>
<td>Exercise Programs for Special Pop</td>
</tr>
<tr>
<td>PE 4153</td>
<td>Training Techniques for Exercise and Sport</td>
</tr>
<tr>
<td>PE 4183</td>
<td>Exercise and Weight Control</td>
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<tr>
<td>PE 4210</td>
<td>Internship (1-6 hours)</td>
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<tr>
<td>PE 4233</td>
<td>Biomechanics</td>
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<tr>
<td>PE Skill Elective (Choose two)</td>
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<tr>
<td>PE 1041</td>
<td>Aerobics</td>
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<tr>
<td>PE 1131</td>
<td>Fitness Walking and Jogging</td>
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<tr>
<td>PE 1361</td>
<td>Strength Training</td>
</tr>
</tbody>
</table>

PE Electives 4 hours
Free Electives 6 hours

Total hours needed for major: 124
Clinical Exercise Physiology Concentration

Major Advisors: Troy Hoyt, John Lamberg and Lee Ann Joc

The Clinical Exercise Physiology concentration is designed as a professional preparation program of study that enables students to work in clinical settings as Exercise Specialists in Cardiac Rehabilitation and Pulmonary Rehabilitation. Students are equipped as Exercise Specialists in a variety of unique areas, such as exercise programs for individuals with diabetes, orthopedic limitations, arthritis, cancer, osteoporosis, renal failure, obesity, as well as programs for the elderly and pregnant women. The Clinical Exercise Physiology concentration also provides students with the essential information necessary to continue their academic career in other allied health professions such as Physical or Occupational therapy. Students electing to pursue Pre-OT or Pre-PT should consult their advisor for approved courses.

| PE 1213 | Introduction to Exercise Science |
| PE 1223 | Personal Health OR |
| BIO 2004 | Human Anatomy |
| PE 2003 | Foundations of Health OR |
| BIO 2014 | Human Physiology |
| PE 2603 | Medical Terminology |
| PE 2613 | Exercise Electrocardiography |
| PE 3173 | Measurement and Evaluation in Exercise Science |
| PE 3181 | Psychology of Sport & Exercise |
| PE 3273 | Athletic Training |
| PE 3623 | Exercise Physiology II |
| PE 3633 | Rehabilitation Techniques |
| PE 3643 | Applied Anatomy for Allied Health Sciences |
| PE 4113 | Exercise Programs and Testing Procedures |
| PE 4133 | Exercise Programs for Special Pop |
| PE 4183 | Exercise and Weight Control |
| PE 4223 | Biomechanics |
| PE 4410 | Clinical Exercise Physiology Internship (1-6 hours) |
| PE 4603 | Exercise in Health and Disease |
| HS 2293 | Individual and Family Nutrition OR approved BIO 3000/4000 |

**PE Skill Electives (Choose 2)**

| PE 1041 | Aerobics |
| PE 1131 | Fitness Walking and Jogging |
| PE 1361 | Strength Training |

**PE Electives** 4 hours (See advisor)

**Free Electives** 9 hours

**Total hours needed for major: 124**

*Pre-OT and Pre-PT students have NO PE electives. These students have 18 hours of designated professional school prerequisites. Please consult advisor.*

Sport Communication Concentration

Major Advisors: B. David Ridpath and Robert Zullo

The sport communication concentration is designed to prepare students for the career opportunities in the sport communication industry, including print media, broadcast media, audio visual production, and sport promotions. The program utilizes the strengths and expertise of faculty in the Department of Kinesiology and the Department of Communication. This concentration prepares students for jobs in University and professional sport media departments, sport video/graphy departments, television and radio broadcast media and sport promotions. Students enrolled in this program will complete the six hour internship. Internship locations depend on the career goals of the student. Students have been placed in internships in private, collegiate, and professional sports settings.

| CO 1403 | Intro to the Mass Media |
| CO 1223 | Intro to Communication Theory |
| CO 2333 | Television Production |
| CO 2343 | Writing for Radio and TV |
| CO 2413 | Intro to News Writing |
| CO 3403 | Photography |
| CO 3803 | Introduction to Public Relations |
| CO 3823 | Public Relations Copy and Layout |
| CO 3833 | Interviewing |
| CO 3843 | Media Relations |
| SO 4333 | Sociology of Sport |
| PE 1313 | Intro to Physical Education |
| PE 3183 | Psychology of Sport and Exercise |
| PE 3422 | Coaching Football |
| PE 3432 | Coaching Basketball |
| PE 3452 | Coaching Softball/Baseball |
| PE 3273 | Athletic Training |
| PE 4173 | Tests and Measurements |
| PE 4316 | Sports Communication Internship |

**PE Electives (Choose two)**

| PE 3133 | Adapted Physical Education |
| PE 3223 | Motor Development and Movement |
| PE 4233 | Biomechanics |

**Free Electives** 9 hours

**Total hours needed for major: 124**

Department of MUSIC EDUCATION (MU), (MU), (MUE)

**Major Advisor:** Michael R. Brown

Office: Music Building A

The Department of Music Education offers a Bachelor of Music Education degree with four concentrations (Instrumental, Vocal, Keyboard and Guitar). Students must choose one of these concentrations:

**Instrumental Concentration.** The curriculum in instrumental music education is designed to prepare instrumental music teachers for positions in junior high schools and high schools. Students who complete this program are fully qualified for licensure by the Mississippi Department of Education. This program provides the student with a balanced curriculum, combining the practical and theoretical aspects of music education. To insure core competency necessary for the field, all instrumental majors must pass the Piano Proficiency Exam and all portions of the Upper Division Proficiency Exam (consult Departmental Handbook) and must participate in the University Band every semester of their attendance at MSU except the semester in which they student teach. (Students are advised to participate in more than two ensembles only after consultation with their advisor and/or the department head.) All Instrumental Music Education majors must study the same instrument in applied lessons for at least six semesters, the last of which will culminate in a Senior Recital.

**Vocal Concentration.** The curriculum in vocal music education is designed to prepare vocal music teachers for positions in elementary schools, junior high schools and high schools. Students who complete this program are fully qualified for licensure by the Mississippi Department of Education. This program provides the student with a balanced curriculum, combining the practical and theoretical aspects of music education. To insure core competency necessary for the field, all vocal majors must pass the Piano Proficiency Exam and all portions of the Upper Division Proficiency Exam (consult Departmental Handbook) and must participate in the University Chorus every semester of their attendance at MSU except the semester in which they student teach. (Students are advised to participate in more than two ensembles only after consultation with their advisor and/or the department head.) All Vocal Music Education majors must study voice in applied lessons for at least six semesters, the last of which will culminate in a Senior Recital.

**Keyboard Concentration.** The curriculum in keyboard music education is designed to prepare music teachers for positions in elementary schools, junior high schools and high schools. Students who complete this program are fully qualified for licensure by the Mississippi Department of Education. This program provides the student with a balanced curriculum, combining the practical and theoretical aspects of music education. To insure core competency necessary for the field, all keyboard majors must pass the Piano Proficiency Exam and all portions of the Upper Division Proficiency Exam (consult Departmental Handbook) and must participate in the University Chorus every semester of their attendance at MSU except the semester in which they student teach. (Students are advised to participate in more than two ensembles only after consultation with their advisor and/or the department head.) All Keyboard Music Education majors must study piano in applied lessons for at least six semesters, the last of which will culminate in a Senior Recital.

**Guitar Concentration.** The curriculum in guitar music education is designed to prepare music teachers for positions in elementary schools, junior high schools and high schools. Students who complete this program are fully qualified for licensure by the Mississippi Department of Education. This program provides the student with a balanced curricu-
lum, combining the practical and theoretical aspects of music education. To insure core competency necessary for the field, all guitar majors must pass the Piano Proficiency Exam and all portions of the Upper Division Proficiency Exam (consult Departmental Handbook) and must participate in the University Chorus every semester of their attendance at MSU except the semester in which they student teach. (Students are advised to participate in more than two ensembles only after consultation with their advisor and/or the department head.) All Guitar Music Education majors must study guitar in applied lessons for at least six semesters, the last of which will culminate in a Senior Recital.

**University Core**

**English Composition (6 hrs)**
- EN 1103 English Composition I OR EN 1163 Accelerated Composition I
- EN 1113 English Composition II OR EN 1173 Accelerated Composition II

**Mathematics (6-9 hrs)**
- MA 1313 College Algebra
- Math Elective at a level above MA 1313
- Math Elective at a level above MA 1313 or Science Elective

**Science (6-9 hrs)**
- Biological Science with Lab
- Science Elective with Lab
- Math or Science Elective

**Humanities (6 hrs)**
- Literature Elective
- History Elective

**Fine Arts (3 hrs)**
- MU 2323 Music History III

**Social Science (6 hrs)**
- PSY 1013 General Psychology
- Social/Behavioral Science Elective

**College Core**

- EDF 3333 Social Foundations of Education
- EPY 3143 Human Develop. and Learning Strategies in Educ.
- EDX 3213 Psych. and Educ. of Exceptional Child. and Youth
- MUE 3243 Planning and Managing Learning in Music Ed
- MUE 3253 Performance Assessment in Music Education
- MUE 4873 Professional Seminar in Music Education
- MUE 4886 Teaching Internship in Music Education
- MUE 4896 Teaching Internship in Music Education

**Major Core**

**Public Speaking**
- Satisfied through music history courses, upper division proficiency exam, music education courses and student teaching.

**Upper Level Writing Requirement**
- Satisfied through music theory, music history, music education courses and the upper division proficiency exam.

**Computer Literacy Requirement (0 hrs)**
- Satisfied through the music theory sequence.

**Red Cross Approved Certification Training** or PE 3213 Emer. Health (Not counted in the total number of hours.) *The Red Cross training must occur during the last two years of study prior to receiving the degree.**

**Music Requirements**

- MU 1162 Music History I
- MU 2322 Music History II
- MU 1213 Music Theory I
- MU 1321 Ear Training I
- MU 1413 Music Theory II
- MU 1521 Ear Training II
- MU 2613 Music Theory III
- MU 2721 Ear Training III
- MU 2813 Music Theory IV
- MU 2921 Ear Training IV
- MU 3333 Orchestration
- MU 3412 Conducting
- MU 3442 Advanced Conducting
- MU 4313 Form and Analysis
- MUE 3001 Practicum in Music Education

**General Electives** 2 hours

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**Choose one of the following concentrations:**

### INSTRUMENTAL CONCENTRATION

- MU 2111 Piano Class
- MU 2121 Piano Class
- MU 3111 Piano Class
- MU 3121 Piano Class
- MU 3112 Functional Skills Piano Class
- MU 3122 Functional Skills Piano Class
- MU 1131 Voice Class
- MUE 3212 Brass Class
- MUE 3222 Woodwind Class
- MUE 3231 String Class
- MUE 3242 Percussion Class
- Piano Proficiency Exam
- Applied Lessons – 12 hours (6 semesters of study)
- Recital – 0 hours
- Major Ensemble – 7 hours (7 semesters of study)
- Recital Hour – 0 hours
- Upper Division Proficiency Exam - 0 hours

**Total hours needed for major: 130**

### VOCAL CONCENTRATION

- MU 2111 Piano Class
- MU 2121 Piano Class
- MU 3111 Piano Class
- MU 3121 Piano Class
- MU 3112 Piano Class
- MU 3122 Piano Class
- Applied Piano – 2 hours (2 Semesters of Study)
- Piano Proficiency Exam - 0 hours
- MUE 3262 Instrumental Class
- Applied Voice – 12 hours (6 semesters of study)
- MU 1141 Seminar for Voice Majors – 4 hours (with links to private study) (4 Semesters of Study)
- Recital – 0 hours
- Major Ensemble – 7 hours (7 Semesters of Study)
- Recital Hour – 0 hours
- Upper Division Proficiency Exam - 0 hours

**Total hours needed for major: 130**

### KEYBOARD CONCENTRATION

- MU 3112 Functional Skills Piano Class
- MU 3122 Functional Skills Piano Class
- MUE 3262 Instrumental Class
- MUE 3333 Introduction to Piano Pedagogy
- MU 1131 Voice Class
- Applied Voice – 2 hours (Two semesters of study)
- Applied Piano – 12 hours (6 semesters of study)
- Recital – 0 hours
- Piano Proficiency Exam - 0 hours
- Major Ensemble – 7 hours (7 semesters of study)
- Recital Hour – 0 hours
- Upper Division Proficiency Exam - 0 hours

**Total hours needed for major: 130**

### GUITAR CONCENTRATION

- MU 2111 Piano Class
- MU 2121 Piano Class
- MU 3111 Piano Class
- MU 3121 Piano Class
- MU 3112 Functional Skills Piano Class
- MU 3122 Functional Skills Piano Class
- MU 1131 Voice Class
- MUE 3231 String Class
Specific certifications and/or endorsements include:

- complete certifications in Computer, Career, and Technology Discovery.
- industrial/technical and vocational courses. Students may also choose to
  
  academic business courses, Business & Computer Technology (BCT), and 
  
  Social/Behavioral Science (6 hours)
  
  Fine Arts (3 hours)
  
  Humanities (6 hours)
  
  Mathematics (6 hours)
  
  English Composition (6 hours)
  
  University Core

- TKI 2413 required for ITE concentration

- Lab Science (see University Core)

- Math/Science Elective (3 hours)

- Humanities (6 hours)

- Fine Arts (3 hours)

- Social/Behavioral Science (6 hours)

- Piano Proficiency Exam

- Applied Voice - 2 hours (2 semesters of study)

- Recital - 0 hours

- Music Electives - 4 hours (advisor approved)

- Upper Division Proficiency Exam - 0 hours

**Total hours needed for major:** 130

Department of INSTRUCTIONAL SYSTEMS, LEADERSHIP, and WORKFORCE DEVELOPMENT (TTE), (ITS), (INDT), (TTS)

**Technology Teacher Education (TTE)**

- Major Advisor: Connie Forde; Office: 251 IED Building

**Business Technology (BT) Concentration**

Major Advisor: W.C. Johnson; Office: 100 IED Building

**Industrial/Technical Education (ITE) Concentration**

Major Advisor: Anthony A. Olinzock; Office: 100 Industrial Education Building

The Technology Teacher Education program provides teacher preparation with concentrations in Business Technology and Industrial/Technical Education. Schools recruit graduates of the TTE program to teach academic business courses, Business & Computer Technology (BCT), and industrial/technical and vocational courses. Students may also choose to complete certifications in Computer, Career, and Technology Discovery. Specific certifications and/or endorsements include:

- Business Education - Grades 7-12 (Certification #105)
- Business & Computer Technology (Certification #310)
- Computer Applications (Certification #111)
- Cooperative Education (Certification #317)
- Technology Education (Certification #147)
- Career Discovery (Certification #996)
- Computer Discovery (Certification #999)
- Technology Discovery (Certification #998)

- Requires admission to Teacher Education.

**Business Technology Concentration**

- Economics 2123 Principles of Microeconomics
- Economics 2113 Principles of Macroeconomics
- Marketing 3213 Organizational Communications
- Marketing 3013 Principles of Marketing
- TKT 4853 Phil & Prin of V oc-Tech Educ.
- TKT 4103 Del of V oc. Inst Program*
- TKT 4213 Teach Basic Bus Subj
- TKT 4253 Planning for the Diversity of Learners*
- TKT 3001 Practicum in Vocational Educ
- EDS 4873 Managing the Secondary Classroom*
- TKT 4886 Teaching Internship*
- TKT 4896 Teaching Internship*
- EDS 4873 Managing the Secondary Classroom*
- TKT 4886 Teaching Internship*
- TKT 4896 Teaching Internship*

**Total hours needed for major:** 124

**Industrial/Technical Education Concentration**

The ITE Industrial/Technical Education concentration prepares students to teach industrial/technical and vocational courses (147), as well as the option to add certifications in Computer, Career, and Technology Discovery.

**Concentration Requirements**

- ACC 2013 Financial Accounting
- ACC 2023 Managerial Accounting
- BL 2413 Legal Environment of Business
- EC 2113 Principles of Macroeconomics
- EC 2123 Principles of Microeconomics
- MGT 3213 Organizational Communications
- MKT 3013 Principles of Marketing
- TKT 1123 Document Formatting and Info. Processing
- TKT 1312 Information Resource Management
- TKT 2122 Intro to Database Management
- TKT 2132 Intro to Spreadsheet Design & Analysis
- TKT 2413 Administrative Office Procedures
- TKB 3133 Office Management
- TKB 4543 Advanced Information Processing
- TKT 3153 Teaching Bus Tech*
- TKT 3173 Teach Bus Ed Skills Subj*
- TKT 4213 Teach Basic Bus Subj
- TKT 4143 His/Phl of Voc Ed
- TKT 4743 Electronic Desktop Publishing

**Writing Requirement**

- BT conc. Satisfied by successful completion of MGT 3213
- ITE conc. EDF 3413 Writing for Thinking

**Choose one of the following concentrations:**

**Business Technology Concentration**

**Total hours needed for major:** 124

**Industrial/Technical Education Concentration**

**Total hours needed for major:** 124

* Requires admission to Teacher Education.
EDUCATIONAL LEADERSHIP (EDA)

Major Advisor: Anthony A. Olinzock; Office: 101 IED Building

The programs in educational administration are designed through course sequence, planned observation and participation, individual study and research, and other learning experiences to prepare administrators, supervisors, teachers, and other educational leaders for positions of leadership in elementary, middle, and secondary schools, and in central offices. The department also provides training for community college administrators.

Administration and supervision programs are offered leading to the Master of Science degree, an MAT in Community Colleges, the Educational Specialist, the Doctor of Education, and the Doctor of Philosophy degrees.

INFORMATION TECHNOLOGY SERVICES (ITS) non-teaching

Major Advisors: Dr. Connie Forde; Office: 251 IED Building

This curriculum is designed to prepare students for the use of computer-based information systems, particularly software applications and hardware and the development and implementation of information technology user support and information project management.

Minor in General Business Administration. By completing the business requirements for the ITS degree, students also are eligible to receive a minor in General Business Administration from the College of Business. ITS majors interested in a minor in General Business Administration.

Students should always get advisement and approval from a faculty advisor for course scheduling.

University Core

English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Mathematics (6 hours)
MA 1313 College Algebra
ST 2113 Intro to Statistics

Science (6 hours)
Natural Science w/lab
Natural Science w/lab

Math/Science Elective (3 hours)
See University Core

Humanities (6 hours)
3 hours US or World History - see University Core
3 hours Literature - see University Core

Fine Arts (3 hours)
See University Core

Social/Behavioral Science (6 hours)
PSY 1013 General Psychology
PS 1113 American Government

College Core

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Computer Literacy Requirement
TKT 1273 Computer Applications or other approved course

Writing Requirement
Satisfied by successful completion of MGT 3213

Major Core

Business Courses
ACC 2013 Financial Accounting
ACC 2023 Managerial Accounting
BL 2413 Legal Environment of Business
EC 2113 Principles of Microeconomics
EC 2123 Principles of Macroeconomics
MGT 3114 Principles of Management and Production
MGT 3213 Organizational Communication
MGT 3513 Human Resource Management

BIS 1733 Visual Basic Applications
BIS 3233 Intro to Mgt Information Systems

Technology Courses
TKB 1123 Document Formatting/Information Processing
TKB 1312 Information Resource Management
TKB 2122 Intro to Database Management
TKB 2132 Intro to Spreadsheet Design
TKB 2413 Administrative Office Procedures
TKB 3133 Office Management
TKT 3213 Call Center Management
TKT 3463 Computer Repair & Maintenance
TKT 3623 Design Tech Training
TKB 4283 Adv Office Systems
TKT 4343 Info Tech Project Management
TKB 4543 Advanced Info Processing
TKT 4563 Intro to Data Networks
TKB 4583 Graphics/Web Design
TKT 4623 Del/Eval Tech Training
TKT 4683 Senior Seminar
TKT 4743 Electron Desktop Publishing
TKT 4753 Teach & Present w/ Multimedia

Total hours needed for major: 124

* Substitutions permitted with approval of the department head.

INDUSTRIAL TECHNOLOGY (INDT) non-teaching

Major Advisor: Dr. John Wyatt; Office: 110 IED Building

This curriculum is designed for students who want to prepare for employment leading to supervisory and management positions in the production or logistics areas of industry. The role of the Industrial Technology graduate is that of a facilitator of ideas from senior management to the production floor. Successful completion of the four-year curriculum would provide an excellent background in science, mathematics, design and human relations. This is coupled with the practical use of both manual and automated machinery and their associated tools, as well as knowledge of industrial manufacturing processes, materials and logistics.

To this extent the curriculum is divided into three concentrations:
• Industrial Automation
• Industrial Distribution
• Manufacturing & Management Maintenance

These concentrations are designed to give students an expertise that they can take into the workforce and build upon throughout their industrial career.

Graduates should quickly become proficient in both the supervisory and administrative roles of dealing with personnel, and depending upon the emphasis selected, the graduate should become adept in the various aspects of the manufacture, distribution and automation of industrial products and processes. Employment opportunities are good.

The MSU Bulletin is not the final source of information; department advisement is critically important for the course sequence and selection. Students should always get advisement and approval from a faculty advisor for course scheduling.

The INDT bachelor’s degree requirements include a cumulative and MSU grade point average of 2.50 on all courses considered in the major.

“Major” courses are defined as those courses listed on the INDT curriculum sheet with the following course symbols: TKI, MGT, MTK or TR.

Upper division courses (3000 level and up) must be taken at a senior college or university. See a faculty advisor for prerequisites and proper course sequence.

NOTE: This curriculum lends itself well to a minor in General Business Administration or Marketing.

University Core

English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II OR
EN 1173 Accelerated Comp II

Mathematics (9 hours)
MA 1313 College Algebra
MA 1323 Trigonometry
MA 1613 Calculus for Business & Life Science
Science (6 hours)
CH 1043 Survey of Chemistry I
PH 1113 General Physics w/lab

Humanities (6 hours)
See University Core

Fine Arts (3 hours)
See University Core

Social/Behavioral Science (6 hours)
See University Core  (EC 2113 & EC 2123 recommended)

Major Core
PH 1133 General Physics w/lab
TKI 1213 Intro to Industrial Technology
TKI 1223 Ind Wood Proc
TKI 1813 Basic Ind Elec & Electronics I
TKI 2113 Intro to PLC/CNC Programming
TKI 2323 Forging, Weld, & Found
TKI 2813 Basic Electricity & Electronics II
TKI 3043 Industrial Safety
TKI 3063 Ind Human Relations
TKI 3103 Adv Ind Elec & Electronics
TKI 3183 Mach Metal Processing
TKI 3223 Ind Materials Tech
TKI 3343 CAD/CAM
TKI 3363 Motion & Time
TKI 4113 Ind Fluid Power
TKI 4213 Survey Energy Sources/Power Tech
TKI 4223 Quality Assurance

Writing Requirement
MGT 3213 Organizational Comm (recommended)

Choose one of the following concentrations:

Industrial Distribution Concentration
BQA 2113 Business Statistics
MKT 3013 Principles of Marketing
MKT 3213 Retailing
MKT 4113 Personal Selling
MKT 4123 Advertising
TR 3313 Principles of Transportation
TR 4393 Transportation Seminar
TKI 3383 Forecasting & Cost Modeling
9 hours  TKI or TR Electives - See advisor

Total hours needed for major: 123

Industrial Automation Concentration
ACC 2013 Principles of Financial Accounting
BL 2413 Legal Env of Business
BQA 2113 Business Statistics
MGT 3114 Principles of Production & Management
TKI 3383 Forecasting & Cost Modeling
TKI 4103 Ind Control Systems
TKI 4203 Automated Systems
TKI 4303 Industrial Robotics
TKI 4233 Maintenance Management
6 hours TKI Electives - See advisor

Total hours needed for major: 123

Manufacturing & Maintenance Management Concentration
ACC 2013 Principles of Financial Accounting
BL 2413 Legal Env of Business
BQA 2113 Intro Bus Statistics
MGT 3114 Prin of Management & Production
TKI 4103 Ind Control Systems
TKI 4233 Maintenance Management
TKI 4263 Mfg Tech & Proc
TKI 3383 Forecasting & Cost Modeling
TKI 4363 Manufacturing Systems
6 hours TKI Electives - See advisor

Total hours needed for major: 123
The James Worth Bagley College of Engineering

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College of Engineering Web page: http://www.bagley.msstate.edu

GENERAL INFORMATION

The James W. Bagley College of Engineering is a professional college whose purposes are to provide both undergraduate and graduate education, to conduct basic and applied research and to engage in outreach and public service activities. The Bagley College consists of eight academic departments and many research centers including:

- Department of Aerospace Engineering
- Department of Agricultural and Biological Engineering
- Dave C. Swalm School of Chemical Engineering
- Department of Civil Engineering
- Department of Computer Science and Engineering
- Department of Electrical and Computer Engineering
- Department of Industrial Engineering
- Department of Mechanical Engineering
- Center for Advanced Vehicular Systems (CAVS)
- Center for Computer Security Research Center
- Center for DoD Programming Environment and Training (PET)
- Computational Simulation and Design Center (SimCenter)
- Diagnostic Instrumentation and Analysis Laboratory
- High Voltage Laboratory
- Raspet Flight Research Laboratory

The Bagley College has the mission to provide programs of excellence in teaching, research, and outreach and the vision to be nationally known for innovative programs. To accomplish the mission the College has established the following specific objectives:

1. Excellence in engineering education with enhancements for the 21st century
2. Highly robust and relevant fundamental and applied research
3. Robust, multidimensional outreach to industry, government, the K-12 and community college systems, and the citizens of Mississippi
4. Effective personal and professional development for faculty and staff
5. Appropriate facilities for a modern, comprehensive engineering program
6. Active partnerships with business, industry and government to foster an environment conducive to economic development
7. Enhanced national image and reputation of the college and university

The Bagley College is dedicated to providing an extraordinarily rich environment where engineering students can gain the skills that will allow them to become leaders and builders in commerce, industry, and government. Through innovations in and enhancements to the curriculum, Bagley engineering graduates will: 1) Develop effective communications skills; 2) Fully utilize the computer as a productivity tool; 3) Develop effective leadership and teamwork abilities; 4) Understand the entrepreneurial process; and 5) Comprehend the global business environment. These enhancements ensure that Bagley engineering graduates are highly sought after by employers and will continue to be successful.

A study abroad program provides students with an opportunity to take courses in another country and experience different cultures. This experience broadens the vision of those who participate and increases their awareness of the global environment in which engineers work. Engineering students also have the opportunity to apply for Congressional internships. Currently internships are in place for the U.S. Congress in Washington, D.C.

The Bagley College is dedicated to producing outstanding graduates who are capable of achieving excellence. With a strong focus on engineering fundamentals and an attitude among the faculty of helping each student achieve his or her best, Bagley engineering graduates are ready to obtain a position with the leading companies or further their education at the finest graduate schools in the nation.

Basic-level professional programs leading to the Bachelor of Science degree are offered in Aerospace Engineering, Biological Engineering, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering, Industrial Engineering, Mechanical Engineering, and Software Engineering. All engineering programs are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). Computer Science is accredited by the Computing Accreditation Commission of ABET.

All basic-level engineering programs are designed to give the student an understanding of the fundamental principles underlying engineering science and engineering practice. Each curriculum consists of four sequences: Basic Sciences and Mathematics; a general education component; Engineering Sciences; and Engineering Analysis, Design and Systems.

Included in the Basic Sciences and Mathematics sequence are Biology, Chemistry, Physics, and Mathematics, through Calculus and other advanced mathematics topics.

The University Core Curriculum, published in this Bulletin, determines the general education component.

The sequence in Engineering Sciences consists of studies in engineering mechanics, thermodynamics, transfer and rate mechanisms, electrical theory, the nature and properties of materials, and computer science.

The Engineering Analysis, Design and Systems sequence is directed toward the creative and practical phases of economic design, involving analysis, synthesis, and engineering research and development. This sequence is the most distinctive feature of the engineering curricula, since it is the element of creative and economic design which distinguishes the engineer from the pure scientist.
Engineers and Computer Scientists must develop communication skills through courses in English composition, public speaking, and upper level writing. These skills are reinforced throughout the curricula. The curriculum in Computer Science consists of general studies, mathematics, science, computer science, and electives.

**ENTRANCE REQUIREMENTS**
Prospective students are encouraged to take as many courses as possible in mathematics, science, English, social studies, and foreign languages while in high school. One unit of computer-aided graphics is recommended for engineering students and at least one-half unit of keyboarding and one-half unit of computer programming are recommended.

The level of high school preparation needed to be successful in an engineering or computer science degree program as measured by ACT or SAT scores and high school academic core grade point average has been identified. The following guidelines are established to help high school students understand the level of preparation required for engineering and computer science. In addition, these guidelines are established to help MSU students at risk who want to pursue engineering or computer science.

**Math Prerequisites**
In order to be successful in engineering, a student must develop good math skills through courses in Calculus, differential equations, and other math topics. In engineering and computer science, the first math course that applies to a degree is Calculus. Taking Calculus requires that a student have an adequate preparation in Algebra, Geometry, and Trigonometry.

To provide students with the best possible opportunity for success in Calculus, the Department of Mathematics has established the following guidelines for placing students in math courses:
- MA 1713 Calculus I - have an ACT math sub-score of 26 or higher, or have grades of C or better in MA 1313 College Algebra and MA 1323 Trigonometry.
- MA 1453 Precalculus - have an ACT math sub-score of 22 or higher, or have a grade of C or better in MA 1313 College Algebra
- MA 1313 College Algebra - have an ACT math sub-score of 20 or higher.

Students who are not prepared for Calculus I will be required to first complete Precalculus before taking Calculus. This may delay a student from taking some engineering courses until they have developed the proper math background, but this should not discourage a student from pursuing an engineering degree. Improving math skills early in their academic career will result in a student having greater academic success.

Students who do not meet the guidelines for enrolling in Calculus I should consider completing Precalculus during the summer prior to attending Mississippi State. These courses may be taken either at Mississippi State, at a Mississippi Community or Junior College, or at any other accredited two-year or four-year institution. Only grades of C or better will be accepted as satisfying these prerequisites. Courses taken during high school will not count for this credit unless they were taken as part of a dual enrollment program and appear on a separate transcript from a high school will not count for this credit unless they were taken as part of a dual enrollment program and appear on a separate transcript from a high school. A combination of College Algebra and Trigonometry may be substituted for Precalculus.

**New Freshmen Admission**
For regular admission to one of the Bagley College of Engineering’s degree-granting programs as a freshman, students must be admitted to MSU, complete the following high school academic core: 4 units of English, 4 units of mathematics (algebra, geometry, trigonometry), 3 units of science (chemistry and either biology or physics), 3 units of social studies and/or foreign languages and 2 units of electives, and meet any one of the following criteria:
- Have a composite score greater than or equal to 23 on the ACT or 1060 on the SAT
- Have a composite score of 20, 21, or 22 on the ACT or between 940 and 1050 on the SAT with a high school GPA of 3.0 or greater on academic core courses listed above
- Have any ACT or SAT score with a high school GPA of 3.5 or greater on academic core courses listed above.

These criteria are essential for the success of a student beginning an engineering or computer science curriculum at the level shown in the following pages of this Bulletin. Applicants with justifiable circumstances may petition the Dean of Engineering for special admission.

New freshmen applicants who do not meet these requirements, are otherwise admitted to MSU, and want to pursue an engineering degree should join the undeclared major with a pre-engineering concentration. These students will be advised for the first 30 hours by the University Academic Advising Center. Students in the pre-engineering and computer science programs can request to be assigned a mentor from the engineering or computer science faculty.

Students with course work deficiencies will be required to schedule preparatory course work. This course work will be in addition to that shown in the engineering and computer science curriculum and will, in general, extend the time to graduation.

**Internal Transfers**
Students in the pre-engineering concentration and other students at Mississippi State University may transfer into an engineering degree-granting program if they satisfy any one of the following criteria:
- Meet engineering new freshmen requirements listed above.
- Have completed at least 30 hours with a cumulative GPA greater than or equal to 2.0 and passed Calculus I (MA 1713), English Composition I (EN 1103), and Fundamentals of Chemistry (CH 1213) with grades of C or better.

Internal transfer students should discuss the transfer with the appropriate department head or program coordinator before completing the Change of Major form. Some departments have additional admission requirements for internal transfers.

Students admitted to one engineering or computer science degree program may transfer to another engineering or computer science program at any time so long as they meet departmental transfer requirements.

**External Transfers**
Students may transfer from other colleges or universities into MSU engineering degree programs if they meet all requirements to transfer to MSU and satisfy any one of the following criteria:
- Meet engineering new freshmen admission standards listed above.
- Have completed at least 30 hours with a cumulative GPA greater than or equal to 2.0 and passed courses equivalent to Calculus I (MA 1713), English Composition I (EN 1103), and Fundamentals of Chemistry I (CH 1213) with grades of C or better.

Applicants with justifiable circumstances may petition the Dean of Engineering for special admission.

Coursework taken elsewhere will not be applied toward a degree in the College of Engineering until it is determined that it is equivalent to required coursework or is an acceptable substitute. Also, only coursework taken elsewhere on which a grade of C or better has been earned will be considered for application toward a degree. No more than one-half of the hours of an engineering or computer science curriculum may be transferred from a two-year community or junior college.

For admission to undergraduate programs, international students must earn a minimum paper-based TOEFL score of 550 or a computer-based minimum score of 213.

**PERSONAL COMPUTER REQUIREMENT**
All engineering students are required to own or lease a personal laptop computer. Minimum specifications for a computer will be developed and posted on the College of Engineering home page on the World Wide Web by July of each year. A computer meeting these minimum specifications should suffice for the entirety of a students program of study as long as normal progress is made each semester. Information on the computer specifications, special pricing which may be available, and departmental requirements can be found by visiting the Web site at http://www.bagley.msstate.edu, by calling the Undergraduate Coordinator at 662-325-2267, or by writing to Mr. Robert Green at the address given above.

Computers are used by students to solve engineering problems, write papers, and develop presentations for classes. Computer technology improves communication between students and faculty and develops the computational skills demanded of engineering graduates by employers.

Students applying for or receiving financial aid should notify the office of Student Financial Aid and Scholarships that they are entering the Bagley College of Engineering and are required to have a personal computer. The cost of the personal computer can then be added to the total cost of education and financial aid will be awarded accordingly. The full cost of the computer will not necessarily be covered by financial aid or scholarships depending on the total amount of aid received and other regulations.

**GRADUATION REQUIREMENTS**
Graduation requirements are the courses and hours shown in the individual programs. Some majors require a grade of C or better in certain courses. This information is available from the department in which the student is enrolled. All students are expected to study these requirements.
together with the course prerequisites, and to be sure that they are taking the proper courses in the curriculum in which they expect to graduate. Students should discuss their programs with their academic advisors each semester, particularly before pre-registration. For graduation with a baccalaureate degree from the Bagley College of Engineering, in addition to meeting the quality-point requirements of the University, candidates must have no less than a 2.00 cumulative GPA on all courses taken at Mississippi State University and applied to meeting degree requirements. It is the student’s responsibility to be sure that requirements are fulfilled in a particular program before applying for a degree.

Credit up to a maximum of six semester hours will be applied toward a baccalaureate degree in the College of Engineering for successful completion of the Army ROTC Advanced Course of study or the Air Force ROTC Professional Officer Course of study. Such credit may not be available to students who, before they enter an ROTC program, have completed those courses for which ROTC credit is usually substituted.

Correspondence credit up to a maximum of six semester hours will be accepted, with the prior approval of the department head and the dean. In no case will engineering courses taken by correspondence be approved. No courses taken under the pass/fail option may be used to satisfy degree requirements.

COMPUTATIONAL ENGINEERING

Computational engineering is the application of computational methods and high-performance computing to solve large-scale, complex engineering problems. It addresses problems that cannot be solved easily by analytical means and that are too difficult or costly to model physically through experiments.

Such problems must have precise mathematical statements, require knowledge of the discipline, and be of significant scope. Examples include the following: analyzing the air flow around an aircraft or missile in order to optimize design for performance and efficiency; analyzing the behavior of electromagnetic fields; studying the movement of pollution through ground water aquifers; or predicting global weather patterns.

The Bagley College of Engineering offers both Master’s and Ph.D. Degrees in computational engineering. Students interested in these programs should refer to the Mississippi State University Graduate Bulletin. To prepare for the computational engineering graduate degree, a student should pursue a bachelor’s degree in an engineering discipline, mathematics, or a physical science such as physics or chemistry.

ENVIRONMENTAL ENGINEERING

The field of Environmental Engineering is an interdisciplinary one concerned with applications of the principles of engineering science and design to improve the quality of the environment. As a broad field, efforts in Environmental Engineering can be found in several departments within the College of Engineering, including the Departments of Agricultural and Biological Engineering, Chemical Engineering, and Civil Engineering. Areas of concern in Environmental Engineering include air quality and pollution control; soil and water quality and wastewater treatment; and disposal, food quality and management of agricultural land and other natural resources, and the minimization, management, and disposal of industrial, municipal, and agricultural waste.

While the College of Engineering does not offer degrees in Environmental Engineering, the undergraduate student pursuing a Bachelor of Science degree may develop an area of emphasis in Environmental Engineering by fulfilling elective course requirements with a number of courses related to Environmental Engineering including:

- ABE 3513 GPS/GIS in Agriculture and Engineering
- ABE 4263 Soil and Water Management
- ABE 4313 Biological Treat. of Non-Point Source Pollution
- CHE 4613 Air Pollution Control Design: Theory & Practice
- CHE 4623 Hazardous Waste Incineration
- CE 2803 Environmental Engineering Issues
- CE 3801 Environmental/Water Resource Engineering I Lab
- CE 3803 Environmental/Water Resource Engineering I
- CE 3811 Environmental/Water Resource Engineering II Lab
- CE 3813 Environmental/Water Resource Engineering II

Courses in environmental chemistry, organic chemistry, biochemistry, microbiology, and geological sciences are offered by the College of Arts and Sciences.

For additional information, the student should consult advisors in the College of Engineering, especially those in Agricultural and Biological Engineering, Chemical Engineering, and Civil Engineering.

THE JACK HATCHER ENGINEERING ENTREPRENEURSHIP PROGRAM

The role of the engineering entrepreneur in the expansion of the economy is self-evident. Engineers with entrepreneurial spirit and skills are the locomotives of the technology-based startup company and, perhaps most importantly, of the evolution of established industry. Developing entrepreneurial thinking in our graduates is one of the primary learning goals of the College of Engineering at Mississippi State University. Through an endowment by alumnus Jack Hatcher and the support of the Robert M. Hearin Foundation of Jackson, Mississippi, we have established a multi-level engineering entrepreneurship program to serve students with different degrees of interest. The base mission of the program is to expose our students to the broader elements of running a business and the general managerial skills required to prepare them for opportunities in management. For a more limited number, our mission is to equip technologically creative students to recognize opportunities and help instill the confidence to start entrepreneurial businesses.

The basic and broadest element of the entrepreneurship program is a weekly seminar series in which successful entrepreneurs present case histories. Also business leaders discuss specific items, such as patents, hiring employees, and venture capital. The next level is the Idea Fair and team projects. At the Idea Fair, select companies are invited to present ideas for products or services that may have commercial value. For those that generate significant student interest, interdisciplinary student teams are formed to develop the product or service. The participating companies provide materials, guidance, and encouragement. The projects also provide credit for design or technical elective classes. Students may also form teams around their own entrepreneurial idea.

Engineering Entrepreneurship Certificate

For students with higher levels of interest, a formal course of study leading to an Entrepreneurship Certificate is available. The certificate program is a joint program with the College of Business and Industry that requires a minimum of 15 semester hours. Students gain knowledge in finance, marketing, and accounting followed by a management course in entrepreneurship where the capstone project is a business plan.

All undergraduate engineering and computer science students in good standing are eligible to join the program. Each student must have a faculty mentor from both engineering and business and industry. To join the program, a student must submit an application to the Associate Dean of Engineering that has been signed by both mentors.

The Entrepreneurship Certificate Program is comprised of three major parts:

1. Completing 15 hours of business and engineering classes:
   ACC 2103 Principles of Accounting
   EC 2123 Microeconomics
   IE 3913 Engineering Economy
   MKT 3323 Principles of Marketing
   MGT 3323 Entrepreneurship

2. The Seminars Series - GE 3011

3. The “company” or project experience.

By utilizing electives, students in most engineering disciplines can complete the course requirements with a maximum of six to nine hours of additional work above the degree program. Also, much of the coursework will apply toward the prerequisites for an MBA degree at a later time should the student decide to pursue that path.

A GPA of 2.25 is required on all coursework, and no grade less than a C can be applied toward the certificate. A maximum of two courses can be transfer courses, and correspondence courses will not be accepted. In addition, a passing grade must be obtained for three semesters of GE 3011 Entrepreneurship Seminar.

The “company” or project experience is the real-world engineering experience of developing a marketable product or service. In most cases, the certificate candidate can get academic credit through the senior design course or a technical elective. For example, Electrical Engineering and Computer Engineering majors can receive credit for the senior design project requirement (ECE 4512/4522 and ECE 4521). The “company” experience may be a project proposed by one of the participating companies in the Idea Fair or a concept developed by students or faculty members. To complete the requirements for the project experience, the candidate submits a report to the Associate Dean, which has been approved by both mentors. This report usually takes the form of a Business Plan and is developed as part of the entrepreneurship course MGT 3323.

Upon completion of the Entrepreneurship Certificate Program requirements, the Associate Dean will review the student’s records. If all requirements are met satisfactorily, the Associate Dean will submit the
candidate to the Deans of Business and Industry and of Engineering for issuance of the certificate. The Associate Dean will notify the Registrar to have a statement placed on the candidate’s transcript. The certificate will be issued concurrently with the B.S. Degree in Engineering or Computer Science.

For more information contact:
Mr. Gerald Nelson
Director, Jack Hatcher Entrepreneurship Program
Box 9544, Mississippi State University, MS 39762-9544
Phone: 662-325-8423  email: gnelson@engr.msstate.edu

ENGINNEERING STUDY ABROAD PROGRAMS
(See International Study Programs)

ADVANCED-LEVEL PROFESSIONAL PROGRAMS
Geospatial and Remote Sensing Engineering Certificate

Geospatial technology refers to the application of technology resources in the acquisition and analysis of data that has a geographic component along with non-spatial attributes associated with the feature(s) under evaluation. Geospatial technologies include remote sensing, geographic information systems (GIS), and global positioning systems (GPS). Over the past several years, MSU has developed a national reputation in research and applications development in geospatial technologies in agriculture, renewable natural resources and transportation. Faculty involved with research utilizing geospatial technologies recently expanded the academic course offerings at MSU in order to extend their experiences to undergraduate and graduate students. With the wide offering of geospatial and related courses in the University curriculum, an engineering certificate program in geospatial technologies, with an emphasis on remote sensing, has been developed.

Eligibility
Undergraduate students in good standing who are currently enrolled in one of the undergraduate majors in the College of Engineering.
Current graduate students in good standing in one of the majors in the College of Engineering.
Other individuals who hold a B.S. degree in a field of engineering from a university accredited by the Engineering Accreditation Commission of ABET.

Applicants will make application for the certificate program to the Director of Education for the ERC (formerly the Engineering Research Center). The Director of Education will validate that the applicant meets admission eligibility requirements and forward the application to the Technical Committee of the GeoResources Institute (GRI) for recommendations. Once an applicant is accepted into the certificate program the Director of Education will notify the Dean of Engineering and the Director of GRI.

Issue of Certificates
The Director of Education will validate completion of the requirements for the certificate and will inform the Dean of Engineering when the candidate has successfully completed the curriculum. The Dean of Engineering will issue the certificate and have the appropriate notice placed on the candidate’s transcript — “Awarded Geospatial and Remote Sensing Engineering Certificate.” The certificate will be signed by the Dean of Engineering, the Director of Education (ERC), and the Director of GRI.

Curriculum
To receive the certificate, the candidate must complete 15 hours - six hours of core courses, six hours of engineering electives, and three hours of application electives from the lists given below. The curriculum must be completed with a minimum of 2.00 GPA for undergraduate students and a 3.00 GPA for graduate students. No grade less than a C will count toward the certificate. No more than two courses can be transferred from another institution.

Core Courses (6 hours)
- ABE/PSS 4483/6483 or ECE 4423/6423
- Introduction to Remote Sensing
- ECE 4413/6413  Digital Signal Processing

Engineering Electives (6 hours)
- ABE 3513  GPS and GIS in Agriculture and Engineering

ECE 3163  Signals and Systems
ECE 8413  Digital Signal Processing
ECE 8401  Topics in Remote Sensing
ECE 8423  Adaptive Signal Processing
ECE 8433  Statistical Signal Processing

Elective  Engineering Special Topics course - as approved by the GRI Technical Committee and the Dean of Engineering

Application Electives (3 hours)
- FO 4313/6313  Spatial Tech in Nat Res
- In 4311/6311  Lab
- GR 2313  Maps and Remote Sensing
- FO 4472/6472  GIS for Nat Resource Mgmt
- 4471/6471  Lab
- PSS 4373/6373  Geospatial Agronomic Management
- WF 4253/6253  GIS & GPS in Wildlife and Fisheries Mgt.

Materials Certificate Program
The Materials Science and Engineering Certificate Program, administered through the Bagley College of Engineering, is available to qualified students who complete an organized plan of study in the interdisciplinary field of Materials Science and Engineering at Mississippi State University.

The University’s various departments offer a range of materials-related courses in both the science and engineering fields, such as biomaterials, electronic and semiconductor materials, metals, composites, polymers, ceramics, and construction materials. We also have a wide range of supporting courses in the areas of materials modeling, mechanics, processing, and characterization, along with special topics in tribology, fatigue, fracture, and corrosion. Faculty participating in these course offerings are organized as the Materials Working Group (MWG).

As part of an organized plan of study, including Directed Individual Study courses under the direction of a MWG member, materials-based courses allow students to pursue an interdisciplinary education and training program tailored to individual interests.

The Materials Science and Engineering Certificate Program is available to both traditional and non-traditional students. This allowed industry to offer employees further training in materials, as well as provide current university students the opportunity to pursue an interdisciplinary materials specialty.

To apply for this program, the candidate must submit the initial application for the certificate to a MWG Faculty in their home department. The MWG Faculty will validate the proposed courses and forward the package to the MWG Chair. Upon successful completion of the required courses, the MWG will recommend award of the certificate by the Dean of Engineering.

Admission to the Certificate Program:
Students pursuing a materials certificate are typically:
- (1) Persons possessing at least a bachelor’s degree in engineering or science;
- (2) Persons working towards either a bachelor’s or master’s degree in engineering or science; or
- (3) Persons working in technical positions in industry desiring a certificate in materials but requiring additional prerequisites.

Minimum admission requirements:
To be admitted to the program a student must have satisfactorily completed freshman Chemistry (CH 1213, CH 1223), its associated laboratories (CH 1211, CH 1221), freshman Calculus (MA 1713, MA 1723), and Physics (PH 2213, PH 2223). In addition, the student is responsible for meeting all prerequisites for each course taken towards the materials certificate.

Candidates in categories (1) and (2) automatically will meet the program requirements, either upon entrance to the program or in parallel. For those lacking the prerequisites, additional course work must be completed successfully, either as a matriculated or non-matriculated student. In all cases, it is the responsibility of the student to provide an official transcript of all courses taken prior to admission into the program. An application form including a proposed course of study must be completed by the student and an official transcript must be provided for admission to the program. A member of Materials Engineering Working Group will review the application and agree to the program of study.

Certificate Requirements:
To receive a materials certificate, students must complete at least
one course from Level I, at least two courses from Level II, at least one course from level III, and a three-hour Directed Individual Study that incorporates a materials-related research project and is under the direction of a MWG faculty member. Students must obtain a grade of "C" or better in each class taken. 

Level I: Fundamental materials courses. This course may be part of the student’s home curriculum. Student must take at least ONE course.

- ABE 3813 Biophysical Properties of Materials
- CE 3313 Construction Materials
- CHE 3413 Engineering Materials
- ME 3403 Materials for Mechanical Engineering Design

Level II: Intermediate material courses. These courses extend and enrich the basic materials topics introduced in the Level I courses. Students must take at least TWO courses.

- CE 4633 Concrete Structures
- CHE 4323/6323 High Polymer Theory and Practice
- ECE 4243/6243 Electronic Materials
- EM 4133/6133 Mechanics of Composite Materials
- FP 4323/6323 Wood Physics
- PH 3613 Modern Physics

Elective: Special topics: Courses under development related to basic materials properties such as: Ceramics, Physical Metallurgy, Polymers, Composites and Electronic Materials.

Note: Only one of the two courses in Level II may be a special topic.

Level III: Advanced or Applied materials courses. Students must take at least ONE course.

- ABE 4523/6523 Biomedical Materials
- ABE/CHE/ME 4624/6624 Experimental Methods in Materials Research
- ABE 8314 Corrosion of Biomedical Implants
- CHE 4423/6423 Fundamentals of Industrial Corrosion
- EPP 8144 Transmission Electron Microscopy
- EPP 8223 Scanning Electron Microscopy
- FP 4423/6423 Mechanical Properties of Wood
- ME 4453/6453 Lubrication
- ME 4413/6413 Casting and Joining
- ME 4423/6423 Machining and Forming
- PH 4813/6413 Introduction to Solid State Physics

For further details about the program and a current listing of allowed courses, please contact the Office of the Dean of Engineering at 662-325-2270.

Software Engineering Certificate Program

Software Engineering is the application of engineering practices to the design and maintenance of software. Large complex software systems and products often involve millions of lines of code and operate in safety-critical environments. Software Engineering skills are critical to systems and products often involve millions of lines of code and operate in safety-critical environments. Programming experience is considered essential.

Admission to the Certificate Program:

It is anticipated that students from the following backgrounds will likely pursue a certificate in software engineering:

- Persons working in industry in a software development or maintenance function and who wish to improve their technical background.
- Government employees such as those located at the John C. Stennis Space Center or the U.S. Army Engineering Research and Development Center in Vicksburg who do not wish to complete a degree, but desire to take advantage of educational support available from their employer.
- Students on campus in related disciplines that would like to obtain this certificate in addition to another degree option.

All candidates, as a minimum, must demonstrate through experience or course work, the following:

- Knowledge of discrete mathematics, algorithms, and data structures at the level of an undergraduate course
- Practical knowledge or programming methods and computer organization.

Although it is expected that most students applying for this certificate program will hold undergraduate degrees from programs like computer science, engineering, mathematics, or physics; those holding a degree in another field will be considered for admission if they can clearly demonstrate the ability to perform graduate-level work in software engineering. Programming experience is considered essential.

Applications for admission to the Certificate in Software Engineering Program will be administered by the Department of Computer Science and Engineering. Students applying for admission may or may not be degree candidates - but all must make application to be admitted by the MSU Graduate School. Application for admission to the certificate program will result in a determination of qualification and, if admitted, an advisor will be assigned. The advisor will meet with the applicant to create a planned program of study and to obtain any necessary pre-requisite waivers that the student may need (primarily for non-traditional certificate candidates).

Requirements for Certificate Award

A minimum of 15 semester credit hours must be completed for award of the certificate. All the courses must be at the 4000 level or higher. Some of the certificate courses may count toward a degree, subject to approval of the Graduate School and the student’s Graduate Committee. Successful completion of the Certificate in Software Engineering requires completion of all courses in List A and any two from List B below:

List A (Certificate in Software Engineering Core Courses):

- CSE 4214/6214 Software Engineering
- CSE 8233 Software Engineering Project Management or
- IE 4533 Project Management
- CSE 4283/6283 Software Testing and Quality Assurance

List B (Certificate in Software Engineering Electives - choose two):

- CSE 4233/6233 Software Architecture and Design paradigms
- CSE 4243/6243 Information and Computer Security
- CSE 8243 Software Specification
- CSE 8253 Software Design
- CSE 8263 Software Verification and Validation

Issuance of Certificates

Upon a candidate’s successful completion of the program’s requirements, the College of Engineering will issue a certificate in Software Engineering. The candidate will submit the initial application for the certificate to the Department of Computer Science and Engineering. The department will validate that the candidate has met all requirements satisfactorily and will recommend award of the certificate to the Dean.

For further details about the program, contact the Department of Computer Science and Engineering at 662-325-2756.

GRADUATE STUDY

Graduate study leading to the Master of Science degree is available in Aerospace Engineering, Biological Engineering, Biomedical Engineering, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science, Computational Engineering, Electrical Engineering, Industrial Engineering and Mechanical Engineering. The Master of Science degree requires 24 semester hours of coursework and a thesis. The Master of Science (non-thesis option) is also offered with 33 semester hours of graduate study required. Computer Science also requires two semester hours of seminar for Computer Science. The Doctor of Philosophy degree is available in all departments, either through a composite inter-disciplinary program or through a specific major. In addition, interdisciplinary Ph.D. degrees are offered in Computational Engineering and Engineering Physics.

Professional Business Administration can be combined with professional engineering education in a program leading to a Bachelor of Science degree in a field of engineering and the Master of Business Administration degree in a field of Business. Students desiring further information on this program should consult the Director of Graduate Instruction in the College of Business and Industry. Counseling by the College of Business and Industry faculty will permit the most rapid rate of program completion. In most cases, a Bachelor of Science in a field of engineering, plus a Master of Business Administration, can be earned in five academic years plus one summer term.

Graduate teaching assistantships are available in most of the teaching departments in the College of Engineering, and a number of graduate research assistantships are available. Barrier and Honda graduate Fel-
lowships also are awarded each year. Because Mississippi State University is a member of the National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc. (GEM), students receiving GEM Fellowships may elect to pursue graduate studies in the College of Engineering at Mississippi State University. Engineering students interested in graduate study should consult with their department heads, the Associate Dean for Research and Graduate Studies in the Bagley College of Engineering, and The Office of Graduate Studies.

**OFF-CAMPUS CENTERS and PROGRAMS**

**Vicksburg Graduate Center**

The Bagley College of Engineering also offers the Master of Science degree in Civil Engineering, Engineering Mechanics, Chemical Engineering, Electrical Engineering, Computational Engineering, Computer Engineering, Computer Science, and Mechanical Engineering through the Vicksburg Center for Graduate Study in Engineering, in cooperation with the United States Army Engineering Research and Development Center. All requirements for the degree may be satisfied in the Vicksburg Center. Fifteen semester hours may be taken in courses taught by adjunct faculty, with an additional requirement of nine semester hours to be taken in courses taught by the regular, full-time engineering faculty at Mississippi State University. Thesis research and thesis requirements may be met in the Vicksburg Center through the appointment of a thesis director from the adjunct engineering faculty in Vicksburg and a major professor who is a member of the regular, full-time engineering faculty on the campus of Mississippi State University.

In addition to the courses taught on-site, students may register for courses delivered electronically in Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering, Industrial Engineering and Mechanical Engineering.

**Center of Higher Learning at the Stennis Space Center**

This center, located at the John C. Stennis Space Center in Hancock County, provides students the opportunity to pursue master’s degrees from Mississippi State University in Civil Engineering, Electrical Engineering, Industrial Engineering, and Mechanical Engineering, as well as a certificate in Software Engineering. Course materials are delivered by distance learning technologies - Internet delivered video, interactive video teleconferencing, and video tape. A dedicated student may earn a master’s degree in three or four years. Students must be fully admitted for graduate studies in one of the participating programs and follow a plan of study approved by the department.

Students may register for courses at the Center of Higher Learning. Courses are delivered by distance education technology during the enrollment period; corresponding sections of the same courses are taught simultaneously on the main campus in Starkville.

In addition to courses offered as part of the four degree programs, courses in other engineering disciplines may be offered upon request.

**Meridian Campus**

The Meridian campus of Mississippi State University is located at 1000 Highway 19 North in Meridian, Mississippi. For more information on courses offered through distance education in the College of Engineering, contact Anthony Lowe, Distance Learning Program Coordinator; Division of Academic Outreach & Continuing Education; Memorial Hall, Mississippi State University, MS 39762-9634. Mailstop -9634; phone: 662-325-2655; email: alowe@oacoe.msstate.edu.

**Department of AEROSPACE ENGINEERING (ASE)**

Department Head: Professor Anthony J. Vizzini
Major Advisor: Ms. Machaunda Bush
Office: 330 Walker Engineering Building

The Department of Aerospace Engineering at Mississippi State University provides an accredited undergraduate curriculum with the mission of preparing students to enter the workplace as qualified entry-level aerospace engineers or to enter any aerospace engineering graduate program adequately prepared for advanced study. This mission is accomplished by a strong foundation in mathematics, physical and engineering sciences upon which student problem solving and application skills are developed. The curriculum stresses analytical and communication skills, with particular emphasis placed on engineering design throughout the curriculum. A capstone design experience in the senior year provides the opportunity to integrate design, analytical, and problem solving skills along with communication skills in a team environment that emulates aerospace engineering practice.

The mission is accomplished by the following educational objectives, which describe what our graduates are expected to be able to accomplish during the first several years following graduation. Our graduates shall:

1. Demonstrate a good understanding of mathematics, basic physical sciences, and engineering sciences.
2. Show proficiency in the use of analytical and problem-solving skills.
3. Be able to apply their design skills.
4. Be proficient in written, oral, and graphic communication.
5. Demonstrate an appreciation for the arts, humanities, and social sciences.
6. Conduct themselves ethically and professionally, and exhibit personal integrity and responsibility in their actions.
7. Be able to work in a multi-disciplinary team environment, and lead when necessary to accomplish a given mission.
8. Appreciate the need for lifelong learning.

The aerospace engineering program is accredited under the EC 2000 criteria by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Telephone: 410-347-7700.

**University Core**

- English Composition (6 hours)
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I
- Humanities (6 hours)
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II
- Mathematics (9 hours)
  - See Major Core
- Science (6 hours)
  - See Major Core
- Social/Behavioral Sciences (6 hours)
  - See University Core

**Major Core**

- Math and Basic Science
  - MA 1713 Calculus I
  - MA 1723 Calculus II
  - MA 2733 Calculus III
  - MA 2743 Calculus IV
  - MA 3253 Differential Equations I
  - 3 hours Math Elective
- Engineering Mechanics
  - EM 2413 Engineering Mechanics I
  - EM 2433 Engineering Mechanics II
  - EM 3213 Mechanics of Materials
  - EM 3313 Fluid Mechanics
  - EM 3413 Vibrations
- Aerospace Engineering
  - ASE 1013 Intro to Aerospace Engineering
  - ASE 1023 Intro to Flight Mechanics
  - ASE 2013 Astrodynamics, Propulsion, and Structures
  - ASE 3123 Static Stability and Control
  - ASE 3213 Aircraft Structures I
  - ASE 3223 Aircraft Structures II
  - ASE 3313 Incompressible Aerodynamics
  - ASE 3333 Aerothermodynamics
  - ASE 4113 Aerospace Engineering Lab I
  - ASE 4123 Dynamic Stability and Control
  - ASE 4143 Astrodynamics I
  - ASE 4343 Compressible Aerodynamics
  - ASE 4413 Aerospace Propulsion
  - ASE 4513 Aerospace Vehicle Design I
  - ASE 4523 Aerospace Vehicle Design II
  - ASE 4623 Aerospace Structures III

**Engineering Topics**

- ECE 3183 Electrical Engineering Systems
- EM 2413 Engineering Mechanics I
- EM 2433 Engineering Mechanics II
- EM 3213 Mechanics of Materials
- EM 3313 Fluid Mechanics
- EM 3413 Vibrations
- ASE 1013 Intro to Aerospace Engineering
- ASE 1023 Intro to Flight Mechanics
- ASE 2013 Astrodynamics, Propulsion, and Structures
- ASE 3123 Static Stability and Control
- ASE 3213 Aircraft Structures I
- ASE 3223 Aircraft Structures II
- ASE 3313 Incompressible Aerodynamics
- ASE 3333 Aerothermodynamics
- ASE 4113 Aerospace Engineering Lab I
- ASE 4123 Dynamic Stability and Control
- ASE 4143 Astrodynamics I
- ASE 4343 Compressible Aerodynamics
- ASE 4413 Aerospace Propulsion
- ASE 4513 Aerospace Vehicle Design I
- ASE 4523 Aerospace Vehicle Design II
- ASE 4623 Aerospace Structures III
Aerospace Engineering Lab II 3 hours Aerospace Elective*
Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking
Writing Requirement
GE 3513 Technical Writing
Computer Literacy
Fulfilled by ASE 1013, ASE 1023 and ASE 2013

Total hours needed for major: 128
* This elective may be selected from the following: any of the department’s listing of Advanced Undergraduate/Graduate Courses, plus EM 4123, EM 4133 and EM 4143. Other courses require prior approval of the department head.

Department of AGRICULTURAL and BIOLOGICAL ENGINEERING (ABE)

Department Head: Professor William Batchelor
Office: 100 Agricultural and Biological Engineering Building

BIOLOGICAL ENGINEERING (BE)

Biological Engineering is that branch of the engineering profession which deals with engineering problems encountered in biological systems. The responsibilities of the Biological Engineer may include the need for more complex food-producing systems, controlling and monitoring the deterioration of the earth’s environment, the replacement of living organs and artificial organs, the use of new technologies to assist the disabled, and the creation of new engineering designs based on the inherently creative characteristics of living systems.

The curriculum in Biological Engineering is designed to give the student a thorough grounding in the basic sciences of mathematics, physics, chemistry, taken with and followed by a series of courses in the engineering and biological sciences and biological engineering.

The educational objectives of the program are as follows:
1. To educate students in the academic discipline of Biological Engineering so that they can formulate and solve engineering problems involving biological systems.
2. To ensure that students develop effective written and oral communication skills.
3. To instruct students in the latest computer-based technology in engineering.
4. To develop the students’ ability to work individually and in teams to complete engineering design projects.
5. To prepare students for employment in engineering jobs or for study in graduate and professional schools and for continual professional development.

Biomedical Engineering Concentration. Students interested in Biomedical Engineering may choose to pursue a concentration in Biomedical Engineering. This concentration is designed for undergraduate students in Biological Engineering who choose to pursue biomedical engineering as a career option. Biomedical Engineering is the rapidly growing interdisciplinary field of engineering that studies the integration of the engineering and biomedical sciences to solve problems associated with the human body and human health. The department has a rich history of biomedical engineering research and teaching that goes back to the early 1970s when the Biological Engineering curriculum at MSU was in its infancy. Students concentrating in biomedical engineering will gain knowledge in biomechanics, biomaterials, bioinstrumentation, physiology, and other topic areas germane to the field. The undergraduate Biomedical Engineering concentration is excellent preparation for students wishing to pursue graduate studies in Biomedical Engineering.

Agricultural Engineering Emphasis. An Agricultural Engineering emphasis is offered in the Biological Engineering curriculum in the Agricultural and Biological Engineering Department, which is jointly administered by the College of Engineering and the College of Agriculture and Life Sciences. The student can tailor a specialization in agricultural engineering by choosing the precision agriculture/agricultural systems emphasis in the Biological Engineering curriculum. Advisors in the department will assist students in selecting courses consistent with the agricultural engineering interests of the student. The Biological Engineering curriculum below should be consulted for required curricular courses.

Environmental Emphasis. Biological engineers can engage in environmental conservation and improvement efforts by monitoring environmental variables, designing sustainable environments, and designing treatment facilities for industrial and other wastes. Students pursuing this emphasis area will earn a B.S. degree in Biological Engineering and be eligible for employment by industry, consulting firms, and governmental agencies such as state departments of environmental quality and the Environmental Protection Agency.

Premedical Emphasis. The Biological Engineering curriculum offers a premedical emphasis which not only leads to a degree in Biological Engineering but also prepares students for acceptance into most medical, dental, and veterinary schools. Students completing this program have demonstrated their ability to tackle tough subjects, perform well under stressful conditions, work together in teams, learn new material, and achieve ambitious goals - characteristics desired by the best medical, dental, and veterinary schools.

The Biological Engineering degree and the Biomedical Engineering concentration curricula are offered by the Department of Agricultural and Biological Engineering and are jointly administered by the College of Engineering and the College of Agricultural and Life Sciences.

The Biological Engineering Program is accredited under the EC 2000 criteria by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Telephone: 410-347-7700.

University Core

English Composition (6 hours)
EN 1103 English Comp I OR EN 1163 Accelerated Comp I
EN 1113 English Comp II OR EN 1173 Accelerated Comp II

Mathematics (9 hours)
See Major Core

Science (6 hours)
See Major Core

Humanities (6 hours)
See University Core

Fine Arts (3 hours)
See University Core

Social/Behavioral Sciences (6 hours)
See University Core

Major Core

Math and Basic Science
MA 1713 Calculus I
MA 1723 Calculus II
MA 2733 Calculus III
MA 2743 Calculus IV
MA 3253 Differential Equations I
CH 1213 Chemistry I
CH 1211 Investigations in Chemistry I
CH 1223 Chemistry II
CH 1221 Investigations in Chemistry II
CH 2503 Elementary Organic Chemistry
CH 2501 Elementary Organic Chemistry Lab
PH 2213 Physics I
PH 2223 Physics II

BIO 3304 General Microbiology
BCH 3613 Elementary Biochemistry

Engineering Topics
EM 3213 Mechanics of Materials
EM 3313 Fluid Mechanics
ABE 1911 Intro to Engineering in Life Sciences
ABE 2421 Analytical Methods
ABE 4803 Biosystems Simulation
ABE 3413 Bioinstrumentation I
ABE 3303 Transport in Biological Environment
ABE 4423 Bioinstrumentation II
ABE 3813 Biophysical Properties of Materials
ABE 4812 Principles of Engineering Design
ABE 4122 Biological Engineering Practices Lab
CSE 1233 Computer Programming with C
EM 2413 Engineering Mechanics I
EM 2433 Engineering Mechanics II
ME 3533 Thermodynamics
Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking
Writing Requirement
GE 3513 Technical Writing
Computer Literacy
Fulfilled in Engineering Topics courses

Choose one of the following sets of courses to complete the degree:

**Biological Engineering Degree Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABE 4313</td>
<td>BioTrtmt NPS Poll OR</td>
</tr>
<tr>
<td>ABE 4323</td>
<td>Phys Sys Biomed Eng</td>
</tr>
<tr>
<td>4 hours</td>
<td>BIO Science Elective</td>
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<tr>
<td>3 hours</td>
<td>BIO Science Elective</td>
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<td>3 hours</td>
<td>BIO Science Elective or Engineering elective</td>
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<td>6 hours</td>
<td>Approved Engineering Electives</td>
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<td>3 hours</td>
<td>ABE Elective</td>
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**Biomedical Engineering Concentration**

<table>
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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PH 2233</td>
<td>Physics III</td>
</tr>
<tr>
<td>BIO 1504</td>
<td>Zoology</td>
</tr>
</tbody>
</table>
| Restricted BIO Science Elective (see below)**
| ABE 4523    | Biomedical Materials |
| ABE 4613    | Biomechanics |
| Restricted Engineering Elective I (see below)**
| Restricted Engineering Elective II (see below)**

**Total hours needed for major: 128**

* Fulfills Jr./Sr. Writing Requirement.
** Restricted BIO Science Elective: BIO 2103, BIO 3504, BIO 4514, BIO 4413 or BIO 4503.
Restricted Engineering Elective: EM 4123, EM 4213, EM 4133, or ME 4833.
Restricted Engineering/Math Elective: ABE 4533, MA 3113, MA 4373, MA 4543, or ECE 5714.

**DAVE C. SWALM SCHOOL of CHEMICAL ENGINEERING (CHE)**

Director: Mark G. White
Office: 330 Swalm Chemical Engineering Building

Chemical Engineering is the application of the principles of the physical sciences, together with the principles of economics and team building, to fields that pertain directly to processes and process equipment in which material is treated to effect a change in state, energy content, or composition. The Chemical Engineering profession is quite diversified in terms of industries and opportunities within those industries.

Students graduating from the Dave C. Swalm School of Chemical Engineering are expected to function as chemical engineers that have the potential for far-reaching impacts on the advancement of science and industrial practice. Students graduating from the Dave C. Swalm School of Chemical Engineering are expected to function as chemical engineers that have the potential for far-reaching impacts on the advancement of science and industrial practice. Graduates will receive a broad education that will enable them to become proficient practicing engineers with meaningful, challenging and rewarding careers that impact the strength of the technological and industrial base. In addition, the education that is received in the Swalm School will benefit those who pursue advanced degrees or attend professional school after graduation. These objectives will be attained by meeting the following teaching goals:

A. Provide chemical engineering graduates with a foundation of learned engineering principles. This is accomplished by instilling in the graduates skills in

- Fundamental math (algebra and calculus principles)
- Basic science
- Engineering concepts
- Oral and Written communication
- Perspective through art, humanities and social/behavioral sciences

B. Provide graduates with fundamental engineering principles to address the practice and/or research aspects of chemical engineering. This is achieved through training in

- Problem solving skills
- Traditional Chemical Engineering Fundamentals

- Advanced math concepts (differential equations and conceptions building on these principles)
- The application and development of computer skills
- Team building and cooperative working groups
C. Enhance the graduates’ engineering abilities to become practicing chemical engineers. This is achieved using a holistic approach incorporating

- Product and Process Design
- Economical Aspects
- Ethics
- Environmental Issues
- Health and Safety Issues
- Professionalism

Design experiences are integrated throughout the chemical engineering curriculum, beginning with the Design Concepts for CHE courses taken during the freshman year, continuing through the unit operations and reactor design courses and culminating in a comprehensive design experience in Plant Design taken during the senior year. Students may select the CHE elective, Chemistry elective and two technical electives from among the faculty-approved lists to provide depth in a given area of chemical engineering.

The Chemical Engineering program is accredited under the EC 2000 criteria by the Engineering Accreditation Commission of the accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Telephone: 410-347-7700.

**University Core**

- **Mathematics (9 hours)**
  - See Major Core
- **Science (6 hours)**
  - See Major Core
- **Humanities (6 hours)**
  - See University Core
- **Fine Arts (3 hours)**
  - See University Core
- **Social/Behavioral Sciences (6 hours)**
  - See University Core

**Major Core**

- **Math and Basic Science**
  - MA 1713 Calculus I
  - MA 1723 Calculus II
  - MA 2733 Calculus III
  - MA 2743 Calculus IV
  - MA 3253 Differential Equations I
  - CH 1213 Chemistry I
  - CH 1211 Investigations in Chemistry I
  - CH 1223 Chemistry II
  - CH 1221 Investigations in Chemistry II
  - CH 4413 Physical Chemistry I
  - CH 4513 Organic Chemistry I
  - CH 4523 Organic Chemistry II
  - PH 2213 Physics I
  - PH 2223 Physics II

**Engineering Topics**

- EM 2413 Engineering Mechanics I
- CHE 1101 Chemical Engineering Freshman Seminar
- CHE 1231 Design Concepts in Chemical Engineering
- CHE 2114 Mass and Energy Balances
- CHE 2213 CHE Analysis
- CHE 3113 Chemical Engineering Thermodynamics I*
- CHE 3123 Chemical Engineering Thermodynamics II
- CHE 3203 Fluid Flow Operations*
- CHE 3213 Heat Transfer Operations*
- CHE 3222 Chemical Engineering Laboratory I
- CHE 3223 Mass Transfer Operations
- CHE 3232 Chemical Engineering Lab II
- CHE 3413 Engineering Materials
- CHE 4113 Chemical Reactor Design
- CHE 4134 Process Design
Department of CIVIL ENGINEERING

Department Head: Professor Thomas White  
Office: 235 Walker Engineering Building

The Civil Engineer plans, designs, and supervises construction of almost every facility essential to modern life. Roads, bridges, buildings, water supply and waste disposal systems, transit systems, airfields, dams and irrigation projects are examples of the creative efforts of Civil Engineers. The field of Civil Engineering offers limitless employment opportunities that range from high-tech computer-aided design to hands-on field engineering. Civil Engineers find rewarding careers in government, military, industry or private practice to meet the challenges of pollution control, energy, transportation, housing and other problems that face modern society.

The mission of the Civil Engineering Department at Mississippi State University is to provide the student with knowledge and skills needed to enter civil engineering practice, or to continue studies at the graduate level, and who have developed a sense of responsibility to the needs of the professor and the community.

The education program objectives of the Department of Civil Engineering carry out the department’s mission by providing an educational environment that will produce graduates who:

1. Possess a broad knowledge of the principles and fundamentals of civil engineering and their application, and thus be able to: successfully practice as professional civil engineers; pursue graduate or professional degrees; or engage in other professional careers that involve the application of the engineering method;
2. Possess the skills required to achieve success in the multidisciplinary environment of the 21st century, such that they will readily be able to adapt to emerging and evolving technologies, social conditions, professional standards, and career opportunities;
3. Possess an understanding and appreciation of the ethical, societal and professional responsibilities of a civil engineer; and
4. Possess the foundation required and an appreciation for the value of continuing professional development in maintaining their professional competence.

The Civil Engineering Program is accredited under the EC 2000 criteria by the Engineering Accreditation Commission of the Accreditation Board for the Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Telephone: 410-347-7700.

University Core

English Composition (6 hours)
- EN 1103  English Comp I OR
- EN 1163  English Comp II OR
- EN 1113  Accelerated Comp I
- EN 1173  Accelerated Comp II

Mathematics (9 hours)
- See Major Core

Science (6 hours)
- See Major Core

Humanities (6 hours)
- See University Core

Fine Arts (3 hours)
- See University Core

Social/Behavioral Sciences (6 hours)
- See University Core

Major Core

Math and Basic Science
- MA 1713  Calculus I
- MA 1723  Calculus II
- MA 2733  Calculus III
- MA 2743  Calculus IV
- MA 3253  Differential Equations I
- CH 1213  Chemistry I
- CH 1211  Investigations in Chemistry I
- CH 1223  Chemistry II
- CH 1221  Investigations in Chemistry II
- PH 2213  Physics I
- PH 2223  Physics II

Engineering Topics
- EG 1143  Graphic Communication
- IE 3913  Engineering Economy I
- ST 3123  Intro to Stat. Inference
- ME 3533  Thermodynamics
- EM 2413  Engineering Mechanics I
- EM 2433  Engineering Mechanics II
- EM 3213  Mechanics of Materials
- EM 3313  Fluid Mechanics
- CE 1001  Intro to Civil Engineering
- CE 2213  Surveying
- CE 2803  Envir. Engineering Issues
- CE 3113  Transportation Engineering
- CE 3313  Construction Materials
- CE 3413  Soil Mechanics
- CE 3601  Stress Analysis Lab
- CE 3603  Structural Mechanics
- CE 3801  Envir. & Water Res. Eng. I Lab
- CE 3803  Envir. & Water Res. Eng I
- CE 3813  Envir. & Water Res. Eng II Lab
- CE 3813  Envir. & Water Res. Eng II
- CE 4601  Fundamentals of Structural Design
- CE 4903  Civil Engineering Comprehensive

Total hours needed for major: 128

Choose one:
- CE 4133  Geometric Design of Highways
- CE 4433  Foundations
- CE 4143  Traffic Engineering
- CE 4103  Pavement Design

Choose one:
- CE 4513  Engineering Hydrology
- CE 4873  Water and Wastewater Engineering
- CE 4523  Open Channel Hydraulics

Choose one:
- CE 4623  Steel Structures
- CE 4633  Concrete Structures

Technical Elective (3 hours)

May be approved courses in Eng. Topics and Math/Science

Oral Communication Requirement

Fulfilled in GE 3513 and other CE courses

Writing Requirement

GE 3513  Technical Writing

Computer Literacy

Fulfilled in Engineering Topics courses

Total hours needed for major: 130
Department of COMPUTER SCIENCE and ENGINEERING (CSE)

The Department of Computer Science and Engineering is dedicated to maintaining quality programs in undergraduate teaching, graduate teaching, and research, and to the fruitful interaction between teaching and research. In research, we wish to maintain our present emphasis on applications (often pursued with colleagues from other disciplines), and upon the synergistic relationships between theory and applications in which the most meaningful advances often result. The department has identified three specific areas in which we shall seek national prominence: software engineering, artificial intelligence, and high-performance computing/scientific visualization. The Department of Computer Science and Engineering offers degree programs leading to the Bachelor of Science degree in Computer Science, Software Engineering, and (jointly with the Department of Electrical and Computer Engineering) Computer Engineering. The department also offers study leading to the Master of Science and the Doctor of Philosophy degrees in Computer Science.

The Mississippi Alpha Chapter of Upsilon Pi Epsilon, the national computer science honorary society, was chartered at the University in 1973 and juniors, seniors, and graduate students with outstanding academic records are selected for membership. The department also supports a student chapter of ACM, the national professional society of the computing sciences.

For more information about the computer science or software engineering programs, requirements of double-major programs, careers in computer science and software engineering, or placement of graduates, please contact the Department of Computer Science and Engineering at Box 9637, Mississippi State, MS 39762, at office@cse.msstate.edu, or at 662-325-2756. View the Computer Science Web pages at http://www.cse.msstate.edu/. For more information about the Computer Engineering program, please see the section on the Department of Electrical and Computer Engineering.

Computer Science (CS)

Major Advisor: Dr. David Dampier
300 Butler Hall

Computer Science is the study of the principles, applications, and technologies of computing and computers. It involves the study of data and data structures and the algorithms to process these structures; principles of computer architecture-both hardware and software; problem solving and design methodologies; and language design, structure and translation techniques. Computer Science provides a foundation of knowledge for students with career objectives in a wide range of computing and computer-related professions.

The objectives for the department with respect to the Bachelor of Science Degree in Computer Science are as follows:

1. The instruction a student receives will be consistent with national norms and will enable the student to become a competent software developer, to understand how computer hardware and software work, and to understand computer science theory.
2. The graduate can compete for jobs in the discipline at both the regional and national levels, and will be able to solve technical problems together with co-workers, to use and develop software tools, to communicate effectively in the workplace, and to apply computer science theory to practical circumstances.
3. The graduate can compete for admission to graduate programs nationwide, and will be able to continue learning new principles and practices of computing as the field progresses.
4. The graduate will understand social and ethical issues that arise from the increased use of technology in society.

Computer Science graduates begin careers as computer programmers, systems analysts, program/analysts, software engineers, systems programmers, computer system engineers and in a number of other computer-related jobs. A minor in computer science is available to students with major programs of study in other fields at the University.

The Bachelor of Science degree requires the completion of a total of 128 credit hours of general studies, computer science, mathematics and science, supporting technical courses. To graduate, a student must have a “C” average in all MSU computer science and engineering courses attempted.


University Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Mathematics (9 hours)
- See Major Core

Science (6 hours)
- See Major Core

Humanities (6 hours)
- See University Core

Social/Behavioral Sciences (6 hours)
- See University Core

Math and Basic Science
- MA 1713 Calculus I
- MA 1723 Calculus II
- MA 2733 Calculus III
- MA 3113 Linear Algebra
- CH 1213 Chemistry I
- CH 1211 Investigations in Chemistry I
- PH 2213 Physics I
- PH 2223 Physics II

Engineering and Computer Science Topics
- CSE 1284 Intro to Computer Programming
- CSE 1384 Intermediate Computer Programming
- CSE 2383 Data Structures and Analysis of Algorithms
- CSE 2813 Discrete Structures
- CSE 3324 Distributed Client/Server Programming
- CSE 3813 Formal Languages

Computer Architecture
- IE 4613 Engineering Stats I
- 12 hours CSE electives from departmental list
- 6 hours Technical Electives - see advisor
- PH 1113 Introduction to Logic
- 6 hours International/Intercultural Studies - see advisor

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

Writing Requirement
- GE 3513 Technical Writing

Computer Literacy
- Fulfilled in Engineering & Computer Science Topics courses

Total hours needed for major: 128

Students taking BIO 1203 and 3 hour science elective need 2 hours of free electives

Computer Science Minor. Computer science has application in a broad range of disciplines, and students with majors in other fields of study may wish to complement their studies with a minor in computer science. Completion of the minor requirements should prepare the student to pursue a career as a computer applications specialist within his/her field of study or as an entry-level computer programmer in the general computing environment. The minor in computer science is not available to students majoring in computer engineering or software engineering since significant parts of these majors consist of computer science courses.
A minor in computer science consists of CSE 1284, CSE 1384, CSE 2383, CSE 2813 and nine hours of approved upper-division courses. A list of approved courses is available from the Department of Computer Science and Engineering.

**Software Engineering (SE)**
Major Advisor: Dr. David A. Dampier
300 Butler Hall

Software Engineering is the application of engineering practices to the design and maintenance of software. The Software Engineering degree program prepares students for careers in the engineering of large complex software systems and products. These systems often involve millions of lines of code and frequently operate in safety-critical environments. The Software Engineering major contains courses related to the study of software engineering in practice necessary to manage these development processes. The faculty for the Software Engineering program is drawn from the Department of Computer Science and Engineering and the Department of Industrial Engineering.

The objectives for the department with respect to the Bachelor of Science Degree in Software Engineering are as follows:

1. The instruction a student receives will be consistent with the software engineering body of knowledge and enables the student to understand the state-of-the-practice engineering of software systems and products and to become a competent software developer, and to understand how software systems are designed, constructed, and maintained.
2. The graduate can successfully compete for software engineering positions in the discipline at both the regional and national levels, and will be successful in the discipline by being able to apply computer science to software engineering processes in practical circumstances.
3. The graduate can solve technical problems together with coworkers in a team environment, can use and develop software tools, and apply written and oral communication skills effectively in the workplace.
4. The graduate can compete for admission to graduate programs nationwide, and will be able to continue learning new principles and practices of computing as the field progresses. The graduate is capable of advancing to professional certification, as it becomes available nationwide.
5. The graduate will understand and be able to apply social and ethical principles to situations that arise from the increased use of technology in society.

The Bachelor of Science degree in Software Engineering requires the completion of a total of 128 credit hours of general studies, computer science, industrial engineering, mathematics and science, supporting technical courses, and free electives. To graduate, a student must have a “C” average in all MSU computer science and engineering courses attempted.


**University Core**

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<thead>
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<th>English Composition (6 hours)</th>
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<tbody>
<tr>
<td>EN 1103 English Comp I OR</td>
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<td>EN 1163 Accelerated Comp I</td>
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<td>EN 1113 English Comp II OR</td>
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Mathematics (9 hours)
See Major Core

Science (6 hours)
See Major Core

Humanities (6 hours)
See University Core

Fine Arts (3 hours)
See University Core

Social/Behavioral Sciences (6 hours)
See University Core

**Major Core**

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<td>MA 1713 Calculus I</td>
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<td>MA 2743 Calculus IV OR</td>
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<td>MA 3053 Foundations of Mathematics</td>
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<td>MA 3253 Differential Equations OR</td>
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<td>MA 3113 Linear Algebra</td>
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<td>CH 1211 Investigations in Chemistry I</td>
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<td>PH 2213 Physics I</td>
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<td>PH 2223 Physics II</td>
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<tr>
<td>BIO 1203 Plant Biology OR</td>
</tr>
<tr>
<td>BIO 1504 Principles of Zoology</td>
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</tbody>
</table>

**Engineering Topics**

| CSE 1284 Intro to Computer Programming |
| CSE 1384 Intermediate Computer Programming |
| CSE 2383 Data Structures and Analysis of Algorithms |
| CSE 2813 Discrete Structures             |
| CSE 3324 Distributed Client/Server Program |
| CSE 4214 Intro to Software Engineering   |
| CSE 3981 Social & Ethical Issues in Computing |
| CSE 4733 Operating Systems               |
| CSE 4503 Database Management Systems     |
| CSE 4833 Introduction to Analysis of Algorithms |
| CSE 4233 Software Architecture & Design Paradigms |
| CSE 4153 Data Communications & Computer Networks |
| CSE 3213 Software Engineering Capstone I |
| CSE 4283 Software Testing & Quality Assurance |
| CSE 3223 Software Engineering Capstone II |
| ECE 3714 Digital Devices                 |
| ECE 3724 Microprocessors                 |
| IE 4533 Project Management               |
| IE 4613 Engineering Statistics I         |
| 3 hours CSE Security Elective            |
| 9 hours Technical elective - see advisor |

**Oral Communication Requirement**

| CO 1003 Fundamentals of Public Speaking |

**Writing Requirement**

| GE 3513 Technical Writing |

**Computer Literacy**

Fulfilled in Engineering Topics courses

**Total hours needed for major: 128**

**Software Engineering Minor.** Software Engineering practices and skills are valuable in a wide range of disciplines, and students with majors in other fields of study may wish to complement their studies with a minor in software engineering. Completion of the minor requirements should prepare the student to pursue careers that involve the application and development of software systems in their field of study.

A minor in software engineering consists of CSE 1284, CSE 1384, CSE 2383, CSE 4214 and nine hours of approved upper-division software engineering courses. A list of approved courses is available from the Department of Computer Science and Engineering.
Department of ELECTRICAL and COMPUTER ENGINEERING (ECE)

Department Head: Professor James C. Harden
Office: 216 Simrall Engineering Building

The specific educational objectives for the Computer Engineering and Electrical Engineering undergraduate programs are that students:

1. demonstrate a strong foundation in fundamentals through an applied competence in mathematics, science, computing, and engineering;
2. demonstrate the ability to apply innovative techniques to address unstructured problems specific to technical specialties in Computer Engineering or Electrical Engineering by identifying and implementing solutions using the proper tools, practical approaches, and flexible thinking;
3. interact with others, both individually and within multidisciplinary teams using effective oral and written communication skills and have the ability to deal with both technical and non-technical subjects when working with peers, supervisors, and the public;
4. develop an appreciation for the ethical duties incumbent on a Computer Engineering or Electrical Engineering professional including a commitment to lifelong learning and concern for society and the environment.

COMPUTER ENGINEERING (CPE)

Major Advisor: Mr. Mike Nosser
Office: 216 Simrall Engineering Building

With the origin of the modern computer dating back to the late 1940’s and the growth of computer hardware fueled by the availability of digital integrated circuits starting in the late 1960’s, Computer Engineers have enjoyed a pivotal role in technology that now permeates our entire society. Whether the end product is an integrated circuit, a system of networked embedded computers, or any system that relies on digital hardware or computer software, its development requires the skills of a Computer Engineer. While computing systems include both hardware and software, it is the optimal combination of these components that is the unique realm of the Computer Engineer. Today, Computer Engineers are a driving force in the technological and economic development of the digital age.

The curriculum requirements for Computer Engineering are built around a substantial engineering core curriculum and required courses in Electrical Engineering and Computer Science. The requirements in mathematics, the basic sciences, and engineering sciences provide the breadth of exposure required for all engineering disciplines. Basic Electrical Engineering requirements include Circuit Theory, Electronics and Digital Devices which are supplemented by upper-level courses in Computer Architecture, Embedded Systems and Computer Aided Design of Digital Systems. Basic Computer Science courses include a coordinated sequence providing fundamental knowledge in data structures, algorithms, object oriented programming, software engineering, real-time application and software development tools. These courses are developed across multiple platforms and are based on the C++ and Java language. Upper-level courses in Data Communications and Computer Networks, Algorithms and Operating Systems are also provided. Students wishing to gain depth of coverage in communications, parallel computing, VLSI or signal processing can achieve this with the availability of technical electives selected from an approved list or in consultation with a faculty advisor. Required courses in communications skills, social sciences and humanities provide studies in non-technical areas that are traditional in a broad-based education. A capstone senior design course requires students to apply newfound knowledge and explore entrepreneurship. Students research and identify a problem and work in teams applying a combination of hardware and software to develop a solution. Critical and Final Design Reviews enable students to develop their professional presentation skills.

The Computer Engineering Program is accredited under the EC 2000 criteria by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Telephone: 410-347-7700.

This program is offered through joint efforts of faculty in the Department of Electrical and Computer Engineering and the Department of Computer Science and Engineering.

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<td>Mathematics (9 hours)</td>
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<td>MA 1713 Calculus I</td>
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<td>MA 4533 Probability and Random Processes</td>
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<td>CH 1211 Investigations in Chemistry I</td>
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<td>PH 2213 Physics I</td>
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<td>PH 2223 Physics II</td>
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<th>Engineering Topics</th>
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<td>CSE 1284 Intro to Computer Programming</td>
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<td>CSE 1384 Intermediate Computer Programming</td>
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<td>CSE 2383 Data Structures and Analysis Algorithms</td>
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<td>CSE 2813 Discrete Structures</td>
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<td>CSE 3324 Distributed Client/Server Programming</td>
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<td>CSE 4153 Data Communications &amp; Computer Networks</td>
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<td>CSE 4733 Operating Systems I</td>
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<td>CSE 4833 Introduction to Analysis of Algorithms</td>
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<td>ECE 1002 Introduction to Electrical and Computer Eng</td>
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<td>ECE 3163 Signals and Systems</td>
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<td>ECE 3413 Intro to Electronic Circuits</td>
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<td>ECE 3424 Intermediate Electronic Circuits</td>
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<td>ECE 3434 Advanced Electronic Circuits</td>
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<td>ECE 3714 Digital Devices and Logic Design</td>
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<td>ECE 3724 Microprocessors</td>
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<td>ECE 4723 Embedded Systems</td>
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<td>ECE 4532 CPE Design I</td>
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<td>ECE 4542 CPE Design II</td>
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<td>ECE 4713 Computer Architecture</td>
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<td>ECE 4743 Digital System Design</td>
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<tr>
<td>6 hours Technical Electives*</td>
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<th>Oral Communication Requirement</th>
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<td>CO 1003 Fundamentals of Public Speaking</td>
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<th>Writing Requirement</th>
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<td>GE 3513 Technical Writing</td>
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<th>Computer Literacy</th>
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<td>Fulfilled in Engineering Topics courses</td>
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**Total hours needed for major: 128**

ELECTRICAL ENGINEERING (EE)

Major Advisor: Mr. Mike Nosser
Office: 216 Simrall Engineering Building

The Electrical Engineer is a principal contributor to the modern technological age in which we live today. Following in the footsteps of inventors such as Thomas Edison and Alexander Graham Bell, the Electrical Engineer is developing technology that improves the quality of life. Developments in microelectronics, telecommunications, and power systems have had a profound effect on each of us. Electrical Engineers have affected all segments of our society such as transportation, medicine, and the entertainment industry, to name only a few. Indeed, the Electrical
Engineer has principally been responsible for the advent of the computer age in which we live today as well as the computer’s miniaturization and rapid expansion in computational power.

The curriculum in Electrical Engineering has a foundation based on the principles of the electrical and physical sciences and uses mathematics as a common language to facilitate the solution of engineering problems. The core curriculum consists of a sequence of courses in digital devices, circuits and electronics, electromagnetics, electromagnetic field theory, and modern energy conversion. In the senior year, students have the opportunity to take additional course work in one or more technical areas that include: telecommunications, electromagnetics, power systems, high voltage, feedback control systems, microelectronics, signal processing, and computer systems. Supporting course work outside electrical engineering consists of a strong background in mathematics, physical sciences, computer programming, social sciences, fine arts, humanities, and personal communication skills. Computers are used extensively throughout the curriculum, and students are expected to become proficient in higher-order programming languages and several application software tools. Although the concept of design is stressed throughout the program so as to emphasize the problem-solving skills of the engineer, the senior year includes a capstone design experience where much of the previous study is culminated. Through this two-semester design course sequence, students are required to integrate design and analytical problem-solving skills together with communication skills in a team environment.

The Electrical Engineering Program is accredited under the EC 2000 criteria by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Telephone: 410-347-7700.

**University Core**

**English Composition (6 hours)**
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

**Mathematics (9 hours)**
- See Major Core

**Science (6 hours)**
- See Major Core

**Humanities (6 hours)**
- See University Core

**Fine Arts (3 hours)**
- See University Core

**Social/Behavioral Sciences (6 hours)**
- See University Core

**Major Core**

**Math and Basic Science**
- MA 1713 Calculus I
- MA 1723 Calculus II
- MA 2733 Calculus III
- MA 2743 Calculus IV
- MA 3253 Differential Equations I
- MA 3113 Introduction to Linear Algebra
- MA 4533 Probability and Random Processes
- CH 1213 Chemistry I
- CH 1211 Investigations in Chemistry I
- PH 2213 Physics I
- PH 2223 Physics II
- PH 2233 Physics III

**Engineering Topics**
- CSE 1284 Intro to Computer Programming
- CSE 1384 Intermediate Computer Programming
- ECE 1002 Introduction to Electrical and Computer Eng.
- ECE 3163 Signals and Systems
- ECE 3413 Introduction to Electronic Circuits
- ECE 3424 Intermediate Electronic Circuits
- ECE 3434 Advanced Electronic Circuits
- ECE 3313 Electromagnetics I
- ECE 3323 Electromagnetics II
- ECE 3414 Fundamentals of Energy Systems
- ECE 4512 EE Design I
- ECE 4522 EE Design II
- ECE 3714 Digital Devices and Logic Design
- ECE 3724 Microprocessors
- EM 2413 Engineering Mechanics I OR ME 3533 Thermodynamics

- 9 hours EE technical electives*
- 3 hours Engineering Science elective*
- 3 hours Free elective
- 3 hours Professional Enrichment elective*

**Oral Communication Requirement**
- CO 1003 Fundamentals of Public Speaking

**Writing Requirement**
- GE 3513 Technical Writing

**Computer Literacy**
- Fulfilled in Engineering Topics courses

* See advisor for approved courses.

**Total hours needed for major: 128**

**Department of INDUSTRIAL ENGINEERING (IE)**

Department Head: Professor Royce Bowden
Office: 260 McCain Engineering Building

Industrial engineering is the application of engineering methods and the principles of scientific management to the design, improvement, and installation of integrated systems of people, materials, information, equipment, and energy. The industrial engineer is concerned with the design of total systems, and is the leader in the drive for increased productivity and quality improvement.

The industrial engineering profession uses a variety of specialized knowledge and skills. These include communications, economics, mathematics, physical and social sciences, together with the methods of engineering analysis and design.

The industrial engineer is often involved in designing or improving major systems that encompass the total organization. Consequently, he/she is often in contact with individuals from many segments of the organization. From his/her education and these experiences, the industrial engineer develops a global view of the many inter-related operations necessary to deliver a firm’s goods and services. Because of their management skills and global view of the organization, a large proportion of industrial engineers move into management positions, and later advance into top management positions.

Although industrial engineering is especially important to all segments of industry, it is also applied in other types of organizations, such as transportation, health care, public utilities, agriculture, defense, government, and merchandising. Industrial engineering is finding increasing application in service industries.

With increasing emphasis on quality and productivity for successful international competition, it is expected that industrial engineers will be in increasing demand in the coming decades.

The objectives of the Department of Industrial Engineering are founded in Mississippi State University’s Educational Philosophy and in the industrial engineering profession. They were developed to satisfy the needs of the department’s constituents: students, employers, alumni and faculty.

The industrial engineering program objective is to graduate students having a broad education, with emphasis in industrial engineering fundamentals and practices, which enables them to function effectively in systems involving people, materials, information, energy, and money.

Consequently, within the first few years after graduation, graduates from the industrial engineering program are expected to:

1. Demonstrate ability to function effectively within an organization with an understanding of its many operations and its management styles.
2. Demonstrate competence in analyzing and designing operation and management systems, and their controls, to safely and effectively produce and deliver the organization’s products and services.
3. Demonstrate ability to understand, explain, and predict system behavior using current or proposed resources, configurations and limitations, if needed, mathematical and computer modeling.
4. Demonstrate basic and professional skills in communication (both written and oral), economics, physical and social science, mathematics, and statistics.
The broad education the student receives in Industrial Engineering at Mississippi State University, in the arts and humanities, as well as in mathematics, sciences, and engineering prepares the student:

5. To think independently and to critically examine ideas, and make discerning professional judgments that balance intellectual, ethical, and aesthetic considerations.

6. To interact professionally in situations with others having different backgrounds, cultures, education, and interests.

7. To be responsible and informed citizens.

8. For a lifelong pursuit of learning through personal investigations and readings, through conferences, short courses or through formal education.

The faculty and staff strive to provide excellence in instruction in its industrial engineering courses, using advanced teaching methods and technologies in classrooms, laboratories, and other educational settings.

Because of the importance of systems design in the many facets of industrial engineering, instruction of the principles and methods of design is integrated throughout the curriculum of industrial engineering, and culminates in a major design experience in the student's senior year.

The Industrial Engineering Program is accredited under the EC 2000 criteria by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Baltimore, MD 21202-4012. Telephone: 410-347-7700.

### University Core

- **English Composition (6 hours)**
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II

- **Mathematics (9 hours)**
  - See Major Core

- **Science (6 hours)**
  - See Major Core

- **Humanities (6 hours)**
  - See University Core

- **Fine Arts (3 hours)**
  - See University Core

- **Social/Behavioral Sciences (6 hours)**
  - PSY 1013 General Psychology
  - EC 2123 Principles of Micro Econ

### Major Core

- **Math and Basic Science**
  - MA 1713 Calculus I
  - MA 1723 Calculus II
  - MA 2733 Calculus III
  - MA 2743 Calculus IV
  - MA 3113 Intro to Linear Algebra
  - CH 1211 Chemistry I
  - CH 1213 Chemistry I
  - CH 1223 Chemistry II
  - PH 2213 Physics I
  - PH 2223 Physics II

- **Math/Science Elective: Choose one of the following:**
  - PH 2233 Physics III OR
  - MA 3253 Differential Equations I

- **Engineering Topics**
  - CHE 3413 Engineering Materials
  - ECE 3183 Electrical Engineering Systems
  - EM 2413 Engineering Mechanics I
  - IE 1911 Introduction to IE
  - IE 3124 Industrial Ergonomics
  - IE 3322 Manufacturing Processes
  - IE 3913 Engineering Economy I
  - IE 4934 Information Systems for IE
  - IE 4333 Production Control I
  - IE 4513 Engineering Administration
  - IE 4543 Logistics Engineering
  - IE 4613 Engineering Statistics I
  - IE 4623 Engineering Statistics II
  - IE 4653 Industrial Quality Control I
  - IE 4733 Linear Programming
  - IE 4753 Systems Engineering & Analysis

- **IE 4773 Systems Simulation I**
- **IE 4915 Design of Industrial Systems**
- **ACC 1203 Basic Industrial Accounting**
- **EG 1142 Engineering Graphics**
- **3 hours IE Design Elective**
- **6 hours Engineering Science Elective**

**Oral Communication Requirement**
- **CO 1003 Fundamentals of Public Speaking**

**Writing Requirement**
- **GE 3513 Technical Writing**

**Computer Literacy**
- Fulfilled in Engineering Topics courses

**Total hours needed for major: 128**

* Any three-hour industrial engineering course not required in curriculum, except Motion and Time Study (IE 3113).

** Courses that can be used for the Engineering Science Elective are EM 2433, EM 3213, EM 3313, ECE 3283 and ME 3533.

### Department of MECHANICAL ENGINEERING

**Major Advisor: Ms. Chris Emplaincourt**

**Office: 213 Carpenter Engineering Building**

Mechanical Engineering is the application of science and mathematics to the design, development, and operation of mechanical and energy systems. Examples of these systems include mechanical devices ranging from simple linkages and gears to complex automated robots and energy systems ranging from basic water pumps to high-performance jet engines. Since the range of applications is so broad, virtually all industries employ Mechanical Engineers in various capacities. Some of the major areas of employment are the manufacturing, chemical, paper, aerospace, utility, construction, transportation, petroleum, electronics, and computer industries.

The mission of the Department of Mechanical Engineering is to educate students in fundamental engineering principles, thus enabling the understanding of existing and next generation technologies relevant to research and engineering practice. All graduates will receive a broad education that will enable them to be successful in industry or academia, the profession and the community.

To carry out this mission, the Mechanical Engineering faculty, with input from other constituencies, has established the following objectives that describe the expected accomplishments of graduates during the first few years following graduation:

1. Demonstrate competence in applying the fundamentals of mathematics, basic sciences, and engineering sciences to the practice of engineering.
2. Demonstrate competence in applying modern engineering analytical and experimental methods and tools to the practice of engineering.
3. Utilize the engineering approach to problem solving in the design of systems and devices.
4. Demonstrate effective oral and written communication skills and the ability to work in teams.
5. Demonstrate ethics in engineering practice and exhibit growth in the profession.

The Mechanical Engineering curriculum is designed to meet these objectives. The basic courses in mechanics, materials, thermodynamics, electronics, and dynamics prepare the student for the comprehensive design courses in the senior year culminating in major design experiences in energy systems and in mechanical systems. Throughout the curriculum there is significant use of the computer to solve realistic engineering problems. All entering ME juniors will be required to have a portable computer that they will use interactively in the classroom. The ME laboratory sequence stresses the planning, design, and operation of experiments. The curriculum also places a strong emphasis on technical communications. Senior technical electives allow the student to study particular areas of interest.

The Mechanical Engineering Program is accredited under the EC 2000 criteria by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012. Telephone: 410-347-7700
University Core
English Composition (6 hours)
EN 1103 English Comp I OR
EN 1163 Accelerated Comp I
EN 1113 English Comp II* OR
EN 1173 Accelerated Comp II*
Mathematics (9 hours)
See Major Core
Science (6 hours)
See Major Core
Humanities (6 hours)
See University Core
Fine Arts (3 hours)
See University Core
Social/Behavioral Sciences (6 hours)
See University Core

Major Core
Math and Basic Science
MA 1713 Calculus I*
MA 1723 Calculus II*
MA 2733 Calculus III*
MA 2743 Calculus IV*
MA 3113 Intro to Linear Algebra*
MA 3253 Differential Equations I*
CH 1213 Chemistry I
CH 1211 Investigations in Chemistry I
CH 1223 Chemistry II*
PH 2213 Physics I*
PH 2223 Physics II
PH 2233 Physics III

Engineering Topics
IE 3913 Engineering Economy
EM 2413 Engineering Mechanics I*
EM 2433 Engineering Mechanics II*
EM 3313 Mechanics of Fluids*
EM 3213 Mechanics of Materials*
ECE 3183 Electrical Engineering Systems*
ECE 3283 Electronics
ME 3133 Modeling and Manufacturing
ME 3513 Thermodynamics I*
ME 3523 Thermodynamics II
ME 1111 Introduction to Mechanical Engineering
ME 3113 Engineering Analysis*
ME 3313 Heat Transfer
ME 3423 Mechanics of Machinery
ME 3701 Experimental Orientation
ME 3403 Materials for Mechanical Engineering Design
ME 4721 Experimental Techniques I
ME 4731 Experimental Techniques II
ME 3613 System Dynamics
ME 4403 Machine Design
ME 4443 Mechanical Systems Design
ME 4643 Automation of Mechanical Systems
ME 4333 Energy Systems Design
6 hours Technical Elective**

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Writing Requirement
GE 3513 Technical Writing

Computer Literacy
Fulfilled in Engineering Topics courses

Total hours needed for major: 128

* A grade of C or better must be made in these courses.
** Mechanical Engineering technical electives are listed on the Web at www.me.msstate.edu/academics/techelects.html. Substitutions may be approved by writing the ME Dept.
College of Forest Resources

GEORGE M. HOPPER, Dean
107 Thompson Hall
Telephone: 662-325-2953

Keith L. Belli, Associate Dean
111 Thompson Hall
Telephone: 662-325-2778
Mailing Address: Box 9680
Mississippi State, MS 39762-9680

GENERAL INFORMATION

Organization. The College of Forest Resources is composed of the Departments of Forestry, Wildlife and Fisheries, and Forest Products. The College is a part of the Division of Agriculture, Forestry, and Veterinary Medicine.

Graduates receive a Bachelor of Science degree in Forestry, Forest Products, or Wildlife and Fisheries Science. Within the Forest Products major there are curricular concentrations in Wood Industries Management, Marketing and Building Supply Operations, Forest Products Technology, Industrial Environmental Operations and Wood Materials Science. Within the Forestry major, there are curricular concentrations in Forest Management, Environmental Conservation, Urban Forestry, and Wildlife Management. Each of these curricular concentrations in the forestry major meet the requirements for the professional degree in Forestry. Within the Wildlife and Fisheries Science major there are curricular concentrations in Fisheries and Aquaculture Science, Wildlife Science, Conservation Law Enforcement, and Wildlife Pre-Veterinary Medicine. Each of these curricular concentrations meet requirements for the professional degree in Wildlife by the Wildlife Society or in Fisheries by the American Fisheries Society. Each department offers courses leading to the Master’s and Ph.D. degrees.

Graduate Programs in Forest Resources. Graduate programs leading to a M.S. or Ph.D. degree are offered in the College of Forest Resources: Departments of Forestry, Forest Products, and Wildlife and Fisheries. For detailed information about graduate study, see the Graduate Bulletin. Copies of the Graduate Bulletin may be secured by writing to Office of Graduate Studies, P.O. Box G, Mississippi State, Mississippi 39762-5726.

Research. Research is conducted in the College of Forest Resources under the direction of the Department of Forestry, the Department of Wildlife and Fisheries, and the Department of Forest Products. Professors are employed jointly as professors and research scientists. There is opportunity for students to gain valuable experience by working part-time as research assistants. The experimental work often provides valuable demonstrations for the teaching program. Forestry-related research also is conducted in other departments of the University, and there are cooperative research arrangements with federal agencies, notably the Southern Forest Experiment Station of the U.S. Forest Service, which operates research programs with headquarters at four locations in Mississippi, including the Inventory and Analysis Research Unit and the Forest Tree Seed Research Unit located in Thompson Hall at Mississippi State University. Wildlife and Fisheries research also is conducted by a Cooperative Unit of the U.S. Fish and Wildlife Service which is located in Thompson Hall. All these activities enrich the teaching program.

Facilities. The classrooms and many of the laboratories and offices of the College of Forest Resources are located in Thompson Hall, a modern building with excellent facilities for teaching and research in forestry and wildlife and fisheries. The facilities used for research— instruments, apparatus, literature, experimental forests, greenhouses, captive animal facilities and fish ponds—also are available in the teaching program. The John W. Starr Memorial Forest of 8,000 acres is conveniently close to the campus, managed and regularly used for demonstration, as well as research. Adjoining the Starr Memorial Forest are the Noxubee National Wildlife Refuge and the Tombigbee National Forest, which also are used for student instruction and research. The Sharp Forest, 1,600 acres in Tishomingo County, was given to the University by Jack, Mollie, and Kate Sharp to be used for forest resources education and research with part of the income designated for scholarships.

Entrance Requirements. Transfer students with less than 2.0 quality point average may not be admitted automatically to the College of Forest Resources’ degree programs. Permission to enroll will be granted on an individual basis, depending on specific circumstances and the requirements of the major for which the student seeks to enroll.

Graduation Requirements. Course and hour requirements for graduation are those shown in the individual programs of study. Each student is expected to become familiar with the courses and the prerequisites in the curriculum in which he/she expects to graduate and to be responsible for meeting those requirements. He/she is expected to consult a faculty advisor each semester prior to pre-registration. Two semesters prior to graduation, students must complete a graduation audit in the Office of Student Services.

The final 32 semester credit hours must be completed in residence on the Mississippi State University campus.

FORESTRY (FO)

Major Advisor: Dr. Keith L. Belli
Office: 327 Thompson Hall

The Objective. The objective of the Forestry Major is to prepare its graduates for professional, science-based careers in the management and use of forested ecosystems. By combining courses offering a broad general education with specialized professional courses, the curriculum of the Forestry Major is designed to produce professionally competent graduates who have appropriate development in interpersonal relations, written and oral communications, cultural understanding, environmental awareness, and professional ethics.

Accreditation: The educational programs in Forest Management, Wildlife Management, Urban Forestry, and Environmental Conservation leading to the first professional degree in Forestry at Mississippi State University are accredited by the Society of American Foresters (SAF). SAF is the specialized accrediting body recognized by the Commission of Recognition of Post-secondary Accreditation and the U.S. Department of Education as the accrediting agency for forestry education in the United States.

The Major: The core curriculum of the Forestry Major is comprised of specifically selected and intentionally designed courses which must be completed satisfactorily by each student who intends to graduate in this major. In addition to completing the core curriculum of the Forestry Major, each student must complete one of the four academic concentrations for specialized study offered by the Forestry Major. The four academic concentrations are Forest Management, Wildlife Management, Urban Forestry, and Environmental Conservation. Each of the four concentrations is an integral part of the Forestry Major and is accredited by the SAF. Graduates of the major are qualified to become a Registered Forester in Mississippi after completing an examination for this purpose from the Board of Registration for Foresters in Mississippi.

The Forestry Major is designed for completion in four academic years plus a nine-week summer field program between the sophomore and junior years. Completion of the special summer field program is prerequisite to enrollment in junior/senior level professional courses in the Forestry Major and students should plan their schedules accordingly. Correspondence courses are not accepted toward the forestry degree.

Transfer Students: Transfer students are encouraged to enter the Forestry Major at MSU in the Spring semester of their sophomore year to complete their academic programs in the normal four-year period of study. Transfer students should be aware that course work taken else-
where may not be accepted toward a degree in forestry. Only course work that is determined by the Forestry Department to be equivalent to required course work will be accepted. In addition, no course work will be considered for acceptance unless a grade of C or better has been earned.

**Degree Requirements:** In addition to University and College requirements students must attain a minimum grade of C on the Forestry Major core courses taught within the College of Forest Resources. These courses are: FO 1101, FO 2111, FO 2112, FO 2213, FO 3012, FO 3015, FO 3102, FO 3101, FO 4121, FO 4123, FO 4133, FO 4221, FO 4223, FO 4213, FO 4231, FO 4233, FO 4313, FO 4323, FO 4413, FO 4423, WF 3031 and WF 4153.

**University Core**

- **English Composition (6 hours)**
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II

- **Mathematics (6 hours)**
  - MA 1313 College Algebra or equivalent
  - ST 2113 Statistics for Beh Sciences OR
  - BQA 2113 Business Stats Methods I

- **Natural Science (6 hours)**
  - CH 1043 Survey of Chemistry I
  - BIO 1203 Plant Biology

- **Humanities (6 hours)**
  - See University Core

- **Fine Arts (3 hours)**
  - See University Core

- **Social/Behavioral Sciences (6 hours)**
  - FO 4113 Forest Resource Economics
  - AEC 2713 Intro Food and Resource Economics OR
  - EC 2113 Intro to Macroeconomics OR
  - EC 2123 Intro to Microeconomics

- **Note:** Prerequisites and co-requisites are strictly enforced in the College of Forest Resources. It is the student’s responsibility to be aware of prerequisites and co-requisites for all courses required in his or her program; prerequisites and co-requisites are identified in the Course Description section of this Bulletin.

**Major Core**

- **BIO 1504 Principles of Zoology**
- **EPP 3124 Forest Pest Management**
- **FO 1101 Forest Resources Survey**
- **FO 2111 Dendrology Lab**
- **FO 2112 Dendrology**
- **FO 2213 Forest Measurements**
- **FO 3012 Intro to Forest Communities**
- **FO 3015 Forest Description and Analysis**
- **FO 4121 Principles of Silviculture Lab**
- **FO 4122 Principles of Silviculture**
- **FO 4213 Forest Biometrics**
- **FO 4221 Practice of Silviculture Lab**
- **FO 4222 Practice of Silviculture**
- **FO 4231 Forest Operations and Harvesting Lab**
- **FO 4233 Forest Operations and Harvesting**
- **FO 4313 Spatial Tech in Nat Res Mgt**
- **FO 4323 Forest Resources Management**
- **FO 4413 Natural Resources Policy**
- **FO 4423 Professional Practice**
- **PSS 3303 Soils**
- **WF 3031 Intro to Wildlife and Fisheries Practices**
- **WF 4153 Prin of Wildlife Conservation & Mgt**

**Oral Communication Requirement**

- **CO 1003 Fundamentals of Public Speaking**

**Computer Literacy Requirement**

- **FO 3101 Computer Appl for Forest Resources Lab**
- **FO 3102 Computer Appl for Forest Resources**

**Writing Requirement**

- **AIS 3203 Intro Tech Writing in Ag-comm OR**
- **MGT 3213 Organizational Comm OR**
- **BIO 3013 Prof Writing for Biologists**

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**Choose one of the following concentrations:**

The academic concentrations within the Forestry Major are offered to encourage the student to design a program with the assistance of a faculty advisor that will fit his or her interests and aptitudes. Each concentration has been constructed by substituting restricted, or in some cases directed, electives for what otherwise would appear as Business, Science, Free, or Professional electives in the major. Concentrations are intended to provide opportunities for the student to focus beyond the foundation education provided by the core curriculum of the Forestry Major. Concentrations are not intended to provide the depth of study demanded by a separate major.

**Forest Management Concentration**

Advisor: Dr. Scott D. Roberts
351 Thompson Hall

This concentration provides the basic education necessary to enter the profession of forestry with the Bachelor of Science degree, yet permits a wide choice of electives. The student may elect courses in almost any subject of interest, if prerequisites are met; however, credit toward the degree will not be allowed for remedial courses, nor for courses covering substantially the same material as courses already passed, or covering only part of the subject matter of required courses.

Faculty advisors are assigned to assist students in selecting electives to meet their personal objectives. A program of study leading to a double degree in forestry and business is available.

Courses to be taken in addition to those in the core curriculum of the Forestry Major are as follows:

**Total hours needed for major: 128**

* Professional electives and Business Science electives are chosen from a list approved by the Department of Forestry.

**Wildlife Management Concentration**

Advisor: Dr. Emily B. Schultz
315 Thompson Hall

Undergraduate students who wish to prepare for careers in wildlife management may do so by completing the Wildlife Management Concentration of the Forestry Major. This concentration is designed for forestry students who intend to pursue careers that emphasize wildlife management within the context of multiple-use management of forest land. In addition, the Wildlife Management Concentration prepares the student for a number of wildlife management positions and fulfills the course requirements for certification as a Wildlife Biologist by the Wildlife Society. Graduates of this concentration may undertake graduate studies in forestry or wildlife ecology and related areas.

Courses to be taken in addition to those in the core curriculum of the Major are as follows:

**Total hours needed for major: 127**

* Professional electives are chosen from a list approved by the Department of Forestry.
Environmental Conservation Concentration

Advisor: Dr. Keith L. Belli
327 Thompson Hall

Students interested in careers dealing with complex environmental issues in the realm of forest resource management may prepare themselves through this concentration. All students within this concentration are required to take the following seven courses:

- PH 1113 General Physics OR
- PH 2213 Physics I
- FO 3113 Forest Recreation Management
- FO 4463 Forest Hydrology & Watershed Mgt
- BIO 3104 Ecology
- FO 4452 Remote Sensing
- FO 4451 Remote Sensing Lab

14 hrs

EMPHASIS ELECTIVES

Land Emphasis
- FO 4472/71 GIS Nat Res Mgt and Lab
- FO 4483 Forest Soils
- GG 1113 Survey of Earth Sciences I
- GG 1111 Earth Sciences I Lab
- GG 3133 Intro Environ Geology
- GR 1114 Physical Geography
- GR 3113 Conservation of Natural Res
- GR 4603 Climatology
- PSS 4333 Soil Conservation and Use

Social Emphasis
- AN 4173 Environment and Society
- CO 2203 Negotiations
- FO 4353 Forestry Law
- PHI 1123 Intro to Ethics
- PHI 4143 Philosophy of Science
- SO 4703 Population Problems

Science Emphasis
- BIO 2503 Environmental Quality
- BIO 4203 Taxonomy of Spermatophytes
- BIO 4213 Plant Ecology
- WF 1213 Intro to Wildlife and Fish Conservation
- WF 3133/31 App Aquatic and Terrestrial Ecol with Lab
- WF 4222 Limnology
- WF 4221 Limnology Lab
- WF 4363 Wetlands Ecology and Mgt

Total hours needed for major: 128

An entire block of courses in a particular area of emphasis may be chosen, or a sampling of each may be recommended. Other courses may be substituted with approval by the Department of Forestry.

Urban Forestry Concentration

Concentration Advisor: Dr. Stephen C. Grado
357 Thompson Hall

This concentration addresses an emerging need for the management of trees in out towns and cities. Urban foresters manage trees along city streets, in municipal parks, private wood lots, and utility right-of-ways. Employers include federal, state, and municipal governments, private consultants, and industry.

Courses to be taken in addition to those in the core curriculum of the major are as follows:

- FO 3113 Forest Recreation Management
- FO 4353 Forestry Law
- FO 4471 GIS Nat Res Management Lab
- FO 4472 GIS Nat Res Management
- LA 3623 Urban Planning
- PS 1113 American Government
- PSS 2423 Plant Materials I
- PSS 3473 Plant Materials II
- PSS 4353 Arbor and Landscape Maintenance
- REM 3253 Real Property Evaluation
- REM 3333 Principles of Real Estate

Total hours needed for major: 128

Wildlife and Fisheries Science (WF)

Major Advisor: Eric Dibble
Office: 109 Thompson Hall

Sustainable management of the diverse wildlife and fisheries resources by private and public sectors, requires knowledgeable and technically competent people. The Department of Wildlife and Fisheries offers a major in Wildlife and Fisheries Science designed to provide students with a curriculum that has foundations in biology, ecology, natural resources management, computer science, and other contemporary educational needs for natural resources professionals. Four concentrations are available to students: fisheries and aquaculture science, wildlife science, conservation law enforcement, and wildlife pre-veterinary medicine. The curriculum will prepare students for employment in natural resource professions within private, federal, or state wildlife, fisheries, or aquaculture sectors. Additionally, the curriculum ensures that students are eligible for employment upon graduation, as well as providing the academic background required for further post-graduate studies.

Students may proceed towards a DVM degree by taking the concentration entitled the wildlife pre-veterinary program. Students, upon completing the course work outlined in the wildlife pre-veterinary program, may apply for admission into the College of Veterinary Medicine. Alternatively, students accepted into the early entry veterinary program, upon completing the wildlife pre-veterinary program satisfactorily, may be admitted into the College of Veterinary Medicine. There also is an opportunity to pursue, with an additional year, a M.S. degree in Veterinary or Wildlife Science. Upon successful completion of course requirements, the student will graduate with a B.S. degree in Wildlife and Fisheries Science, pre-veterinary concentration at the end of the fourth year, and a DVM at the end of the seventh year.

Course work in the Wildlife Science and the Conservation Law Enforcement concentrations, and the wildlife Pre-veterinary program, enables students to fulfill the course work requirements necessary to become Certified Wildlife Scientists. The Wildlife Science concentration exceeds requirements for certification by the American Fisheries Society as an Associate Fisheries Scientist.

The Wildlife and Fisheries Science Major is designed for completion within four years, but some students may not complete the program in that time because of course scheduling or other constraints. Students also are required to enroll in a two-week summer session prior to the junior year (except for the wildlife pre-veterinary program students). Transfer students are encouraged to begin course work at MSU by the end of their sophomore year to enable graduation in four years. Transfer students should be aware that course work taken elsewhere may not be accepted toward a degree in Wildlife and Fisheries Science. Only course work determined by the Wildlife and Fisheries Department to be equivalent to required course work will be accepted. Additionally, no course work will be considered for acceptance unless a grade of C or better has been earned. Correspondence courses will not be accepted toward the Wildlife and Fisheries Science Degree. Transfer students with a grade point average less than or equal to 2.0 may not be admitted automatically into the Wildlife and Fisheries Science Department.

Sustainable management of the diverse wildlife and fisheries resources by private and public sectors, requires knowledgeable and technically competent people. The Department of Wildlife and Fisheries offers a major in Wildlife and Fisheries Science designed to provide students with a curriculum that has foundations in biology, ecology, natural resources management, computer science, and other contemporary educational needs for natural resources professionals. Four concentrations are available to students: fisheries and aquaculture science, wildlife science, conservation law enforcement, and wildlife pre-veterinary medicine. The curriculum will prepare students for employment in natural resource professions within private, federal, or state wildlife, fisheries, or aquaculture sectors. Additionally, the curriculum ensures that students are eligible for employment upon graduation, as well as providing the academic background required for further post-graduate studies.

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The Wildlife and Fisheries Science Major is designed for completion within four years, but some students may not complete the program in that time because of course scheduling or other constraints. Students also are required to enroll in a two-week summer session prior to the junior year (except for the wildlife pre-veterinary program students). Transfer students are encouraged to begin course work at MSU by the end of their sophomore year to enable graduation in four years. Transfer students should be aware that course work taken elsewhere may not be accepted toward a degree in Wildlife and Fisheries Science. Only course work determined by the Wildlife and Fisheries Department to be equivalent to required course work will be accepted. Additionally, no course work will be considered for acceptance unless a grade of C or better has been earned. Correspondence courses will not be accepted toward the Wildlife and Fisheries Science Degree. Transfer students with a grade point average less than or equal to 2.0 may not be admitted automatically into the Wildlife and Fisheries Science Department. Permission to enroll on specific circumstances and the requirements of the Wildlife and Fisheries Science Major. In addition to University and College requirements, students must maintain a C or better in Wildlife and Fisheries Science major core courses taught within the College of Forest Resources. These courses are concentration specific. Students in the wildlife pre-veterinary program, interested in pursuing the Veterinary Medicine program, must meet all admission requirements by the College of Veterinary Medicine.

University Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Mathematics (6 hours)
- MA 1613 Calculus for Bus & Life Sciences OR
- MA 1713 Calculus I
- MA 3123 Intro to Statistical Inference

Natural Science (9 hours)
- BIO 1203 Plant Biology
- BIO 1504 Principles of Zoology

See concentrations for additional requirements
Humanities (6 hours)
  3 hours See University Core
  3 hours See concentrations
Fine Arts (3 hours)
  See University Core
Social/Behavioral Sciences (6 hours)
  AEC 2713 Intro to Food & Resource Economics OR
  EC 2113 Intro to Macroeconomics OR
  EC 2123 Intro to Microeconomics
  3 hours See concentrations

Note: Pre-requisites and co-requisites are strictly enforced in the College of Forest Resources. It is the student’s responsibility to be aware of pre-requisites and co-requisites for all courses required in his or her program; pre-requisites and co-requisites are identified in the Course Description section of this Bulletin.

Major Core

WF 1101 Wildlife and Fisheries Profession
PSS 3303 Soils
FO 2112 Dendrology
FO 2111 Dendrology Lab
BIO 3524 Biology of Vertebrates
WF 3133 Appl Aquatic and Terrestrial Ecology
WF 3131 Appl Aquatic and Terrestrial Ecology Lab
WF 4122 Wildlife and Fisheries Biometrics
WF 4121 Wildlife and Fisheries Biometrics Lab
WF 4473 Wildlife and Fisheries Practices

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking
Writing Requirement
AIS 3203 Intro to Tech Writ in Ag Comm OR
MGT 3213 Organizational Comm OR
BIO 3013 Prof Writing for Biologists

Choose one of the following concentrations:

The Concentrations: The academic concentrations within the Wildlife and Fisheries Science Major are offered to enable students to develop an academic background that is suited to their professional career goals. Each concentration has been developed to supplement the core curriculum which provides the basis for the wildlife and fisheries science major, regardless of the area of expertise desired by the student.

Fisheries and Aquaculture Science Concentration
Advisor: Dr. Louis A. D’Abramo
Room 255 Thompson Hall

This concentration is designed for undergraduate students who wish to pursue one or more advanced degrees (M.S., Ph.D.), as it prepares students for graduate school. This concentration is intended for serious, academically strong students, who maintain an A-B grade record (GPA 3.0), which is the minimum required for admittance into graduate schools. Undergraduate students who wish to seek employment within the aquaculture industry, particularly as farm managers, upon graduation should consider the aquaculture concentration within the Department of Agricultural and Biological Engineering.

Courses to be taken in addition to those of the core curriculum include:

3 hours Humanities Elective - see University Core
3 hours Social Science Elective - see University Core
CH 1043 Survey of Chemistry I
CH 1051 Experimental Chemistry Lab
CH 2503 Elementary Organic Chemistry
CH 2501 Elementary Organic Chemistry Lab
PH 1113 General Physics OR
PH 2213 Physics I
BIO 3103 Genetics
BIO 3304 General Microbiology
BIO 4513 Ichthyology
PSS 3301 Soils Lab
WF 1213 Intro to Wildlife & Fish Conservation
WF 3141 Wildlife and Fisheries Seminar
WF 4133 Fisheries Science
WF 4173 Fish Physiology
WF 4183 Principles and Practices of Aquaculture
WF 4222 Limnology
WF 4223 Limnology Lab
WF 4253 App. Spatial Tech and Wildlife Mgmt.
WF 4313 Fisheries Management
WF 4463 Human Dim. of Fish Wildlife Mgmt.
4 hours Entomology Elective*
3 hours Human Resource Mgt or Policy Elective*
3 hours Professional Elective*
3 hours Natural Resource Management Elective*

Total hours needed for major: 124

* All electives are chosen from a list approved by the Department of Wildlife and Fisheries.

Conservation Law Enforcement Concentration
Advisor: Dr. Kevin M. Hunt
Room 223 Thompson Hall

This concentration is designed for undergraduate students who wish to seek employment immediately following receipt of a B.S. degree and wish to obtain positions related to natural resource law enforcement (e.g., conservation officers, park rangers) or wildlife managers (not biologists). Students may, upon graduation within this concentration, continue on to graduate school in the human dimensions-law enforcement or wildlife arenas. Starting salaries, on average, would be less than with a M.S. degree.

Courses to be taken in addition to those of the core curriculum include:

PHI 1123 Intro to Ethics OR
PHI 3013 Business Ethics
SO 1003 Intro to Sociology
PSY 1013 General Psychology
CH 1043 Survey of Chemistry I
CH 1053 Survey of Chemistry II
CH 1051 Experimental Chemistry Lab
BIO 4203 Taxonomy of Spermatophytes
BIO 4523 Mammalogy
BIO 4543 Ornithology
PSS 3301 Soils Lab
COR 3103 Criminal Justice Systems
SO 3313 Deviant Behavior
SO 3603 Criminology
WF 1213 Intro to Wildlife & Fisheries Conservation
WF 3141 Wildlife and Fisheries Seminar
WF 4153 Prin Wildlife Conservation and Mgmt
WF 4243 Wildlife Techniques
WF 4253 Appl Spatial Tech. and WF Mgmt
WF 4313 Fisheries Management
WF 4353 Fish & Wildlife Policy & Law Enforce.
WF 4463 Human Dim. of Fish Wildlife Mgmt
3 hours Professional Elective*
3 hours Human Resource Mgt Elective*
3 hours Natural Resources Mgt Elective*
3 hours Nutrition/Physiology/Anatomy Elective*

Total hours needed for major: 124

* All electives are chosen from a list approved by the Department of Wildlife and Fisheries.

Wildlife Science Concentration
Advisor: Dr. Richard M. Kaminski
Room 249 Thompson Hall

This concentration is designed for undergraduate students who wish to pursue one or more advanced degrees (M.S., Ph.D.), as it prepares students for graduate school. Employment following this B.S. program is possible, but competition for jobs may be keen. This concentration is intended for serious, academically strong students, who maintain a A-B grade record (GPA 3.0), which is the minimum required for admittance into most graduate schools.

Courses to be taken in addition to those of the core curriculum include:

3 hours Humanities Electives - see University Core
3 hours Social Science Elective - see University Core
CH 1043 Survey of Chemistry I
CH 1053 Survey of Chemistry II
The mission of the Department of Forest Products is to enhance the intellectual, cultural, social, and professional development of its students by providing them with knowledge and skills needed to utilize and conserve diverse forest resources effectively. In this regard, the department’s primary teaching responsibility is to provide the high quality educational opportunities necessary to adequately prepare students for professional and scientific careers in forest products and wood science.

The State Legislature established the Forest Products Department in 1964. Its establishment culminated work by a group of Mississippians to obtain a research facility to serve the technical needs of forest-based industries and uses of wood products in the state. Five laboratory-office buildings and other special purpose buildings, with a combined floor space in excess of 90,000 square feet, comprise the Department’s physical plant. These buildings house the analytical and testing equipment, pilot plants, and support facilities required for a comprehensive research program involving wood and wood products.

Forest Products’ graduates work in industry, higher education, trade associations and government agencies across the country. Graduates find employment in four broad areas: manufacturing, marketing, technical service, and research. Career preparation in the manufacturing and marketing of wood products and furniture, for positions requiring high level skills with a broad technical background, in processing operations, such as drying, furniture manufacturing, gluing, machining, preservation, and chemical modification is available. All Forest Products students learn the biological, physical, chemical, and mechanical properties of wood as raw material.

Forest Products provides strong career opportunities in materials science, engineering, materials processing, process design and control, marketing and business. The processing of wood into a multitude of products requires professional wood scientists and technologist trained to understand the nature of this complex material and markets in which it is sold.

The Forest Products curriculum is accredited by the Society of Wood Science and Technology. Double degree programs with the College of Business and Industry are available.

A student enrolled in the forest products major must complete a specified core curriculum and one of five academic concentrations within the major:

1. Marketing & Building and Supply Operations
2. Forest Products Technology
3. Industrial Environmental Operations
4. Wood Industries Management
5. Wood Materials Science

**University Core**

- English Composition (6 hours)
  - EN 1103 English Comp I OR
  - EN 1163 Accelerated Comp I
  - EN 1113 English Comp II OR
  - EN 1173 Accelerated Comp II

- Mathematics (6 hours)
  - See concentration for specific requirements

- Natural Science (9 hours)
  - See concentration for additional requirements

- Humanities (6 hours)
  - See University Core and Concentration for requirements

**Fine Arts (3 hours)**

- See University Core

**Social/Behavioral Sciences (6 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>AEC 2713</td>
<td>Intro to Microeconomics OR</td>
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<tr>
<td>AEC 2713</td>
<td>Intro to Microeconomics</td>
</tr>
<tr>
<td>EC 2113</td>
<td>Intro to Macroeconomics and</td>
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<tr>
<td>EC 2123</td>
<td>Intro to Microeconomics OR</td>
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<tr>
<td>EN 1103</td>
<td>English Comp I OR</td>
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<td>EN 1163</td>
<td>Accelerated Comp I</td>
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<tr>
<td>EN 1113</td>
<td>English Comp II OR</td>
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<tr>
<td>EN 1173</td>
<td>Accelerated Comp II</td>
</tr>
<tr>
<td>AEC 2713</td>
<td>Intro to Food &amp; Resource Economics</td>
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<tr>
<td>For either EC 2113 or EC 2123</td>
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</tbody>
</table>

Note: Pre-requisites and co-requisites are strictly enforced in the College of Forest Resources. It is the student’s responsibility to be aware of pre-requisites and co-requisites for all courses required in his or her program; pre-requisites and co-requisites are identified in the Course Description section of this Bulletin.
Major Core
- FO 2112 Dendrology
- FO 2111 Dendrology Lab
- FP 1103 Wood Tech and Products
- FP 3012 Intro to Forest Industries
- FP 4013 Wood Anatomy
- FP 4023 Wood Chemistry
- FP 4253 Quant. Methods in FP and Furniture
- FP 4313 Environmental Principles
- FP 4323 Physical Properties of Wood
- FP 4413 Professional Practice
- FP 4423 Mechanical Properties of Wood
- 9 hours Forest Products Electives
- 3 hours Professional Electives
- 3 hours Free Elective

Oral Communication Requirement
- CO 1003 Fundamentals of Public Speaking

* Professional electives and Forest Product electives are chosen from a list approved by the Department of Forest Products.

Choose one of the following concentrations:

Marketing & Building Supply Operations Concentration
This concentration is designed to meet the needs of industry for individuals with knowledge and training in basic sciences, business management and marketing, as well as a thorough knowledge in wood properties and manufacturing technologies, technical aspects of building materials and service life. Students completing this curriculum can expect to begin their careers in technical and managerial positions in sales, building supply operations, marketing, distribution of forest products, and/or product development. Employment opportunities are varied with students finding positions in industry, government agencies, associations serving the wood-based industry, and chain operations. Today, marketing increasingly is being recognized and utilized as a key element in the overall production environment. The addition of management and business courses to complement the knowledge and experience received in the technical concentration will begin their careers in manufacturing management in a production environment. The course work is designed to provide students with skills to advance rapidly beyond entry-level positions. Students pursuing this emphasis will receive a marketing minor.

Course requirements include:
- MA 1613 Calculus for Bus and Life Sciences OR
- MA 1713 Calculus
- BQA 2113 Business Statistics Methods I OR
- IE 4613 Engineering Statistics I OR
- ST 3123 Intro to Statistical Inference
- PH 1113 General Physics OR
- PH 2213 Physics I
- CH 1043 Survey of Chemistry I
- CH 1053 Survey of Chemistry II
- CH 1051 Experimental Chemistry Lab
- MGT 3114 Principles of Management
- ACC 1203 Basic Industrial Accounting
- FP 4233 Furniture Production I
- 3 hours Free Elective

Total hours needed for major: 124

* Professional and FP electives are chosen from a list approved by the Dept. of Forest Products.
+ If BIS 1012 is selected for Computer Literacy, then seven hours of electives are required.

Industrial Environmental Operations Concentration
This concentration is designed to provide Forest Products students with the background to pursue careers as environmental managers within the forest products industry. Environmental compliance is a major component of all forest products manufacturers and industry has requested that prospective employees become knowledgeable in this field. Students that successfully complete this concentration will have career opportunities in virtually any forest products manufacturing operation with opportunity for advancements. The course work is designed to provide students with a basic understanding of environmental science, policy and practices and to complement the knowledge and experience received in the areas of forest products science and technology and business management. Courses have been selected from such diverse fields as economics, management, forestry and sociology. The selection of an Environmental Science certificate course for 3 SCH of Professional Elective will yield a Certificate in Environmental Science for students pursuing this emphasis. Course requirements include:
- MA 1613 Calculus for Bus and Life Science OR
- MA 1713 Calculus
- BQA 2113 Business Statistics Methods I OR
- IE 4613 Engineering Statistics I OR
- ST 3123 Intro to Statistical Inference
- PH 1113 General Physics OR
- PH 2213 Physics I
- CH 1043 Survey of Chemistry I
- CH 1053 Survey of Chemistry II
- CH 1051 Experimental Chemistry Lab
- MGT 3114 Principles of Management

Total hours needed for major: 124

* Professional and FP electives are chosen from a list approved by the Dept. of Forest Products.
+ If BIS 1012 is selected for Computer Literacy, then four hours of electives are required.
Wood Industries Management Concentration

This concentration is designed to provide Forest Products students with the background to pursue careers in the forest products and allied industries. The curriculum is multidisciplinary; provides a knowledge of the basic sciences, the social sciences, business, and wood science; and provides extensive training in the major wood processing operations. The abundant elective hours in this curriculum are chosen in consultation with an advisor in the Department of Forest Products and allow the student to tailor a program of study yielding a minor in General Business, Management, or other areas of business. Double degree programs with the College of Business & Industry are also available. Course requirements include:

- MA 1613 Calculus for Business and Life Science
- MA 1713 Calculus
- BQA 2113 Business Statistics Methods I OR
- IE 4613 Engineering Statistics I OR
- ST 3123 Intro to Statistical Inference
- PH 1113 General Physics OR
- PH 2213 Physics I
- CH 1041 Survey of Chemistry I
- CH 1051 Survey of Chemistry II
- CH 1053 Survey of Chemistry II
- CH 1051 Experimental Chemistry Lab
- MGT 3114 Principles of Management
- MKT 3103 Principles of Marketing
- 22 hours Professional Electives*+
- 6 hours Forest Products Electives*+

Computer Literacy Requirement
- BIS 1012 Intro to Bus Computer Systems OR
- CSE 1013 Basic Computer Concepts OR
- BIS 3233 Intro to Mgt Information Systems OR
- FO 3102/3101 Comp Appl for Forest Resources

Writing Requirement
- MGT 3213 Organizational Comm OR
- AIS 3203 Intro to Tech Writ in Agricomm OR
- BIO 3013 Prof Writing for Biologists

**Total hours needed for major: 124**

* Electives are chosen from a list approved by the Department of Forest Products.
+ If BIS 1012 is selected for Computer Literacy, then four additional hours are required.

Forest Products Minor

A minor in Forest Products will provide non-major students with knowledge of wood, wood products and their use, and their importance to employers in many areas including construction, design, marketing and distribution, retail and wholesale management, sales, production, technical services and scientific fields such as chemistry, engineering, and industrial technology. This minor in Forest Products will also provide non-major students an excellent background for entering a graduate degree program in Forest Products. Academic advising is available in the Department of Forest Products at Mississippi State University located at the Forest Products Laboratory, 100 Blackjack Road. A minimum of 18 hours is required to obtain a Forest Products minor. Some choices require others as prerequisites.

**Required Courses**

- FP 1103 Wood Technology & Products
- FP 4013 Wood Anatomy

Choose any four of the following:

- FP 4113 Adhesives and Finishes for Wood
- FP 4123 Lumber Manufacturing
- FP 4143 Composite Wood Products
- FP 4213 Wood Deterioration & Preservation
- FP 4223 Furniture Production I
- FP 4233 Furniture Production II
- FP 4253 Quantitative Methods in FP & Furn
- FP 4313 Environmental Principles
- FP 4323 Physical Properties of Wood
- FP 4253 Forest Products Marketing
- FP 4423 Mechanical Properties of Wood

Wood Materials Science Concentration

This concentration is designed to provide Forest Products students with the background to pursue careers in research and development or to continue their education at the graduate level. The curriculum is multidisciplinary; provides a knowledge of the basic sciences, mathematics, and provides a strong background in wood materials science. By judicious selection of elective, students may obtain a minor in various fields. The professional electives are chosen in consultation with an advisor from a list approved by the Department of Forest Products. Course requirements include:

- MA 1713 Calculus
- MA 1723 Calculus II
- IE 4613 Engineering Statistics
- CSE 1213 Computer Program with Fortran
- CH 1213 Chemistry I
- CH 1211 Investigations in Chemistry
- CH 1223 Chemistry II
- CH 1221 Investigations in Chemistry II
- PH 2213 Physics I
- PH 2223 Physics II
- CH 4513 Organic Chemistry
- CH 4511 Organic Chemistry Lab
- EM 2113 Eng Mech
- 11 hours Professional Electives*
- 9 hours Forest Products Electives*

Writing Requirement
- MGT 3213 Organizational Comm OR
- AIS 3203 Intro to Tech Writ in Agricomm OR
- BIO 3013 Prof Writing for Biologists

**Total of hours needed for major: 124**

* The professional electives and forest product electives are chosen from a list approved by the Department of Forest Products.
College of Veterinary Medicine

J. GREGG BORING, Dean
Office: College of Veterinary Medicine (Wise Center)
Telephone: 662-325-3432
Mailing Address: Box 6100, Mississippi State, MS 39762-6100

GENERAL INFORMATION
The College of Veterinary Medicine was established in 1974 by an act of the Mississippi Legislature. The first class was admitted during the 1977-78 academic year and graduated in May, 1981.

The permanent College facilities, completed in the fall of 1981, include the learning resources center, the animal health center, and the research facility. College programs, faculty, students, and staff are located in these facilities.

The primary objective of the College is to serve the needs of Mississippi. In quest of this objective, the College will provide training in the sciences required for a career in veterinary medicine. The professional curriculum focuses on the skills of the veterinary practitioner who will serve the animal-owning public of Mississippi.

Students seeking a career in veterinary medicine should acquire a sound foundation in the biological and physical sciences and a general knowledge of the humanities in high school and college. Because of the increasing use of information technology in veterinary medicine, students are strongly encouraged to acquire familiarity with computers. They must have a demonstrated aptitude for scientific study, and, in addition, experience with animals. An awareness of the requirements and characteristics of the practice of veterinary medicine is desirable in reaching a mature decision to seek a career in veterinary medicine.

EARLY ENTRY PROGRAM for the COLLEGE OF VETERINARY MEDICINE
The Early Entry Program is offered on a competitive basis to high school seniors who have demonstrated exceptional academic achievement. Applications are available by October 1st of each year and are due for return by January 15th. Applications may be obtained by contacting the Office of Student Affairs, College of Veterinary Medicine at 662-325-1278 or coats@cvm.msstate.edu. A printable application is available at cvm.msstate.edu.

The Program is designed so an individual has the opportunity to obtain both a B.S. degree and a D.V.M. degree in a seven-year period. Those accepted into the Early Entry Program are pre-accepted into the professional program at the College of Veterinary Medicine contingent upon their maintaining predetermined qualifications throughout their college career and providing documentation of no less than 480 hours veterinary experience.

ENCENTRAL REQUIREMENTS
The GRE® general exam (school code 1326) is required for admission consideration – No minimum score is required. Scores must be in the Office of Student Affairs by October 1 of the application year. A Test of English as a Foreign Language (TOEFL®) score of 213 is required for applicants whose primary language is not English, also due October 1.

Three (3) completed LOR (Letter of Recommendation) forms are required with the completed VMCAS application. At least one evaluator must be a veterinarian. To apply… applicants must have a minimum grade point average of 3.00 on a 4.00 scale both cumulative and in the required sciences (including mathematics). Minimum GPAs must be maintained throughout the application process. Prerequisite courses for entrance into the college must include specific courses:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English composition</td>
<td>6</td>
</tr>
<tr>
<td>Speech</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>(including vertebrate zoology)</td>
<td></td>
</tr>
<tr>
<td>Biological science with lab</td>
<td></td>
</tr>
<tr>
<td>Immunology</td>
<td>3</td>
</tr>
<tr>
<td>Genetics with lab</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry with lab</td>
<td>8</td>
</tr>
<tr>
<td>Organic chemistry with lab</td>
<td></td>
</tr>
<tr>
<td>Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>Physics (can be Trig-based)</td>
<td>3 sem hours</td>
</tr>
<tr>
<td>Nutrition</td>
<td>3-5</td>
</tr>
<tr>
<td>Humanities/fine arts/social and behavioral sciences</td>
<td>15</td>
</tr>
</tbody>
</table>

Total semester credit hours 65-67 sem hrs.

Science and mathematics courses must be completed or updated within six calendar years prior to the anticipated date of enrollment.

ADMISSION PROCEDURE
Applications are accepted through October 1 each year for the upcoming academic year. Admissions procedures take place in spring, with new students beginning classes at the beginning of the fall session. All applicants apply electronically through the Veterinary Medical College Application Service (VMCAS) at www.aavmc.org. Applications are available online in June each year.

Further information may be obtained from:
Office of Student Affairs
College of Veterinary Medicine
Mississippi State University
Box 6100, Mississippi State, MS 39762-6100
662-325-1278; coats@cvm.msstate.edu

DVM CURRICULUM
The professional curriculum is divided into two phases - Phase 1 (DVM 1 and DVM 2 years) and Phase 2 (DVM 3 and DVM 4 years). Phase 1 is conducted in a lecture/lab based format.

DVM 1 COURSES
Freshmen Fall Courses
- CVM 5163 Veterinary Parasitology
- CVM 5011 Professional Development I
- CVM 5012 Vet Medical Informatics and Evidence-based Med
- CVM 5023 Immunology and Mechanisms of Infect. Agents
- CVM 5033 Veterinary Physiology I
- CVM 5064 Veterinary Anatomy I
- CVM 5073 Veterinary Histology

Freshmen Spring Courses
- CVM 5013 Veterinary Neuroscience
- CVM 5021 Professional Development II
- CVM 5022 Veterinary Epidemiology
- CVM 5044 Introduction to Veterinary Pathology
- CVM 5074 Veterinary Anatomy II
- CVM 5083 Veterinary Physiology II
- CVM 5093 Veterinary Agents of Infectious Disease

Total Credit Hours: 39 hours

DVM 2 COURSES
Sophomore Fall Courses
- CVM 5122 Anesthesiology & Pharmacology I
- CVM 5123 Veterinary Clinical Pathology
- CVM 5133 Veterinary Preventive Medicine
- CVM 5142 Equine Medicine and Surgery I
- CVM 5143 Theriogenology
- CVM 5152 Veterinary Toxicology
- CVM 5185 Small Animal Medicine and Surgery I

Sophomore Spring Courses
- CVM 5132 Anesthesiology & Pharmacology II
- CVM 5153 Equine Medicine and Surgery II
- CVM 5162 Diagnostic Imaging
- CVM 5175 Food Animal Medicine and Surgery
- CVM 5183 Special Species
- CVM 5195 Small Animal Medicine and Surgery II

Total Credit Hours: 40 hours
Clinical and Elective

Phase 2, (DVM3 and DVM4 years) is conducted in a clinical and elective format. Students participate in ten required clinical rotations of two to six weeks duration each. In these rotations students actively participate in the clinical diagnosis and management of patients admitted to the Animal Health Center.

During the fourth year (DVM4) students have 9 months of elective options. The options include elective clinical rotations, externship experiences, small group or discussion based courses, and special problems (directed individual study) opportunities. In essence, each student, working closely with a faculty advisor, designs a schedule which most uniquely meets the student’s needs and career preferences.

Conducted in an experiential-learning mode, the clinical rotations and many of the electives continue to make the student responsible for his or her own education. The clinical cases or elective courses provide the environment for continued student growth and development. Students must be mature and responsible learners to obtain the maximum benefit from these courses.

DVM3 COURSES
Services and Practices
- CVM 5214 Laboratory Services
- CVM 5224 Radiology
- CVM 5234 Anesthesiology
- CVM 5246 Community Practice
- CVM 5256 Small Animal Surgery
- CVM 5252 Equine Medicine and Surgery
- CVM 5276 Food Animal Medicine and Surgery

Total Credit Hours: 36 hours

DVM4 COURSES
- CVM 5000 Directed Individual Study in Veterinary Medicine I
- CVM 5302 Professional Development IV*
- CVM 5310 Small Animal Emer and Critical Care Medicine*
- CVM 5386 Small Animal Internal Medicine*
- CVM 5392 Pharmacy
- CVM 5420 Advanced Rotation in Radiology (1-6 hours)
- CVM 5430 Advanced Rotation in Anesthesiology (1-6 hours)
- CVM 5444 Clinical Small Animal Practice
- CVM 5454 Advanced Rotation in Small Animal Surgery
- CVM 5464 Advanced Rotation in Equine Medicine & Surgery
- CVM 5474 Advanced Rotation in Food Animal Practice
- CVM 5484 Advanced Rotation in Sm An Internal Medicine
- CVM 5510 Animal Industry Externship 1 (1-6 hours)
- CVM 5520 Animal Industry Externship 2 (1-6 hours)
- CVM 5530 Animal Industry Externship 3 (1-6 hours)
- CVM 5540 Animal Industry Externship 4 (1-6 hours)
- CVM 5550 Animal Industry Externship 5 (1-6 hours)
- CVM 5560 Advanced Clinical Rotation 1 (ACR 1) (1-6 hours)
- CVM 5570 Advanced Clinical Rotation 2 (ACR 2) (1-6 hours)
- CVM 5580 Advanced Clinical Rotation 3 (ACR 3) (1-6 hours)
- CVM 5604 Professional Development III
- CVM 5612 Laboratory Animal Medicine
- CVM 5622 Veterinary Diagnostic Toxicology
- CVM 5632 Advanced Large Animal Techniques
- CVM 5644 Applied Gross Anatomy
- CVM 5654 Applied Veterinary Parasitology
- CVM 5662 Clinical Neurology
- CVM 5672 Veterinary Dentistry
- CVM 5682 Veterinary Ophthalmology
- CVM 5694 Veterinary Cytology
- CVM 5704 Veterinary Practice Management
- CVM 5714 Advanced Small Animal Dermatology
- CVM 5722 Small Ruminant Production Medicine
- CVM 5754 Advanced Small Animal Surgery
- CVM 5764 Advanced Equine Reproduction
- CVM 5772 Canine Theriogenology
- CVM 5784 Clinical Behavioral Medicine
- CVM 5794 Clinical Cardiology
- CVM 5814 The Feline Patient
- CVM 5824 Diagnostic Ultrasound
- CVM 5834 Advanced Anesthesia Techniques
- CVM 5844 Clinical Pharmacology

- CVM 5854 Aquarium Health Management
- CVM 5862 Equine Lameness
- CVM 5902 Job Search
- CVM 5912 Personal, Professional and Financial Success
- CVM 5922 Veterinary Practice Management
- CVM 5990 Spec Topics in Veterinary Medicine I (1-6 hours)

Total Credit Hours Required: 48 hours

* Required

Students must take 30-36 hours of electives during their senior year. Electives can be selected from the above listed CVM courses or from University courses upon advisor’s approval.

ANIMAL HEALTH TECHNOLOGY
(Veterinary Technology Program)

The Veterinary Technology Program is a one-plus-one program offered by Mississippi State University College of Veterinary Medicine in conjunction with two Mississippi community colleges—Northwest Mississippi Community College in Senatobia and Hinds Community College in Raymond. The student spends one year—fall and spring semester—at one of the community colleges and one year—fall and spring semester—at Mississippi State University College of Veterinary Medicine gaining additional clinical experience. An Associate of Science degree is awarded from either Northwest or Hinds upon completion of the two-year program. The program is structured to provide the successful graduate optimum employment opportunities in Veterinary Technology careers.

To be accepted into the first year of the program, a student must meet admission requirements at one of the two community colleges. To be accepted into the second year of the Veterinary Technology Program, a student must be in good standing at their respective community college as well as be recommended by the Director of the Veterinary Technology Program at that community college. You may contact Hinds Community College at (601) 857-3334 or Northwest Mississippi Community College at (662) 562-3381 for an application.

GRADUATE PROGRAM

The College of Veterinary Medicine at Mississippi State University offers advanced graduate study leading to Master’s and PhD degrees with emphasis in infectious diseases, toxicology, pharmacology, and pathology. The multidisciplinary composition of the Veterinary Science Program provides the unique opportunity for training in food animals with special emphasis in aquaculture and poultry. Specialized training encompassing molecular biotechnology, microbiology, immunology, virology, physiology, toxicology, pathology and biochemical approaches to solving basic and applied biomedical problems is offered. Master’s and Ph.D. degrees are offered in Veterinary Medical Science and Ph.D. degree in Toxicology is also offered. A non thesis Master’s option in Veterinary Medical Science is also offered with emphasis in food animal production medicine, i.e. dairy, beef, swine, poultry and aquaculture.

Research interests of the faculty include pathogenesis of viral and bacterial and environmental diseases, comparative and developmental immunology, biochemical characterization of parasites, and xenobiotic contamination of animal tissues. The multidisciplinary approach of the program is strengthened by active collaboration of faculty members with other institutional units including the Departments of Animal and Dairy Sciences, Biochemistry, Poultry Science, Wildlife and Fisheries, and Biological Science. The Veterinary Medical Science Graduate Program is firmly committed to providing trained graduates who can serve as leaders in management and research for the food animal industry and in biomedical research.

For additional information about the Graduate Program, contact the Graduate Coordinator, Box 9825, Mississippi State, Mississippi 39762, telephone 662-325-1417.
Environmental Sciences Certificate Program

Any study of the human environment is by nature multi-disciplinary. Therefore, an undergraduate certificate program in Environmental Sciences (ENS) that can also serve as an academic minor has been established to serve a large student population from a variety of disciplinary majors. The intent of this program is to provide a certification track whereby a student in any given undergraduate major may strategically select elective courses within their normal program of study to additionally satisfy the requirements for a certificate and minor in Environmental Sciences. Certification is also available for the nontraditional student seeking further professional credentials for career development.

Due to the multi-disciplinary nature of the program, it structurally resides and is administered within the Office of Academic Affairs, outside of any particular college. A program coordinator is appointed by the Provost to advise Environmental Sciences students and assist departmental advisors. It is also the coordinator’s responsibility to perform the necessary transcript audits and formally authorize the certificates and minors.

To assist the ENS coordinator and provide a mechanism for regular review, a faculty oversight committee has been formed. The committee is composed of at least six faculty members including the ENS advisor and represents a cross-section of environmental disciplines.

For further information and enrollment forms, please contact the ENS program coordinator:

Dr. Joseph Massey
Department of Plant and Soil Sciences
117 Dorman Hall
662-325-4725
jmassey@pss.msstate.edu

Environmental Sciences Certificate

General Requirements:
A total of 22 semester hours are required in the following four component areas with at least six hours from the social sciences and humanities and six hours from the natural sciences. Courses typically serve as electives within any traditional disciplinary major. No more than two courses can be double-counted between the ENS certificate and the student’s academic major. Courses marked in BOLD are required of all students. It is recommended that ENS 2102 be taken as the entry-level course.

Introductory (2 hours)
ENS 2102 Intro to Environmental Science

Social Sciences and Humanities (6-12 hours)
BL 4263 Environmental Law
SO 4173 Environment and Society
PS 4743 Environmental Policy
AEC 3233 Intro Environmental Economics and Policy
AEC 4233 Advanced Topics in Environmental Economics
GG 4523 Coastal Environments
GR 3113 Conservation of Natural Resources
SO 4703 Population Problems and Processes
FO 4413 Natural Resources Policy
FP 4313 Environmental Principles
WF 4463 Human Dimensions of Fish & Wildlife Mgt

Capstone (2 hours)
ENS 4102 Practicum (with seminar)

Natural Sciences (6-12 hours)
BIO 2503 Environmental Quality
BIO 3104 Ecology
BIO 3114 Marine Biology
BIO 4213 Plant Ecology
BIO 4404 Environmental Microbiology
CE 3824 Environmental Engineering
CE 4843 Advance Sanitary Analysis
CE 4873 Water and Wastewater Treatment
CE 4893 Hazardous Waste Management

CH 4303 Environmental Chemistry
CHE 4613 Air Pollution Control Design
CHE 4623 Hazardous Waste Incineration
CVM 4513 Environmental Toxicology
FO 3123 Forest Ecology and Global Environment
GG 3613 Water Resources
GG 3133 Intro Environmental Geology
GR 4943 Air Pollution Meteorology
GR 4613 Applied Climatology
GR 4813 Natural Hazards and Processes
PSS 3303 Soils
PSS 4313 Soil Microbiology
PSS 4333 Soil Conservation and Land Use
ABE 3303 Biosystems Environment I
ABE 4312 Biosystems Environment II

Geospatial and Remote Sensing Technologies Certificate Program

Technology revolutions have driven the expectations of remote sensing and spatial technologies to an all-time high for a new generation of resource managers. Advances in computational technologies, visualization products, and sensor technologies have led to the development of unprecedented capabilities in remote sensing, global position systems, and geographic information systems. With the recent launches of commercial and governmental remote sensing satellites, as well as the development of aerial remote sensing instruments that provide advanced spectral and radar technologies, the industry is poised to develop operational remote sensing applications that fundamentally impact management of resources. Mississippi State University has developed broad, multi-disciplinary efforts in spatial technologies of many types, and is a leader among universities in education and outreach activities to prepare the next generation for utilizing these technologies. One of the primary limitations to the development of this industry is the need for a better-educated workforce that can understand and utilize the tools of these spatial technologies. Education in geospatial and remote sensing technologies is by nature multi-disciplinary; therefore, a certificate program that crosses departmental and college boundaries has been developed to address these needs. This certificate can thus serve the needs of undergraduates and graduate students with diverse backgrounds from a variety of disciplines. Students may strategically assess which courses within their disciplinary academic program can be used for the certificate program, thus satisfying the needs of both and maximizing their educational experience. Non-traditional students may also receive the certificate in seeking professional credentials for career advancement.

Due to the multi-disciplinary nature of this program, the Office of Academic Affairs is the resident office for admission and administration. Thus, the program is not focused on a single college or department. A program coordinator, appointed by the Provost, advises students seeking the GRS certificate, and assists departmental advisors. The coordinator is also responsible for conducting the necessary transcript audits and authorizing the awarding of certificates.

A multi-disciplinary certificate program has also been developed in Geospatial and Remote Sensing Engineering. This is administered through the College of Engineering. See this listing under that college for more information.

For further information and enrollment information, contact the GRS program coordinator:

Dr. David R. Shaw, Director
GeoResources Institute; 219 ERC
662-325-9575
dshaw@gri.msstate.edu

General Requirements:
A total of 15 semester hours are required: six selected from the list of required courses, and nine selected from the list of elective courses.

Required Courses (6 hours)
FO 4312/6312 Forest Photogrammetry (2)
FO 4311/6311 Forrest Photogrammetry Lab (1)
GR 2313 Maps and Remote Sensing (3)
or
ABE/ECE/PSS 4483/6483 Introduction to Remote Sensing (3)
or
FO 4452/6452 Remote Sensing Applications (2)
FO 4451/6451 Remote Sensing Applications Lab (1)
ABE 3513 GPS & GIS in Agriculture and Engineering (3)
ABE/ECE/PSS 4483/6483 Introduction to Remote Sensing (3)
ECE 3163 Signals and Systems (3)
ECE 4413/6413 Digital Signal Processing (3)
ECE 8363 Digital Spectral Analysis (3)
ECE 8401 Current Topics in Remote Sensing
ECE 8423 Adaptive Signal Processing (3)
ECE 8433 Statistical Signal Processing (3)
FO 4452/6452 Remote Sensing Applications (2)
FO 4451/6451 Remote Sensing Applications Lab (1)
FO 4472/6472 GIS for Natural Resource Management (2)
FO 4471/6471 GIS for Natural Resource Management Lab (1)
PSS 4373/6373 Geospatial Agricultural Management (3)
PSS 4411/6411 Remote Sensing Seminar (1)
Electives (9 hours)

INTERDISCIPLINARY STUDIES

BACHELOR of SCIENCE in INTERDISCIPLINARY STUDIES

The Bachelor of Science in Interdisciplinary Studies is a university-wide degree coordinated through the College of Arts and Sciences by the Interdisciplinary Studies Committee. This multi-discipline academic program is appropriate for students motivated by specific interests not recognized in traditional majors and is not intended to compete with existing programs. The Interdisciplinary Studies Committee. This multi-discipline academic program is appropriate for students motivated by specific interests not recognized in traditional majors and is not intended to compete with existing programs. The Center for Interdisciplinary Studies at the University of North Dakota (UND) is an academic program designed to allow students maximum flexibility to custom-design a curriculum to meet their personal and career goals. Such a program of study must assure depth of study as well as breadth. Therefore, it must ins at least 36 upper-division hours in the areas they have chosen for emphasis and that they select a minimum of 12 hours in each of three areas or 18 hours in two. Emphasis areas must be selected from at least two colleges. University core curriculum requirement (45 hours) must be met in addition to a general studies core of 12 hours. A total of 122 semester hours is required for graduation, along with an MSU and cumulative GPA of 2.0.

To assure coherence in the program, the student must construct and explain in writing the rationale for the interdisciplinary studies program’s direct relationship to the student’s personal and career goals. Each student will be required to find advisors in the academic disciplines who will agree to sponsor the student in drawing up the proposed curriculum, formulating the rationale, and presenting the case in writing to the Interdisciplinary Studies Committee. This should be done prior to the senior year.

The Interdisciplinary Studies Committee will review applications, and if approved, the student may proceed with the curriculum. The Committee will meet during the fall, spring and summer semesters, and students must make written application by September 15, February 15 or May 15. Application for a degree must be submitted to the Office of the Registrar. For further information, contact:

College of Arts and Sciences
224 Allen Hall, Mail Stop 9706
Mississippi State, MS 39762
(662) 325-2646

UNIVERSITY ACADEMIC ADVISING CENTER
UNDECLARED (UND)
Director: Dr. David Boles
Coordinator: Wesley Ammon
Professional Academic Advisors: Jamie Inmon, Tim Fancher, Jaia Potts and Sandra Roberts
Volunteer Advisors: The UAAC also utilizes the expertise of selected distinguished faculty members, staff, and MSU graduate students during peak preregistration periods to meet the needs of students served by the Center.

48 Magruder Street; Mail Stop 5729;
Web site at http://www.msstate.edu/dept/academic-advising
Telephone 662-325-4052; Fax 662-325-4026;
P.O. Box 6117, Mississippi State, MS 39762.

UAAC Mission to Undeclared students

The University Academic Advising Center was established to meet the needs of those students who have competing interest in more than one major area, as well as those who are uncertain of their career and educational goals. The professional staff and volunteers at the center offer one on one advising services to traditional and nontraditional undergraduate students and provide accurate information concerning specific curricular requirements, university policies and procedures, campus resources, and various programs of study. The center is committed to assisting students with the development of educational plans consistent with their life goals, objectives and abilities. Students normally remain UND “majors” for no more than two semesters during which time advisors recommend courses that meet basic core requirements in relation to “majors of interest” for each individual student. Students who have reached Junior status can remain undeclared for one (1) semester after accumulating 60 hours of academic credit.

UAAC advisors traditionally recommend that UND students enroll in 12-18 hours each fall and spring semester with careful considerations given to courses required in each student’s majors of interest. It is the goal of the center to assist each UND student in enrolling in courses that satisfy the minimum core requirements for any major the student may later choose with respect to each department’s right to specify more stringent requirements than the University as a whole. However, ultimate responsibility for taking the UAAC staff’s advice rests with the student.

Visits to UAAC and responses to requests for information through our Web site are subject to staff availability and the center’s priority responsibilities during MSU’s designated preregistration and orientation periods. Otherwise, UAAC urges students to make appointments with advisors at the center to establish a plan of action. The University Academic Advising Center staff encourages all UND “majors” to utilize services offered by the Career Center, the Counseling Center, the Learning Center, Student Support Services and other support programs offered by various units at MSU.
Office of Graduate Studies

William A. Person, Director

Office: 116 Allen Hall
Telephone: 662-325-7400
P.O. Box G, Mississippi State, MS 39762-5507

ADMINISTRATION

The Office of Graduate Studies is the administrative unit responsible for providing graduate students with admission and enrollment services and the management of graduate student records. The office is responsible for processing applications for admissions to graduate education; processing graduate assistantship paperwork; publishing the Graduate Bulletin, the Guidelines for Preparing Dissertations and Theses, and the Graduate Assistant Handbook; coordinating the Graduate Teaching Assistant Workshop; monitoring academic performance; coordinating the Graduate Work Study/Plan of Compliance Assistantship Program; monitoring and coordinating the English as a Second Language (ESL) Program for international graduate students; and conducting degree audits of students as they complete their programs of study. The Office is guided by the academic policies established by the Graduate Council.

The Director of the Office reports to the Vice President for Research and Graduate Studies.

DEGREES

1. MASTER of ARTS
   a. The Master of Arts degree is offered in applied anthropology, economics, English, foreign languages, history, and political science.
   b. Two plans for the Master of Arts degree are offered. They are designated as Plan One and Plan Two. Plan One requires a minimum of 30 semester hours of graduate credits with at least 24 hours earned as course work and at least six hours earned as thesis. Plan Two is offered at the option of the department and requires a minimum of 30 semester hours of graduate-level course work.
   c. A reading knowledge of one foreign language is required of students majoring in English and history (thesis option only).

2. MASTER of SCIENCE
   a. The Master of Science degree is offered in agricultural and extension education, the physical and biological sciences, the agricultural sciences, agricultural economics, architecture, business administration, computer science, specializations in education, engineering disciplines, forestry, forest products, geosciences, information systems, mathematics, mathematical (applied math), psychology, sociology, statistics, veterinary medical science, wildlife and fisheries science, and workforce education leadership.
   b. Two plans for the Master of Science degree are offered. They are designated as Plan One and Plan Two. Plan One requires a minimum of 30 semester hours of graduate credits with at least 24 hours earned as course work and at least six hours earned as thesis. Plan Two is offered at the option of the department and requires a minimum of 30 semester hours of graduate-level course work.

3. MASTER of AGRIBUSINESS MANAGEMENT
   a. The Master of Agribusiness Management is offered in Agribusiness Management.
   b. Courses are divided between the College of Agriculture and Life Sciences and the College of Business and Industry.

4. MASTER of PROFESSIONAL ACCOUNTANCY
   A minimum of 30 semester hours of course work in graduate credit business courses is required. Those hours must include a minimum of
   a. Twenty-one semester hours of accounting, and
   b. Nine semester hours of other related business courses.

5. MASTER of BUSINESS ADMINISTRATION
   a. The Master of Business Administration, a graduate professional degree requires 30 semester hours of graduate course work; a thesis is not required.
   b. The Master of Business Administration with a concentration in Project Management is an interdisciplinary program between the College of Business and Industry and the College of Engineering. This program consists of 32 semester hours; no thesis is required.

6. MASTER of PUBLIC POLICY and ADMINISTRATION
   a. The Master of Public Policy and Administration is a graduate professional degree with admission open to students who have earned at least a B average in a relevant undergraduate major.
   b. Forty-two semester hours, including a three-credit internship and internship paper, are required. The internship and internship paper may be waived for students with significant and relevant work experience as determined by the Department of Political Science.

7. MASTER of FINE ARTS
   a. The Master of Fine Arts is offered in electronic visualization with emphases in computer animation and multi-media.
   b. The degree requires a minimum of 60 graduate credits with at least six semester hours earned as exhibition and thesis.

8. MASTER OF LANDSCAPE ARCHITECTURE
   a. The Master of Landscape Architecture is offered in landscape architecture with three areas of concentration: watershed planning and management; landscape planning and management; and community based initiatives.
   b. A minimum of 36 semester required, including a six hour thesis.

9. MASTER of TAXATION
   a. The Master of Taxation is a graduate professional degree requiring 30 semester hours of graduate course work.
   b. A thesis is not required.

10. EDUCATIONAL SPECIALIST DEGREE
    The Educational Specialist degree is offered with areas of emphasis in agricultural and extension education, school administration, elementary education, counselor education, school psychology, secondary education, special education, and technology. These programs may be completed only after the student has received the master’s degree from Mississippi State University or another recognized institution.

    A three-hour special problem or six-hour thesis is required, upon completion of which the student will be expected to pass an oral or written comprehensive examination, or both.

    The Educational Specialist degree is a planned program of a minimum of thirty semester hours above the master’s degree, pursued under the direction of a major advisor. It is designed to broaden leadership training by providing courses in fields and disciplines that are supplementary to the basic study in the major field. At least twenty-one of the hours must be earned on the main campus or the Meridian Center.

    A student completing the degree must apply for the comprehensive examination in the office of the major advisor with notification to the Director of the Office of Graduate Studies.

11. DOCTOR of PHILOSOPHY
    The Doctor of Philosophy degree may be pursued in agricultural economics, agronomy, animal physiology, applied economics, biological sciences, biomedical engineering, business administration (areas of emphasis – accounting, business information systems, economics, finance, management, marketing), chemistry, cognitive science, college/post-secondary student counseling and personnel services, community college leadership, computational engineering, computer engineering, computer science, counselor education/student counseling and guidance services, curriculum and instruction, education (areas of emphasis – agricultural and extension education, technology), educational psychology, electrical engineering, elementary education, education administration (elementary, middle and secondary), engineering (areas of emphasis – aerospace engineering, biological engineering, chemical engineering, civil engineering, engineering physics, industrial engineering, mechanical engineering), entomology, environmental toxicology, food and science technology, forest resources (areas of emphasis – forest products, forestry, wildlife and fisheries), history, horticulture, mathematical sciences, molecular biology, nutrition, plant pathology, public policy and administration, secondary education, sociology, veterinary medical science, and weed science.
12. DOCTOR of EDUCATION

The Doctor of Education degree is offered in the College of Education with an area of program emphasis in agricultural and extension education, counselor education, elementary education, school administration, secondary education, and technology.

GRADUATE COURSES

Courses numbered 8000 or higher are for graduate students only. Courses numbered 6000 and 7000 may be taken for graduate credit if approved by the Director of Graduate Studies.

GRADUATE BULLETIN

A Graduate Bulletin is published annually. It contains more detailed statements concerning the requirements for advanced degrees at Mississippi State University, as well as other pertinent information. To secure a copy, write to the Office of Graduate Studies, P.O. Box G, Mississippi State, Mississippi 39762-5507.

The Graduate Bulletin and additional information relative to graduate studies may be accessed at www.msstate.edu/dept/grad.
THE DIVISION OF ACADEMIC OUTREACH & CONTINUING EDUCATION

The Division of Academic Outreach & Continuing Education is an academic/service arm of the University and extends educational opportunities through a variety of learning options to individuals, groups, and agencies in non-traditional program formats. It provides leadership coordination and assistance in implementing lifelong learning opportunities sponsored by Mississippi State University. The central purpose of the Division of Academic Outreach & Continuing Education is to provide programs tailored to the needs of lifelong learners consistent with the overall objectives, resources and unique capabilities of the University. These programs are enhanced by a rich array of support services.

The mission of the Division of Academic Outreach & Continuing Education is to engage people in achieving their lifelong learning goals through dynamic partnerships, targeted programming, innovative technology, and quality customer service. Our vision is to be the nationally recognized leader in lifelong learning. We value exemplary customer service and employee well-being, lifelong access to knowledge, and operational excellence. We value an educational environment based on mutual understanding, success, and equality with our clients, partners, and employees.

The Division of Academic Outreach & Continuing Education is a member of the University Continuing Education Association (UCEA), Learning Resources Network (LERN), and Association for Continuing Education and Training and by the Southern Association of Colleges and Schools. The objective of the Independent Study Program is to provide a positive learning experience for individuals that are self-motivated and self-disciplined and to provide evidence of a self-directed learning capability. Details are available at http://www.is.msstate.edu.

ENGLISH AS A SECOND LANGUAGE CENTER

Molly Watkins, Manager
Office: 13 Morgan Avenue, 662-325-2648

The English as a Second Language Center is an academic unit within the Division of Academic Outreach & Continuing Education. It offers an intensive English language program (non credit) for non-admitted students as well as English language academic support courses (credit) for admitted MSU students.

In addition to English Language courses, the ESLC offers various other programs and services designed to promote the exchange of ideas and information with other countries, such as short-term group programs and the conversation partner program, developed to introduce ESL students to American college students.

The ESLC also provides teaching observations and practicums for students enrolled in the TESL Certificate program through the English Department; assists the Graduate Office in offering the international teaching assistants workshop; and is active in bringing international and cultural programming to the MSU and Starkville communities.

For more information about the English as a Second Language Center, go to www.eslc.msstate.edu.

OFFICE OF CONTINUING EDUCATION

Michelle Johnston, Manager
Office: 322 Memorial Hall, 662-325-7330

The Continuing Education unit provides many specialized services to assist professional, governmental, business groups, and individuals in fulfilling their professional and personal development needs. Continuing Education also offers coordination support to campus departments to facilitate the delivery of conferences, workshops, short courses, camps, and events that serve the outreach mission of the university. The unit is comprised of the following offices:

University Partnerships: The Office of University Partnerships specializes in providing educational opportunities for continued growth from a variety of fields. In cooperation or collaboration with academic departments and colleges of the University, the Office of University Partnerships offers programs that serve the needs of University alumni and other professionals in the state and region. Also, this office manages the University’s CEU registry service which maintains essential materials, data and mechanisms for CEU approval, record keeping and evaluation, and CEU registration for the University. This office maintains a permanent registry for non-credit activities offered by the University that meet the national guidelines for the CEU set forth by the International Association for Continuing Education and Training and by the Southern Association of Colleges and Schools. Available services include needs assessment and market analysis assistance, content development support, design of marketing plans and development of promotional materials, and coordination of logistical aspects (facilities, meals, instructional materials, equipment, registration, financial management, etc.).

Conferencing and Community Partnerships: The Office of Conferencing and Community Partnerships assists in the planning, coordination, and management of conferences, workshops, and short courses in leading to a diploma. Some college courses may also be used to achieve professional certifications involving teachers, consumer safety officers, and many more. In addition, High School courses are available to both traditional and home schooled students.

For more information about the Office of Conferencing and Community Partnerships, contact Michelle Johnston at 662-325-7330.

INDEPENDENT STUDY

Rusty Foster, Manager
Office: 219 Memorial Hall, 662-325-2659

The Independent Study Program provides an educational opportunity for a diverse group of learners interested in studying by correspondence and receiving instruction in a wide variety of subject areas. Courses are developed by qualified faculty and staff of the University and are designed to provide structure and content that parallels in-class and on-campus equivalents while providing flexibility of time, place, and delivery through the use of combinations of technology.

College or High School credit received upon successful completion of courses may be used for self-improvement or toward requirements leading to a diploma. Some college courses may also be used to achieve professional certifications involving teachers, consumer safety officers, and many more. In addition, High School courses are available to both traditional and home schooled students.

The objective of the Independent Study Program is to provide a positive learning experience for individuals that are self-motivated and self-disciplined and to provide evidence of a self-directed learning capability. Details are available at http://www.is.msstate.edu.

OFFICE OF ACADEMIC OUTREACH

Dr. Laura Crittenden, Manager
Office: 210 Memorial Hall, 662-325-2677

The Office of Academic Outreach is dedicated to providing quality academic courses, certifications, and programs via distance at Mississippi State University and to assist distance learners in their academic pursuits. By working closely with academic departments across campus, Academic Outreach is able to offer courses, certifications, and programs through a variety of distance learning methods at both the undergraduate and graduate levels. Delivery methods offered include Text-Based and Video Streaming Online through WebCT and Blackboard, the Mississippi Interactive Video Network (MIVN), CD-ROM, Intensive Weekend Seminar, and Hybrid.

Students interested in enrolling in any courses offered through the Office of Academic Outreach must first contact the appropriate Distance Learning Program Coordinator for admittance criteria. Since some of the courses are available through partnerships with other four-year institutions and community colleges, admission procedures vary.

For more information about the Office of Academic Outreach, go to www.distance.msstate.edu.
connection with campus units and/or external organizations, agencies, and associations. Also, this office offers a variety of learning experiences for personal growth and self-fulfillment that are designed to serve the desires and needs of the community with instruction provided by university faculty, staff, and expert practitioners.

Safety and Environmental Training: The Office of Safety and Environmental Training provides programs ranging from on-campus short courses and seminars to in-house training services that are made available to state and regional businesses, industries, governmental agencies, municipalities and defense facilities who must comply with various EPA, DOT, and OSHA regulations. This office also partners with the Mississippi Department of Environmental Quality (MDEQ) and the U.S. Environmental Protection Agency (EPA) to provide asbestos certification courses which fulfill the requirements of EPA's Model Accreditation and Certification Act. These courses are required for persons seeking licensing qualifications as asbestos professionals. In 1989, the Mississippi Legislature designated MSU to be the sole asbestos training provider within the state.

For more information about the Office of Continuing Education, go to www.ce.msstate.edu.

CONFERENCE CENTER
Cindy Wasson, Administrative Assistant
Offices: 103 Memorial Hall, 662-325-3476

The Division of Academic Outreach & Continuing Education is located in Memorial Hall near the center of the Mississippi State University campus. Memorial Hall is an attractive and functional setting for conference meetings. Coskrey Auditorium can accommodate between 120 to 200 people. The patio space adjacent to the auditorium provides an outdoor reception area or dining area with barbecue cooking facilities, three fountains, and lush garden landscaping. There are two small, well-equipped meeting rooms available for groups up to 35 for breakout sessions for larger groups.
Mississippi State University-Meridian Campus is a regional, upper-division, degree-granting campus of Mississippi State University. Located in east-central Mississippi, the Meridian campus is non-residential and provides site-based credit and non-credit course work, as well as classes through distance learning using resident faculty, MSU-Starkville campus faculty, and part-time adjunct instructors.

A friendly atmosphere, personal attention, a convenient location, and a diverse student population flavor the educational experience at MSU-Meridian. Through the flexibility of day and evening classes at the MSU-Meridian Campus, both nontraditional adult students and traditional college-age students are able to continue employment, maintain important roles in family life, contribute to their communities, and still obtain a quality Mississippi State University education.

Mississippi State-Meridian serves as a proud symbol of the university’s heritage as “the people’s university” and to its commitment of providing quality higher education through the missions of learning, research, and service.

Location
Mississippi State University-Meridian is located on a 26-acre campus at 1000 Highway 19 North in Meridian, Miss. It is easily accessible to residents of east Mississippi and west Alabama by a short drive north-west of Exit 150, off Interstate 20/59 in Meridian.

Facilities
Overlooking a beautiful lake, the 60,000 square-foot, two-story complex is nestled among hardwoods and loblolly pines. A 90-foot tower stands watch over the main entrance and serves as the focal point and official symbol of the Meridian Campus. The complex contains 23 classrooms and laboratories, a bookstore, academic suites, study lounges, an 800-person multi-purpose auditorium for campus and community use, and ample parking. Since it is a commuter campus which primarily serves non-traditional, working students, no dormitory facilities are available on campus. Apartments are located nearby at Meridian Community College or may be found in other Meridian locations.

Students
Approximately one-half of the students who attend MSU-Meridian reside in Lauderdale County. The remainder commute from 34 other Mississippi counties and from Alabama, with a majority making their homes in the surrounding counties of Clarke, Jasper, Jones, Kemper, Leake, Neshoba, Newton, Scott, and Wayne. Advancements in course offerings, programs, and distance learning technology are expected to expand even further the scope of service.

Distance Learning
Two interactive “teleclassrooms” allow students on the Meridian and Starkville campuses, and at downlink sites elsewhere in the state, to receive instruction and interact through two-way video and audio distance technologies. This greatly improves MSU-Meridian’s ability to expand the scope of its service and still maintain courses of the highest quality.

The development of Web-based (direct-to-desktop) delivery systems is also being utilized to facilitate the delivery of asynchronous and synchronous real-time audio and video through computer-based technologies and the Internet.

Library Facilities
Meridian Campus students are authorized to use the Mitchell Memorial Library in person, or may access it and other university resources through the MSU Web site.

MSU-Meridian Campus and Meridian Community College have a partnership whereby MSU-Meridian students may access the holdings in the L.O. Todd Library. The book collection contains 56,000 titles. The library also subscribes to over 600 periodical titles, including scholarly journals, magazines, and newspapers. Interlibrary loan services are provided for students and faculty.

Through an “Electronic Library Room” on the MSU-Meridian Campus, students may access many references and databases directly via computer.

Degree Programs
Junior, senior, and graduate-level courses offered at Mississippi State-Meridian Campus enable students to fulfill requirements for bachelor’s, master’s, specialist’s, and doctoral degrees. They may also elect to enroll in specific classes for professional or personal growth.

Undergraduate Degrees
Division of Arts and Sciences
Bachelor of Arts in Communication (Concentration in Broadcasting)
Bachelor of Arts in General Liberal Arts
Bachelor of Arts in Psychology
Bachelor of Science in Interdisciplinary Studies
Bachelor of Arts in Criminal Justice*
Bachelor of Social Work
Gerontology Certificate is available at the undergraduate and graduate level. Contact the Division of Arts and Sciences for information.

Division of Business & Industry
Bachelor of Business Administration with concentrations in:
Accounting
Business Administration
Information Systems
Management
Marketing

Division of Education
Bachelor of Science in Education with majors in:
Elementary Education
Secondary Education - concentrations in Teaching of English Teaching of Social Studies

USM-Meridian School of Nursing

Bachelor of Science in Nursing

Graduate Degrees
Division of Business and Industry
Master of Business Administration
MBA for Professionals Saturday program
Division of Education
Master of Science degree with majors in:
Elementary Education
Secondary Education
Counselor Education
School Administration
Master of Arts in Teaching degree with major in Comm. College Education
Master of Arts in Teaching Secondary degree (Alternate Route)

Educational Specialist degree in Education with concentrations:
Elementary Education
Secondary Education
Counselor Education
School Administration

USM-Meridian School of Nursing
Master of Science in Nursing*

* USM program offered at MSU-Meridian
DIVISION of ARTS and SCIENCES

Dr. Dennis J. Mitchell, Chair
Assoc. Professor & Dir. of Social Work Program Sandra S. Vaughn
Assistant Professor & BSW Advisor Rhonda R. Goodman Carr
Assistant Professor of Social Work Marian Swindell, Ph.D.
Assistant Professor of History David Sicko, Ph.D.
Assistant Professor of Psychology C. Edward Snodgrass, Ph.D.
Assistant Professor of English James Kelley, Ph.D.

The Division of Arts and Sciences offers five degree programs: the Bachelor of Science in Interdisciplinary Studies (BSIS), the B.A. in Communication, General Liberal Arts (GLA), Psychology, and the Bachelor of Social Work (BSW). Also available is a Gerontology Certificate that may be added to any degree.

Bachelor of Science in Interdisciplinary Studies (BSIS)

Advisor: David A. Sicko, Ph.D.
Office: 092

The Bachelor of Science in Interdisciplinary Studies is a university-wide degree coordinated through the Office of Academic Affairs by the Interdisciplinary Studies Committee. This multi-discipline academic program is appropriate for students motivated by specific interests not recognized in traditional majors and is not intended to compete with existing programs. All University requirements, including 32 hours of upper-division coursework, must be met for graduation.

The Bachelor of Science in Interdisciplinary Studies is intended to allow students maximum flexibility to custom-design a curriculum to meet their personal and career goals. Such a program of study must assure depth of study as well as breadth. Therefore, it must insure that students take at least 36 upper-division hours in the areas they have chosen for emphasis and that they select a minimum of 12 hours in each of three areas or 18 hours in total. Emphasis areas must be selected from at least two colleges. University core curriculum requirements (45 hours) must be met in addition to a general studies core of 15 hours. A total of 128 semester hours is required for graduation, along with an MSU and cumulative GPA of 2.0.

To assure coherence in the program, the student must construct and explain in writing the rationale for the interdisciplinary studies program’s direct relationship to the student’s personal and career goals. Each student will be required to find advisors in the academic disciplines who will agree to sponsor the student in drawing up the proposed curriculum, formulating the rationale, and presenting the case orally and in writing to the Interdisciplinary Studies Committee. This should be done prior to the senior year.

The student, along with at least one sponsor, must meet with the Interdisciplinary Studies Committee to submit oral arguments and answer questions concerning the proposed program. If approved, the student may proceed with the curriculum. The Committee will meet during the fall, spring and summer semesters, and students must make written application by September 15, February 15 or May 15. Application for a degree must be submitted to the Office of the Registrar. For further information, contact Dr. David Sicko, Office 092 of the MSU-Meridian Campus.

Communication with a concentration in Broadcasting

MSU Advisor: Dr. Dennis J. Mitchell; MCC Advisor: Josh Taylor

The Communication B.A. Degree is a joint offering with Meridian Community College. Contact Dr. Dennis Mitchell for a brochure detailing this joint program with MCC.

General Liberal Arts Program (GLA)

Advisor: Dr. James Kelley
Office: 088

Students who prefer to specialize in more than one field of study may earn a B.A. degree in General Liberal Arts. Requirements for this degree include all of the following: satisfactory completion of the University and College Core curriculum; satisfactory completion of the College of Arts and Sciences B.A. requirements; approval of the proposed G.L.A. program; satisfactory completion of twelve hours of upper-division courses (courses numbered 3000 and above) in each of three fields of study. The three fields may all be within the College of Arts and Sciences, or one of the three may be within another school/college of the University if that field is related to the student’s educational or career goals. To insure an orderly progression of work toward the degree, interested students should meet with the program’s advisor as early as possible. Furthermore, admittance into the program requires a GPA of at least 2.5 and the approval of the GLA Committee and the Associate Dean of the College of Arts and Sciences. General Liberal Arts is not suitable for students who are uncertain about their choice of a major; these students should see the Undecided listing in this section.

University and College Core

English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II

Foreign Language (9 hours)
- 3 semesters one Foreign Language (see advisor)

Humanities (18 hours)
- 3 hours Literature - see Major Core
- 3 hours History - see A&S listing
- 3 hours Philosophy Elective - see advisor
- 9 hours Humanities Electives - consult advisor

Math (6 hours)
- MA 1313 College Algebra
- 3 hours Above College Algebra

Fine Arts (3 hours)
- 3 hours See A&S listing

Natural Sciences (9-12 hours)
- 3-4 hours Physical Science w/Lab*
- 3-4 hours Biological Science w/Lab**
- 3-4 hours Natural Science Elective***

Social Sciences (18 hours)
- 6 hours See A&S Listing
- 12 hours Social Sciences Electives****

Major Core

Students must choose 3 areas with 12 upper division hours in each area. Consult advisor.

Oral Communication Requirement (3 hours)
- CO 1003 Fundamentals of Public Speaking

Computer Requirement - consult advisor for approved courses

Writing Requirement - consult advisor for approved courses

Electives
- 8 or more hours to equal 124

Total hours needed for major: 124

* CH, GG, or PH; see University Core.
** BIO, EPP, or PO; see University Core.
*** Consult advisor.
**** Must be from 2 different areas and must cross 4 disciplines over the 18 hours. Only one Economics allowed. See advisor.

Psychology Program

Advisor: Dr. C. Edward Snodgrass
Office: 090

MSU-Starkville faculty members may offer courses at Meridian. Three adjunct professors teach regularly in the program. They are:
- Thomas N. Elliott, Ph.D., University of Mississippi. Hospital Program Director/ Director of Psychology, East Mississippi State Hospital, Meridian.
- Alisha Gray Marlow, Ph.D., University of Southern Mississippi. Psychologist, Weems Mental Health Center, Meridian.
- James L. Shumate, Ph.D., University of Southern California. Psychologist, East Mississippi State Hospital, Meridian.
Required Curriculum
Undergraduate students wishing to major in psychology must have a minimum 2.0 grade point average on all college work attempted prior to entering the major. The Bachelor of Arts degree program in psychology is designated to provide training for advanced study in psychology or related fields. Advanced study is recommended for students desiring a career in psychology. Psychology majors must earn a C or better in all required psychology courses.

University and College Core
English Composition (6 hours)
- EN 1103 English Comp I OR
- EN 1163 Accelerated Comp I
- EN 1113 English Comp II OR
- EN 1173 Accelerated Comp II
Foreign Language (9 hours)
- 3 semesters one Foreign Language - see advisor
Humanities (6 hours)
- 3 hours Literature - see University Core
- 3 hours History - see University Core
Philosophy Elective (3 hours)
- Consult advisor
Humanities Elective (9 hours)
- (Must be from 2 different areas - see A&S Core)
Mathematics (6 hours)
- MA 1313 College Algebra
- MA 1323 Trigonometry OR
- ST 2113 Stats for Beh Sci (or higher math)
Fine Arts (3 hours)
- See A&S Core List
Natural Sciences (9-12 hours)
- 3-4 hours Physical Sciences w/lab (CH, GG, PH)*
- 3-4 hours Biological Sciences w/lab (BIO, EPP, PO)*
- 3-4 hours Natural Science Elective**
Social Sciences Core (6 hours)
- PSY 1013 General Psychology
- 3 hours See A&S Core listing
Social Sciences Electives (12 hours)***
Major Core
- PSY 1021 Careers in Psychology
- PSY 3103 Intro Psychological Statistics
- PSY 3314 Experimental Psychology
Choose two of the following:
- PSY 3213 Psy of Abnormal Behavior
- PSY 3623 Social Psychology
- PSY 3803 Developmental Psychology
- PSY 4203 Theories Personality
Choose one of the following:
- PSY 3345 Psychology of Learning
- PSY 3713 Cognitive Psychology
Choose one of the following:
- PSY 4403 Biological Psychology
- PSY 4423 Sensation and Perception
- 3 hours Choose one unused course from the groups above
- 12 hours PSY Upper Division Electives
Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking
Writing Requirement
Satisfied by successful completion of PSY 3314
Computer Literacy
Satisfied by successful completion of PSY 3314
General Electives Consult advisor
Total hours needed for major: 120
* See University Core.
** Consult advisor.
*** Must be from 2 different areas and must cross 4 disciplines over the 18 hours (6 hours from the Social Science core and 12 hours of SS electives). Only one Economics allowed. See advisor.

Social Work Program
Program Director: Sandra Vaughn, MSW, ACSW, LCSW
Office: 076

The Social Work Program at Mississippi State University-Meridian Campus is accredited by the Council on Social Work Education was reaffirmed until 2013. The profession of social work recognizes the Bachelor of Social Work (BSW) degree as the first practice degree. The BSW graduate is prepared to work as a generalist social work practitioner in a variety of practice settings such as child welfare service agencies, nursing homes, medical hospitals, mental health hospitals/clinics, public health clinics, industries, juvenile and family courts, shelters for battered women and children, neighborhood and community services.

The social work program integrates a liberal arts perspective into the social work curriculum. This liberal arts perspective enhances the person-in-environment focus of generalist social work practice. Mississippi State University-Meridian Campus, an Upper Division University, offers courses equivalent to the third and fourth years. The social work program does accept course credit through transfer (up to 66 hours) from other accredited universities and colleges. The applicant must complete the sixty-four (64) semester hours of university/college work indicated in the shaded area below before applying for admission to Mississippi State University-Meridian Campus Social Work Program. The Program Director reviews all course credit transfer hours.

Although students may enroll in social work as their major, there is a formal admission process into the social work program. Criteria for admission into the program include:
1. Cumulative GPA of 2.0
2. The following liberal arts requirements must be completed:
   - English Composition I and II
   - College Algebra
   - Introduction to Sociology
   - American Government
   - General Psychology
   - Anatomy & Physiology
   - Principles of Macroeconomics
   - Fund. of Public Speaking
   - Basic Computer Concepts & Applications
   - Social Work with At-Risk Populations
3. Completion of the following social work courses with a minimum grade of B
   - SW 3003 Social Work with At-Risk Populations
   - SW 2313 Introduction to Social Work
   - SW 3013 Human Behavior in the Social Environment I
4. Completion of Application for Admission to the Social Work Program
5. Students must provide three reference letters on provided forms
6. Students must complete a personal interview with social work admissions committee
7. Students must be admitted to the Social Work Program before enrolling in further social work courses.

Additional courses, as noted in the application for admission form, must be completed prior to petition for admission to the major.

Before enrolling in any social work classes, it is the responsibility of the student to consult with their social work advisor regarding prerequisites for social work classes. The criteria for remaining in the program and entering field practicum include:
1. Maintain an overall GPA of 2.0, with a 3.0 GPA or better for all social work courses
2. Must earn a minimum of a B in each social work course before proceeding to required social work courses at the next level
3. Continue to demonstrate an aptitude for a social work career
4. Adhere to all academic expectations of the university and the social work program
5. Adhere to the National Assoc. of Social Workers Code of Ethics

University and College Core
English Composition (6 hours)
- EN 1103 English Composition OR
- EN 1163 Accelerated Comp I
- EN 1113 English Composition OR
- EN 1173 Accelerated Comp II
Foreign Language (9 hours)
3 semesters one Foreign Language – see advisor

Humanities (6 hours)
3 hours Literature – see University Core
3 hours History – see University Core

Philosophy (3 hours)
PHI 1103 Introduction to Philosophy OR
PHI 1113 Introduction to Logic

Humanities Elective (9 hours)*
3 hours Literature Elective
3 hours History Elective
3 hours Humanities Elective

Mathematics (6 hours)
MA 1313 College Algebra
ST 2113 Introduction to Statistics

Fine Arts (3 hours)
See Arts & Sciences Core List

Natural Sciences (9-12 hours)
BIO 1004 Anatomy and Physiology
3-4 hours Physical Sciences w/lab (CH, GG, PH) **
3-4 hours Natural Science Elective *

Social Sciences (6 hours)
SO 1003 Intro to Sociology
PS 1113 American Government

Social Sciences Electives (12 hours)
Required:
SW 3003 Populations at Risk *
PSY 1013 General Psychology
EC 2113 Prin of Macroeconomics
AN 1103 Intro to Anthropology OR
AN 1143 Intro to Cultural Anthropology

Major Core
Social Work curriculum is completed as sequenced.
SW 2313 Intro SW/Soc Welfare
SW 2303 Social Welfare Policy I
SW 3013 Human Behav & Social Envir. I
Students must successfully complete a formal admissions process prior to taking the following courses:
SW 2323 Social Welfare Policy II***
SW 3023 Human Behav & Social Envir. II***
SW 3213 Research Methods in Social Work ***
SW 4613 Child Welfare Services
SW 3513 Social Work Practice I****
SW 3523 Social Work Practice II****
SW 3533 Social Work w/ Comm & Organizations****
3 hours Social Work Elective

Oral Communication Requirement
CO 1003 Fundamentals of Public Speaking

Writing Requirement
SW 4713 Senior Seminar***

Computer Literacy
Consult Advisor

General Electives
Consult Advisor
Field Work includes full-rime placement for one semester in a supervised agency setting.
SW 4916 SW Field Practicum and Seminar I***
SW 4926 SW Field Practicum and Seminar II***

Total hours needed for major: 124

32 hours of course work must be A&S 3000/4000
* Consult Advisor.
** See University Core.
*** Course has prerequisite. Please check course description in back of catalog or consult advisor.

Administration of Justice Program
Advisor: Dr. Dennis J. Mitchell

Contact Dr. Mitchell for details on the Administration of Justice Program. The University of Southern Mississippi offers this degree through a consortium agreement with MSU.

Gerontology Concentration Program
Advisor Dr. Dennis J. Mitchell
Office: 074

On the Meridian campus the gerontology concentration is offered in cooperation with the School of Human Science which provides key courses by distance learning. The Arts and Sciences Division provides courses in psychology, sociology, and social work at Meridian. The Education Division provides community counseling courses. Administration of the certificate is through the Council on Gerontology on the Starkville campus. The concentration in gerontology is open to all students within the university. It is intended to be added to any degree to signify that a student has combined factual and theoretical knowledge with practicum experience.

This area of study is open to students from all colleges within the University. The Gerontology Certificate was developed to supplement the student’s chosen major. Undergraduate students wishing to complete the Gerontology requirements will select a major in addition to electing 15 hours of gerontology course work. Graduate students are required to complete a readings or independent study course in addition to the 15 hours of gerontology course work.

Undergraduate Certificate Requirements: (minimum 15 hours)
Select three of the following:
HS 4403 Intro to Gerontology
ABE 4513 Dynamics of Aging
PSY 4983 Psychology of Aging
HS 4863 Consumer Aspects of Aging
SO 4413 Aging and Retirement in American Society
SW 4623 Social Work with the Aged

Select at least two of the following: (may include courses from above list)
COE 4713 Issues in Aging
SW 2323 Social Welfare Policy
HS 3673 Environments for Special Needs
HS 4243 Nutrition Throughout the Life Cycle
HS 4813 Adult Development
HS 4333 Families, Legislation, and Public Policy

Graduate Certificate Requirements (minimum 18 hours):
Select three of the following:
ABE 6513 Dynamics of Aging
PSY 6983 Psychology of Aging
SO 6413 Aging & Retirement in American Society
HS 6863 Consumer Aspects of Aging
PE 8153 Wellness and Aging

Take at least two of the following (may include courses from above list):
COE 8813 Counseling the Elderly
COE 6713 Issues in Aging
PSY 8313 Developmental Psychology

Required: Independent study/readings course (3 hours)
**DIVISION of BUSINESS and INDUSTRY**

Dr. Jack Tucci, Chair  
Associate Professor Paul Allen; Assistant Professors Kevin Ennis, William Hill, DohKhuil Kim, and Seung Jae Shin  
Instructors James S. Lawson, Jason Sharp and Harold White;  
Academic Advisor Regena Clark

The mission of the College of Business and Industry is to develop knowledge and critical skills in students, and to foster economic and professional development through teaching, research, and service.

**BACHELOR of BUSINESS ADMINISTRATION**

(Concentrations in Accounting, Business Administration, Information Systems, Management, or Marketing)

**Lower Division** - Lower division hours must be completed at another educational institution.

- **English** - 6 hours  
  EN 1103 English Composition  
  EN 1113 English Composition
- **Humanities** - 6 hours  
  3 hours Humanities Elective  
  3 hours Humanities Elective
- **Fine Arts** - 3 hours  
  Choose one of the following:  
  Art Appreciation  
  Music Appreciation
- **Mathematics** - 9 hours  
  MA 1313 College Algebra  
  MA 1613 Calculus for Business  
  BQA 2113 Intro to Business Statistical Methods
- **Science** - 6 hours  
  BIO, GG, CH, or PH (with laboratory)
- **Behavioral Science** - 3 hours (Choose one)  
  Introduction to Psychology  
  Introduction to Sociology  
  Introduction to Anthropology

**Additional Required Lower Division Courses**

- PS 1113 American Government  
- CO 1003 Fundamentals of Public Speaking  
- ACC 2013 Principles of Financial Accounting  
- ACC 2023 Principles of Managerial Accounting  
- BL 2413 The Legal Environment of Business  
- EC 2113 Principles of Macroeconomics  
- EC 2123 Principles of Microeconomics  
- 7 hours Electives

**Total lower division hours 61**

**Upper Division**

- BIS 3233 Intro to Mgt Info Systems  
- BIS 3713 Electronic Information Systems  
- BQA 3123 Business Statistical Methods II  
- FIN 3113 Financial Systems  
- FIN 3123 Financial Management  
- MGT 3114 Principles of Management & Production  
- MGT 3213 Organizational Communications I  
- MGT 3013 Principles of Marketing  
- GB 4853 Business Policy (Senior course)  
- 3 hours International Elective  
- Major Electives*  
- General Electives**

**Total hours needed for degree: 124**

* Major elective hours by major: Accounting (24), Business Administration (24), Information Systems (18), Management (18), and Marketing (21).

** Choose enough general electives to bring the total number of hours to 124.

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**DIVISION of EDUCATION**

Dr. George Thomas, Chair  
Associate Professor Laura Bryan  
Assistant Professors Sallie Leewer, Elizabeth Burns, Bill Leewer, Janet McCarr, Julia Porter, Ingrid Smith, Linda Walker, Joshua Watson and Darren Wozny  
Instructors Dana Howell and Carole Smith

The Division of Education offers degree programs in areas previously listed. Education programs offered at the Meridian Campus parallel those offered through the College of Education. Specific degree program requirements may be obtained by referencing the College of Education section in this Bulletin.

Degree requirements not listed in this section may be found by referencing the corresponding degree program located within this general bulletin.
The Reserve Officers’ Training Corps is under the administrative and academic supervision of the College of Arts and Sciences, Army ROTC (Military Science) courses are indicated by the prefix MS; Air Force ROTC (Aerospace Studies) courses are indicated by the prefix AS. All ROTC courses are bona fide University courses. The total number of ROTC hours allowed as elective credit toward a specific degree varies. Most schools and colleges at the University accept six (6) or more hours of ROTC courses offered toward degrees conferred. The advanced ROTC courses are options for meeting social/behavioral science core requirements. A student should contact the appropriate college, school, or department to determine allowable ROTC course credit toward a particular degree.

PURPOSES and OBJECTIVES
The general objective of the Reserve Officers’ Training Corps is to develop in each student: (1) a basic understanding of associated professional knowledge necessary to be an officer in the U.S. Armed Forces; (2) a strong sense of personal integrity, individual responsibility and honor; and, (3) an appreciation of the requirements of national security.

The Army ROTC Basic Course is designed to give the first and second year ROTC student an introduction to the Army and its career opportunities without incurring any obligation on the part of the student. The Advanced Course (third and fourth years) stresses the military skills and knowledge, and interpersonal skills required of commissioned officers of the Active Army, Army Reserve, or Army National Guard.

The Air Force ROTC General Military Course (GMC) is a two-year course normally taken during the freshman and sophomore years. The course covers two main themes - the development of air power and the contemporary Air Force in the context of military organization. A student can enroll in the GMC without military obligation (unless on an AFROTC Scholarship). The Professional Officer course (POC) is a two-year course of instruction, normally taken during the junior and senior years. The curriculum covers Air Force leadership and management and American Defense Policy. A minor in Aerospace Studies is available to students completing the specified requirements in Air Force ROTC.

Army Program
Army Program. The Basic and Advanced Courses consist of 4 semesters each as shown below. See the “Description of Courses” section of this catalogue for further information.

Basic Courses (2 hours each)
- MS 1112 Leader Development 1
- MS 1122 Leader Development 2
- MS 2112 Leader Development 3
- MS 2122 Leader Development 4

Total of 8 hours

Advanced Courses (3 hours each)
- MS 3113 Advanced Military Skills I
- MS 3123 Advanced Military Skills II
- MS 4113 Leader’s Responsibilities
- MS 4123 Professional Development of the Leader

Total of 12 hours

Professional Military Education (PME). In addition to the above, each cadet must complete, as a minimum, one university approved course in each of the following subject areas; Written Communication Skills, Human Behavior, Military History, Computer Literacy, and Math Reasoning. The PME requirement is normally achieved by the cadet as part of a normal course of study. Students should coordinate with a Military Science instructor to determine a course of action to complete the PME requirement.

Requirements for commissioning as a Second Lieutenant in the United States Army include thirty-two days at Advanced Camp (normally between the junior and senior years), completion of the Advanced Course, satisfactory academic progress, and the recommendation of the Professor of Military Science (PMS).

ENTRANCE REQUIREMENTS
Basic Course. The Army Basic Course is an elective course requiring only that the individual be a full time student and a legal U. S. citizen. ROTC credit hours earned at other universities are transferable.

Advanced Course. Entrance into the Advanced Course is on a selective and competitive basis. The primary requirements for entry into the advance program are satisfactory completion of the basic course or equivalent, good academic standing, demonstrated leadership ability, an approved physical examination and completion of 54 semester hours of college credit.

Two-Year Program. Equivalent credit for the basic course may be obtained by students with 54 semester hours of college credit or more for direct enrollment in the advanced course, based on any one of the following.

(a) Satisfactory completion of the five weeks Basic Summer Camp. This basic summer camp is primarily intended for students who could not obtain the basic ROTC course during the freshman and sophomore years.

(b) At least 180 days of honorable service or active duty for training with the U.S. Armed Forces or Coast Guard.

(c) Substitute credit, which in varying amounts may be derived from attendance at service academies, junior ROTC courses, and National Defense Cadet Corps training.

(d) Successful completion of Basic Combat Training with the Army Reserve or the National Guard.

Interested students should consult the PMS during their first sophomore semester but not later than their junior year. Graduate students should apply prior to starting graduate work.

Simultaneous Membership program (SMP). Students who are members of a National Guard or Army Reserve unit may qualify for direct entry into the Army ROTC Advanced Course. Consult the PMS for additional information concerning the financial benefits of this program.

Summer Camps
MS 2256 Introductory Leadership Course
The Army Leader’s Training Course can be used by students desiring to enter the Advanced Course who are not eligible for advanced placement under any other process (e.g., Basic Course, veteran, four years of junior ROTC, completion of Basic Training, etc.). The course is five weeks long and incurs no military obligation for attendance. The course is a substitute for the two year Basic Course. Students attending may compete for Army scholarships.

MS 3376 Advanced Leadership Course
The five-week Army Advanced Camp is required of all students enrolled in the Advanced Course and is normally attended between the junior and senior year.

Uniforms and Equipment
Uniforms and textbooks are issued without cost to students. However, all equipment and textbooks must be returned to the ROTC Department upon departure of the student, and any such article lost or damaged other than by fair wear and tear, must be paid for by the students. Each student enrolled in ROTC is responsible for the maintenance of his/her uniform. Students who fail to clear their accounts before leaving the institution will have

Pay and Allowances
At School. Each student enrolled in the Army Advanced Course is paid a monthly subsistence allowance by the Federal Government of $200.00 per month.
At Camp. While at the Army Basic Camp, the student receives pay at the rate of the first enlisted grade with less than four months service (approximately $726 per month). Students attending Army Advanced Camp receive pay equal to one-half the pay of a second lieutenant with less than two years service (approximately $752 per month).

**Army ROTC Scholarship Program**

The Army awards ROTC scholarships to outstanding students each academic year. Army ROTC scholarships are for periods of either two, three, or four years. They pay tuition, fees, books, and laboratory expenses incurred by the cadet and provide up to $400 per month subsistence allowance to the cadet for the duration of the scholarship (except during the summer). Additionally, 4-year Scholarship Winners and 3-year Designees that attend MSU may receive (CASH AWARDS) for room and board. The amount of the award depends on the number of scholarship winners and designees that attend MSU. All contracted cadets can compete for a scholarship. Both men and women are eligible to apply for these scholarships.

High school students should consult their guidance counselors early in September or October of their senior year to apply for the four year scholarship. College sophomores with a 2.5 GPA and greater who otherwise qualify may be eligible for a 2-year scholarship.

**Obligations**

Accepting a commission as a 2nd Lieutenant in the U.S. Army incurs a service obligation of 8 years. This period may be served in a variety of ways to include:
- Active Duty, Reserves, National Guard, Individual Ready Reserve or a combination of these.

**AIR FORCE PROGRAM**

Air Force Course Program. The General Military Course (GMC) and the Professional Officer Course (POC) consist of four semesters as shown below. See the “Description of Courses” section of this catalog for further information. Each course has a mandatory laboratory.

General Military Courses (GMC) 2 hours each
- AS 1012 Foundations of USAF I, fall semester
- AS 1022 Foundations of USAF II, spring semester
- AS 2012 Air and Space Power I, fall semester
- AS 2022 Air and Space Power II, spring semester

**Total of 8 hours**

Professional Officer Course (POC) 3 hours each
- AS 3013 AF Leadership Studies I, fall semester
- AS 3023 AF Leadership Studies II, spring semester
- AS 4013 Nat. Security Affairs and Prep for Active Duty I
- AS 4023 Nat. Security Affairs and Prep for Active Duty II

**Total of 12 hours**

Requirements for commissioning as a USAF Second Lieutenant include completion of a degree according to the university’s rules and regulations, completion of the Professional Officer Course, completion of AFROTC Field Training (normally during the summer between the sophomore and junior years), and approval of the Professor of Aerospace Studies. Officer candidates must be between 18 and 31 years of age for commissioning.

**Entrance Requirements**

GMC: To enter the GMC, a student must be full-time, be a U.S. citizen, be in good physical condition, and be of good moral character. 

POC: In addition to the GMC requirements, POC cadets must have passed the AFROTC Physical Fitness Test and the Air Force Officer Qualifying Test. They must be interviewed, selected by board of USAF Officers, and have completed a four- or six-week field training encampment.

While Aerospace Studies courses are designed to prepare eligible students for commissioning as Second Lieutenants in the USAF, the AS academic courses are open to all interested students, even those who do not meet GMC or POC entry requirements. Students who are not presently taking AFROTC courses may still apply for the in-college scholarships.

**Field Training:** AFROTC cadets who have completed the GMC course work and meet other requirements for POC entry will normally attend the four-week USAF field training encampment between their sophomore and junior years. There are six-week encampments for students seeking POC entry who have not previously completed GMC requirements. Cadets report individually to selected Air Force bases. Field Training is a mentally and physically demanding period of concentrated USAF training.

**Uniforms and Equipment:** AFROTC uniforms and textbooks will cost students. However, all equipment and textbooks remain property of AFROTC and must be returned before departure. Each student is responsible for the maintenance of his/her uniform.

**Pay and Allowances:** Each student enrolled in the POC is paid a monthly subsistence allowance of at least $350 while enrolled in the POC (maximum of 600 days). While at Field Training, students are paid at a rate of approximately $20 per day.

**IN-COLLEGE SCHOLARSHIP PROGRAM**

Full-time students are eligible to apply for Air Force ROTC three- or two-year scholarships. The majority of scholarships pay full college tuition, laboratory and incidental fees, book costs, plus at least $250 per month, depending on academic year. Applicants are selected on the basis of college grade point average. Air Force Officer Qualifying Test scores, and a recommendation from the Professor of Aerospace Studies. Final selection is made by a Central AFROTC selection board which considers qualified applicants nationwide. There is no maximum number of scholarships for any one school. Students who are not presently taking AFROTC courses may still apply for the in-college scholarships.

Inquiries about AFROTC scholarships may be made directly to the Admissions Officer, AFROTC Detachment 425, Box AF, Mississippi State, MS 39762.

**Active Duty Obligations:** Individuals who complete the AFROTC program and are commissioned a Second Lieutenant incur an active duty service commitment of four years.

**ROTC EXTRACURRICULAR ACTIVITIES**

**Cadet Military Societies.** Chapters of the Scabbard and Blade (Army and Air Force), Arnold Air Society (Air Force), and the Society of American Military Engineers (Army and Air Force) are chartered by appropriate national organizations. Selected Basic cadets with scholarships and Advanced cadets are eligible for membership in the Scabbard and Blade, and the Arnold Air Society, while the Society of American Military Engineers is open to all ROTC cadets and engineering students.

**Drill Teams.** The Blue Knights is a precision military drill team, composed of selected cadets from Air Force ROTC. The drill team participates in university and community events, as well as in state-wide competitions.

**Lee’s Rangers.** The Army ROTC Lee’s Rangers is made up of selected volunteers from the Army. This unit participates in extra training in small unit tactics and leadership under simulated combat conditions. Emphasis is placed on maintaining a high level of physical conditioning and developing self-confidence. Participants must be enrolled in Army ROTC. The Lee Ranger Company sponsors the ranger challenge team.

**Army “Blades.”** The “Blades” were established in March 1969 to formalize the women’s auxiliary of the Army ROTC Cadet Corps. These outstanding cadets serve the University and Cadet Corps as hostesses at social functions and in other ways to promote citizenship and interest in the Army ROTC program. They also undertake various service projects.

**Silver Wings.** Silver Wings is a nationwide honorary organization of college students dedicated to the interests of the United States Air Force and Air Force ROTC. Silver Wings evolved from the previously all-male auxiliary of the cadet corps, Angel Flight. Silver Wings exists to further the cause of the United States Air Force by promoting the interest of college men and women in the Air Force ROTC program. Members of Silver Wings are considered associated members of Arnold Air Society. Participation in worthwhile projects such as the Red Cross blood drives and orphanage parties, as well as hosting at Air Force ROTC functions makes these students an outstanding asset to the campus.

**Bulldog Battery.** The Army ROTC’s Bulldog Battery exists to support military ceremonies and athletic events.

**Color Guard.** Both the Air Force and Army Programs have Color Guards. The cadets present the Colors at home football and SEC home basketball games. They also participate in various community events.
### III. DESCRIPTION of COURSES

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COURSE NUMBERING SYSTEM

Courses are listed alphabetically by course symbol. Each department entry contains a list of faculty members, including designation of the department head, and a description of the courses.

System of Course Numbers

All course numbers consist of four digits, of which the first (left) digit indicates the level of preparation required and the fourth (right) digit indicates the number of semester hours. The two middle digits are reserved for the departments to distinguish one course from another. A fourth digit of zero (0) means that credit is variable to be fixed in consultation with the professor: example, ACC 4000, Directed Individual Study.

Courses that are in close sequence, such as two semesters of a survey course or a sequence of numbers for a seminar in a particular field may be listed with a hyphen (-) between the two four digit numbers: example, PSS 4711-4731. Seminar.

Where the same course is offered on both undergraduate and graduate levels, two numbers are used to designate the two levels of credit; example, HI 4703/6703. England to 1485. Students enrolled for graduate credit will be required to complete assignments above and beyond those students enrolled for undergraduate credit.

Course Numbers  Level of Credit*
1001-2999  Lower division courses  Undergraduate credit only
3001-4999  Upper division courses  Undergraduate credit only
4000  Directed Individual Study (Undergraduate)
5011-5999  Fifth year undergraduate or Professional courses
6011-6999  Courses for graduate credit only
8011-8999
9011-9999
7000  Directed Individual Study (Graduate)
8000  Master’s level research and thesis
9000  Ph.D. level research and dissertation

* Courses numbered 2000 or higher were upper division courses until Spring semester 1996.

Course Descriptions in Alphabetical Order by Course Symbol

Department of AGRICULTURAL and BIOLOGICAL ENGINEERING

Office: 100 Agricultural and Biological Engineering Center

Professors Batchelor (Head), Cathcart, Pote, and Smith;
Associate Professors To and Thommason;
Assistant Professor Elder, Fernando and Warnock

Biological Engineering

ABE 1911. Engineering in the Life Sciences. (1) (Open to freshmen and sophomores or first-semester transfer students only). One hour lecture. Introduction to agricultural and biological engineering; survey of the engineering profession; elementary analysis of biological systems; creative engineering and design and synthesis.

ABE 1921. Introduction to Engineering Design. (1) (Prerequisite: ABE 1911). Two hours laboratory. Introduction to the process of engineering design, including project management, prototype assembly, engineering graphics, technical writing and oral presentation.

ABE 2421. Analytical Methods. (1) Two hours laboratory. The application of biostatistics to real experimental problems with emphasis on experimental design, sampling distribution, statistical hypotheses and decision rules.

ABE 2990. Special Topics in Agricultural and Biological Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ABE 3303. Transport in Biological Engineering. (3) (Prerequisite: PH 2233 and CSE 1213 or CSE 1233 or equivalent). Three hours lecture. Principles of steady state and unsteady state energy and mass transfer as applied to biological systems.

ABE 3413. Bioinstrumentation I. (3) (Prerequisite: PH 2223 or consent of instructor). Two hours lecture. Two hours laboratory. Applied circuit analysis, electrodes and transducers, stress and strain, temperature measurements, human physiology, digital and programmable instrumentation.

ABE 3813. Biophysical Properties of Materials. (3) (Prerequisite: PH 2213). Two hours lecture. Two hours laboratory. Physical properties of biological products and materials. Primary emphasis placed on measurement and evaluation of dimensional, mechanical, rheological, transport, thermal, electrical, and optical properties.

ABE 4000. Directed Individual Study. Hours and credits to be arranged.

ABE 4111/6111. Biological Engineering Principles Laboratory. (1) (Co-requisite: ABE 4812). Three hours laboratory. The theory and practice of applying engineering principles and approaches for solving problems in the design of biological systems. The student develops a design for a project in biological engineering.

ABE 4122/6122. Biological Engineering Practices Laboratory. (2) Six hours laboratory. The student constructs, tests, and evaluates a biological engineering design.

ABE 4313. Biological Treatment of Nonpoint Source Pollutants. (3) Three hours lecture. Fundamental principles and design of biologically based treatment systems used to remove pollutants and protect receiving waters from agricultural and urban/suburban storm water runoff.

ABE 4323. Physiological Systems in Biomedical Engineering. (3) (Prerequisites: BIO 1504 or equivalent; EM 3513 or equivalent; ABE 3813; ABE 4803 or equivalent). Three hours lecture. Mathematical description and modeling of the behavior of physiological systems significant to biomedical engineers.

ABE 4423/6423. Bioinstrumentation II. (3) (Prerequisite: ABE 3413 or graduate standing). Two hours lecture. Two hours laboratory. Theory; application of automated measuring and control systems in biological sciences. Includes design/use of transducer interfaces; electronic signal conditioning; data logging; microprocessor based systems.

ABE 4483/6483. Introduction to Remote Sensing Technologies. (3) (Prerequisite: Senior or graduate standing, or consent of instructor). Three hours lecture. Electromagnetic interactions, passive sensors, multispectral and hyperspectral optical sensors, active sensors, imaging radar, SAR, Lidar, digital image processing, natural resource applications. (Same as ECE 4423/6423 and PSS 4483/6483).

ABE 4513/6513. Dynamics of Aging. (3) (Prerequisite: BIO 1123 or BIO 1504 or consent of instructor). A broad based systematic, quantitatively oriented introduction to the dynamics of aging. Systems physiology of aging in relation to biomedical engineering.

ABE 4523/6523. Biomedical Materials. (3) (Prerequisites: One of the following: ABE 3813 or CHE 3413 or ME 3403). Three hours lecture. Emphasis is on applications, composition, testing, and biocompatibility of biomedical materials used in implant devices. This course may be used for honors credit.

ABE 4533/6533. Rehabilitation Engineering (3) (Prerequisites: Senior standing in College of Engineering). Three hours lecture. An introduction to rehabilitation engineering emphasizing applications of technology in prosthetics; orthotics, mobility, and sensory augmentation. This course may be used for honors credit.


ABE 4624/6624. Experimental Methods in Materials Research. (4) (Prerequisites: CHE 3413 or ABE 3813 or ME 3403 or consent of instructor). Three hours lecture. Three hours laboratory. Introduction to research methodology commonly used in the evaluation of treatments, and mechanical testing. (Same as CHE 4624/6624 and ME 4624/6624).


ABE 4812/6812. Principles of Engineering Design. (2) (Prerequisite: senior standing in engineering). Two hours lecture. Emphasizing the use of
mathematics, mechanics, and systems analysis in the design of engineering systems in agricultural, biomedical, food processing and forestry areas.

ABE 4911. Engineering Seminar. (1) (Prerequisite: Consent of instructor). One hour lecture. Discussion of current engineering developments, professional developments, ethics and their relation to agriculture and the life sciences.

ABE 4990/6990. Special Topics in Agricultural and Biological Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ABE 7000. Directed Individual Study. Hours and credits to be arranged.

ABE 8000. Thesis Research/Thesis. Hours and credits to be arranged.

ABE 8314. Corrosion of Biomedical Implants. (4) (Prerequisite:Graduate Standing). Three hours lecture & three hours laboratory. Basic concepts of electronics, especially related to corrosion. Development of corrosion mechanisms and evaluation of corrosion susceptibility of implant metals/alloys in dentistry and orthopaedics.

ABE 8501-8531. Journal Reviews in Biomedical Engineering. (1) One hour lecture. Current Journal articles relevant to Biomedical Engineering topics are read and reviewed.

ABE 8801. Clinical Experience for Biomedical Engineering. (1) (Prerequisite: Graduate standing in the Biomedical Program and permission of the instructor). Three hours experiential learning. This course will provide graduate students with exposure, understanding and insight into the clinical environment and/or treatment modalities of clinical (human and/or animal) patients.

ABE 8911-8931. Agricultural and Biological Engineering Seminar. (1) Discussion of research needs, review of literature, and development of research work plans.

ABE 8990. Special Topics in Agricultural and Biological Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ABE 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

Agricultural Engineering Technology and Business

ABE 1073. Agricultural Mechanics. (3) One hour lecture. Four hours laboratory. Developing skills in hot and cold metal work; welding, carpentry practices, painting and finishing wood, concrete and concrete masonry; and basic electric wiring.

ABE 1863. Engineering Technology in Agriculture. (3) Three hours lecture. Introductory course emphasizing use of fundamentals for solving problems related to soil and water management, electrical power and control, agricultural machinery, and environmental control.

ABE 2063. Introduction to Agricultural Engineering Technology. (3) (Prerequisite or Co-requisite: MA 1313. Open to freshman or first-semester transfer students only). Three hours lecture. Curricula and career objectives. Quantitative and analytical assessment of the physical system in agriculture and natural resources.

ABE 2173. Internal Combustion Engine Technology. (3) Two hours lecture. Three hours laboratory. Principles of operation of gasoline, diesel and LP gas engines; engine types; ignition, fuel, valve, and cooling systems; transmission; power trains; power measurement; and tune-up.

ABE 2263. Agricultural Surveying and Drainage. (3) Two hours lecture. Three hours laboratory. Basic surveying measurements and equipment use. Surveys for drainage and erosion control measures, principles of water control for soil conservation and drainage.

ABE 2873. Land Surveying. (3) (Prerequisite: MA 1323 or equivalent). Two hours lecture. Three hours laboratory. Fundamentals of measurements and traverse computations. Public land surveys. Surveying practice in traverse and topographic surveys.

ABE 3513. The Global Positioning System and Geographic Information Systems in Agriculture and Engineering. (3) (Prerequisite: MA 1313 and MA 1323, or equivalent). Two hours lecture. Four hours laboratory. Basic theory and hands-on application of global positioning system (GPS) technology/hardware, and geographic information systems (GIS) software, for precise positioning in agriculture and engineering.

ABE 3700. Internship in Gin Management and Technology. (1-6) (Prerequisite: Minimum of junior standing or permission of instructor). Credits to be arranged. Work experience in approved cotton gins for Agricultural Engineering Technology and Business majors with an emphasis in Gin Management and Technology.

ABE 4163/6163. Machinery Management for Agro-Ecosystems. (3) (Prerequisite: Junior standing or consent of instructor). Two hours lecture. Two hours laboratory. Basic principles of operation and management of agricultural, cultural, landscape, and turf power machinery; selection of machinery based on power requirements, economy, and suitability for Agro-Ecosystems.

ABE 4263/6263. Soil and Water Management. (3) (Prerequisite: ABE 2873. Students with credit in ABE 2263 will not receive credit in this course). Two hours lecture. Three hours laboratory. Introduction to soil and water management principles; elementary hydrology, basic fundamentals of erosion control, surface and subsurface drainage, and water control for irrigation.

ABE 4383/6383. Building Construction. (3) (Prerequisites: EG 1143, junior standing.) Three hours lecture. An introduction to building terms, construction materials, structural components, construction methods, and mechanical systems pertaining to residential and commercial structures.

ABE 4453/6453. Cotton Ginning Systems and Management. (3) Three hours lecture. An in-depth exposure to the modern cotton ginning industry, including the basics of the operation of a cotton gin and management of the ginning process.

ABE 4473/6473. Electrical Applications. (3) Two hours lecture. Two hours laboratory. Fundamental electricity, wiring, and control of agricultural operations. Includes use of computer tools, instruments, safety, and hardware.

ABE 4483/6483. Introduction to Remote Sensing Technologies. (3) (Prerequisite: Senior or graduate standing, or consent of instructor). Three hours lecture. Electromagnetic interactions, passive sensors, multispectral and hyperspectral optical sensors, active sensors, imaging radar, SAR Lidar, digital image processing, and natural resource applications. (Same as ECE 4423/6423 and PSS 4483/6483).

ABE 4961. Seminar. (1) (Prerequisite: Consent of instructor). One hour lecture. Review of current literature dealing with the technical problems in the agricultural industry.

SCHOOL OF ACCOUNTANCY

Office: 381 McCool Hall
Professors Hollingsworth (Director), Daughtrey, McNair and Milam; Associate Professors Addy, Herring, and Rigsby; Assistant Professors Boone, Lehman, and Stammerjohn.

ACC 1203. Basic Industrial Accounting. (3) Three hours lecture. Emphasis on the fundamentals of financial and cost accounting essential for interpreting accounting reports. Designed primarily for engineering students. (Not open to students who have had 3 semester hours in accounting or who are accounting or business majors.)


ACC 2023. Principles of Managerial Accounting. (3) (Prerequisite: ACC 2013). Three hours lecture. Managerial accounting fundamentals including interpretation and use of management reports, cost behavior, cost accumulation, budgeting, financial statement analysis, responsibility accounting. Honors section available through invitation only.

ACC 2990. Special Topics in Accounting. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ACC 3003. Accounting Information Systems I. (3) (Prerequisite: ACC 2023). Three hours lecture. Using computerized information systems, including word processing, spreadsheet, database, network, and Internet software. Documenting accounting information system processes and establishing effective internal controls.

ACC 3013. Cost Accounting. (3) (Prerequisite: ACC 3003). Three hours lecture. Cost accounting principles and techniques as applied to job order and continuous process types of industry; determination of unit costs; preparation of cost reports.


ACC 3033. Intermediate Accounting II. (3) (Prerequisite: ACC 3023). Financial accounting and reporting related to liabilities, leases, pensions, income taxes, stockholder’s equity, accounting changes, errors, cash flows, and earnings per share.
ACC 3053. Accounting Information Systems II. (3) (Prerequisite: ACC 3005). Three hours lecture. Designing and using accounting information systems in both computerized general ledger and database processing environments.


ACC 4000. Directed Individual Study. (Prerequisites: ACC 2023 and consent of Director of School of Accountancy). Hours and credits to be arranged.


ACC 4033. Auditing. (3) (Prerequisite: ACC 3053). (Not open to PACC students). Three hours lecture. Fundamentals of auditing, including evaluating controls, assessing risk, designing audit programs, statistical sampling, professional ethics, and collecting evidence for financial, internal, operational, and compliance audits.

ACC 4043/6043. Municipal and Governmental Accounting. (3) (Prerequisite: ACC 2023). (Not open to PACC students). Three hours lecture. Accounting theory and practice applied to governmental units, state operated schools and colleges; classification and use of funds; fiscal procedures; budgetary control; financial statements; reports.

ACC 4053/6053. International Accounting. (3) (Prerequisite: ACC 2023). (Not open to PACC students). Three hours lecture. A study of the international dimension of accounting as it relates to multinational corporations and the international environment.

ACC 4063/6063. Income Tax II. (3) (Prerequisite: ACC 4013). (Not open to PACC students). Three hours lecture. Discussion of the Federal Income Tax treatment of taxpayers other than individuals and the treatment of property transfers which are subject to Federal and State gift and death taxes.

ACC 4203/6203. Accounting Internship. (3) (Prerequisites: Senior standing and approval by the Internship Director prior to the internship). A minimum of eight consecutive weeks consisting of forty hours per week of professional experience in audit, tax and other accounting related areas.

ACC 4990/6990. Special Topics in Accounting. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ACC 7000. Directed Individual Study. Hours and credits to be arranged.

ACC 8013. Seminar in Financial Accounting Theory. (3) (Prerequisite: ACC 4023). Examination of the theoretical concepts, definitions, and models espoused in the accounting literature and relevant to analyzing various contemporary issues in financial accounting and reporting.

ACC 8023. Advanced Managerial Accounting. (3) (Prerequisite: ACC 3013). Three hours lecture. The study of theoretical conceptual and technical issues in planning, control and decision making.

ACC 8033. Business Assurance Services. (3) (Prerequisite: ACC 4033). Three hours lecture. Financial statement auditing practices, including professional standards, ethical responsibilities, legal liability, and reporting requirements.

ACC 8043. Fraud Examination. (3) (Prerequisite ACC 3053 and ACC 4033). Three hours lecture. Developing and executing a program of procedures to detect errors and frauds using information generated by computerized accounting systems.


ACC 8063. Research in Tax Practice and Procedures. (3) (Prerequisite: ACC 4013). Three hours lecture. Preparation of tax protests, tax planning; use of tax services; client representation; structure of Internal Revenue Service; and research problems in taxation.

ACC 8073. Taxation of Corporations and Shareholders. (3) (Prerequisite: ACC 4013). Examination of Federal income tax laws as applied to corporations and shareholders with an emphasis on how research issues deal with these topics.

ACC 8083. Federal Estate and Gift Taxation. (3) (Prerequisite: ACC 4013). An examination of the Federal Estate and Gift tax laws with an emphasis on how to research issues dealing with these topics.

ACC 8093. Taxation of Partnerships, S Corporations, Trusts, and Estates. (3) (Prerequisite: ACC 4013). Three hours lecture. An examination of the income taxation of partnerships, S corporations, trusts, and estates with an emphasis on how to research issues dealing with these topics.

ACC 8103. Income Taxation of Natural Resources. (3) (Prerequisite: ACC 4013). Three hours lecture. An examination of federal income tax laws as applied to oil and gas, solid minerals, timber, and topics in farming.

ACC 8112. Financial Statement and Management Accounting Report Analysis for Decision Making. (2) (Prerequisite: ACC 8303 or equivalent). Two hours lecture. Analysis of financial statements and internal accounting reports to help management make decisions.

ACC 8113. Advanced Individual Taxation. (3) (Prerequisite: ACC 4013 or consent of instructor). Three hours lecture. An in-depth analysis of taxation of individuals with an emphasis on how to research issues dealing with these topics.

ACC 8123. Tax Topics. (3) (Prerequisite: ACC 4013). Three hours lecture. An examination of specialized taxation topics such as real estate taxation, state and local taxation, and bank taxation.


ACC 8303. Survey of Accounting. (3) (Prerequisite: Graduate Standing). Three hours lecture. Introduction to financial and managerial accounting: including accounting process, cash flow, elements, business organizations, analysis of management reports and financial statements, cost planning and control.

ACC 8909. Special Topics in Accounting. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ACC 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.


ACC 9033. Seminar in Accounting Research. (3) (Prerequisite: Consent of the instructor) Evaluation and analysis of academic research strategies and methodologies, emphasis on (1) understanding and evaluating empirical research results and (2) formulating and writing research proposals.

The Department of ANIMAL and DAIRY SCIENCES

Office: 4025 Wise Center

Professors Althen, Boyd, and Kiser;
Associate Professors Rude, Ryan and Willard;
Assistant Professors Evans, Nicodemus, A. Smith, T. Smith, St. Louis, and Vann

ADS 1114. Animal Science. (4) Fall and spring semester. Three hours lecture. Two hours laboratory. Fundamental principles and practical application of livestock, dairy, and poultry science.

ADS 1132. Western Equitation. (2) Fall and spring semester. One hour lecture. Two hours laboratory. Principles of horsemanship and management and training of western pleasure horses.


ADS 2122. Advanced Equine Evaluation. (2) Fall Semester. (Prerequisite: ADS 2102 or consent of instructor). Four hours laboratory. Advanced evaluations of equine conformation and performance classes. Develop more extensive oral reason presentations to defend conformation and performance placings.

ADS 2212. Equine Behavior and Training. (2) (Prerequisite: ADS 1132 and consent of instructor). Four hours laboratory. Equine behavior and application of psychology principles for training horses. Systematic approaches to horse training emphasizing learning principles and training methods for specific equine activities.
ADS 2990. Special Topics in Animal and Dairy Science. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ADS 3142. Meats Judging I. (2) Spring semester. Four hours laboratory. Grading and judging meat carcasses and cuts, study of packing house operation. (Same as FNH 3142)

ADS 3213. Performance Analysis of Meat Animals. (3) Fall Semester. One hour lecture. Four hours laboratory. Productive evaluation of livestock as meat animals, directly related to carcass value and economics of production.

ADS 3232. Horse Science. (2) Spring semester. Two hours lecture. Breeding, feeding, management, and training of horses.

ADS 3233. Introduction to Therapeutic Riding. (3) (Prerequisite: ADS 1132 or consent of instructor). Two hours lecture. Two hours laboratory. An introductory course to therapeutic horseback riding discussing the therapeutic riding team, facilities and equipment, standards and accreditation, and special needs of the rider.

ADS 3312. Livestock Management Practices. (2) (Prerequisite: ADS 1114). Four hours laboratory. Modern techniques used in proper vocational management of beef cattle, sheep, swine, and horses.

ADS 3813. Dairy Cattle Appraisal. (3) One hour lecture. Four hours laboratory. Phenotypic appraisal; breed programs; performance record systems.

ADS 4000. Directed Individual Study. Hours and credits to be arranged. Approval by Department Head only.

ADS 4113/6113. Swine Science. (3) (Prerequisites: ADS 1114). Three hours lecture. Feeding, management, breeding, production, and marketing of swine. Fall semester.


ADS 4123/6123. Animal Breeding. (3) (Prerequisite: PO 3103). Three hours lecture. The basis for genetic improvement of livestock, including the study of variation, heritable characteristics, mating systems and methods of estimating breeding values. Fall semester. (Same as GNS 6123.)

ADS 4212/6212. Livestock Evaluation. (2) (Prerequisite: ADS 3213). Four hours laboratory. Evaluation of individuals and representative groups of livestock from the standpoint of the breeder, the market, and the consumer. Spring semester.

ADS 4213/6213. Livestock Nutrient Requirements and Formulation of Rations. (3) Application of knowledge of feedstuffs and nutrient requirements in ration formulation for all classes of livestock. Fall semester.


ADS 4222/6222. Sheep Science. (2) (Prerequisite: Junior or senior standing). Two hours lecture. Breeding, feeding, management, and marketing of sheep for lamb and wool production. Fall semester.


ADS 4243/6243. Composition and Chemical Reactions of Foods. (3) (Prerequisites: CH 1053 and CH 2503 or equivalent). Three hours lecture. Nature and chemical behavior of food constituents including proteins, lipids, carbohydrates, minerals, water, enzymes and pigments; properties of food systems as related to commercial preparation. Spring semester. (Same as FHN 4243/6243.)

ADS 4314/6314. Meats Processing. (4) Three hours lecture. Two hours laboratory. Survey of the meat industry with emphasis on slaughtering, cutting, curing, cooling, care, storage and manufacturing meats and meat products. Spring semester. (Same as FHN 4314/6314.)


ADS 4333/6333. Equine Exercise Physiology. (3) (Prerequisite: ADS 3232). Three hours lecture. Evaluation of research in equine exercise science. Physical, physiological, metabolic, behavioral and locomotive adaptations of the equine athlete to athletic training.

ADS 4412. Managing Livestock Sales I. (2) (Prerequisites: Instructor approval). Four hours laboratory. Course in preparation, structure and management of livestock sales. Emphasis will be on cattle and horse sales. Students will prepare for and conduct sale. Fall Semester.

ADS 4423. Animal and Dairy Sciences Internship. (3) (Prerequisite: Consent of instructor). Individual work experience with the farm animal spe-
AEC 1223. Computer Applications for Agriculturists and Life Scientists. (3) Two hours lecture. Two hours laboratory. Basic agricultural microcomputer applications and computing logic; creating reports using word processors; developing presentations on agricultural subjects using multimedia software; and agricultural calculations using spreadsheets.

AEC 2611. Seminar I. (1) One hour lecture. Planning and preparing for careers in agricultural economics and agribusiness. Exploring subject areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

AEC 2713. Introduction to Food and Resource Economics. (3) Three hours lecture. Each semester. Prerequisite to other Agricultural Economics courses. Economic principles applied to production, value, prices, credit, taxation, land tenure, marketing, international trade, and related problems affecting agriculture.

AEC 2990. Special Topics in Agricultural Economics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

AEC 3113. Introduction to Quantitative Economics. (3) Prerequisites: AEC 2713, MA 1613 or MA 1463. Three hours lecture. Each semester. Preparation to techniques and procedures for the quantitative analysis of economic problems related to the production and distribution of agricultural products.

AEC 3133. Introductory Agribusiness Management. (3) Three hours lecture. Study of marketing, production, risk, and financial management in agribusiness firms. Emphasis on application of economic principles to management of agri-marketing and farm supply firms.

AEC 3213. International Trade in Agriculture. (3) Prerequisites: AEC 2713 or EC 2123 or consent of instructor. Three hours lecture. Examination of the importance of international agricultural trade, the economic basis of trade, and the policies affecting agricultural trade.

AEC 3223. Introduction to Environmental Economics and Policy. (3) Prerequisites: AEC 2713 or EC 2123. Three hours lecture. Examines how economic forces, in concert with other processes, influence environmental quality through private markets and public policy.

AEC 3413. Introduction to Food Marketing. (3) Prerequisites: AEC 2713 or EC 2123. Three hours lecture. Describes the principles, functions, agencies, and methods of farm and food product and input marketing.

AEC 3513. Economics of Food and Fiber Production. (3) Prerequisites: AEC 3113 or EC 3113. Three hours lecture. Economic principles applied to food and fiber production situations; emphasis on firm-level decision analysis.

AEC 4000. Directed Individual Study. Hours and credits to be arranged.

AEC 4113/6113. Agribusiness Firm Management. (3) Prerequisites: EC 3123 or EC 3333. Three hours lecture. Examination and study of the organization, management, and operation of agricultural business with special reference to the application of managerial principles for decision-making.

AEC 4123/6123. Financial and Commodity Futures Marketing. (3) Prerequisite: Junior standing. Three hours lecture. Discussion of the purpose, function, mechanics, analysis, and application of commodity and financial futures markets in pricing and hedging opportunities. (Same as FIN 4123/6123).


AEC 4223/6223. Advanced Topics in Environmental Economics. (3) Prerequisites: AEC 3223 and EC 3123. Three hours lecture. Identifies topics lying on the frontier of environmental economics; demonstrates contributions that economics can make in understanding the problems and in providing guidance on solutions.

AEC 4333/6333. Economics of Aquaculture. (3) Prerequisite: AEC 2713 or consent of instructor. Three hours lecture. Application of economic principles to understand aquacultural production systems, with emphasis on farm management, resource allocation, industry market structure, food safety and environmental issues.

AEC 4343/6343. Advanced Farm Management. (3) Prerequisite: Senior standing, EC 3123, and AEC 4523. Three hours lecture. Techniques and procedures used for decision-making in the farm business as related to the determination of optimum enterprise choice and resource combination in both static and dynamic frameworks.

AEC 4413/6413. Public Problems of Agriculture. (3) Prerequisite: Senior standing and EC 3123 and AEC 3113. Three hours lecture. Major public and private problems of agriculture policies and action programs of government and individuals to deal with them; limitations encountered; appraisal of results.

AEC 4511/6511. Agricultural and Resource Legislative Policy. (1) Prerequisites: AEC 2713 or consent of instructor. One hour lecture. Discusses agricultural policy history and development, roles of consumer, producer, and environmental groups in policy development, and congressional organization and procedures in the policy process.

AEC 4523/6523. Farm Financial Management. (3) Prerequisites: AEC 2023, AEC 3113 and AEC 3133. Three hours lecture. Financial analysis and decision making, including farm records, marginal analysis and enterprise budgeting, financial statement analysis, capital budgeting, and financial intermediation in agriculture.

AEC 4530/6530. Agribusiness Management Internship. (1-6) Prerequisite: Consent of instructor. Individual work experience with approved agribusiness companies for agricultural economics or agribusiness students.

AEC 4611. Seminar II. (1) Prerequisite: Senior standing. One hour lecture. Discussion of current agricultural economics and agribusiness developments and their relation to the food and fiber sector.

AEC 4623/6623. Economics of Export and Import Traffic Management in Agriculture. (3) Prerequisites: Senior Graduate level standing or consent of instructor. Examination of the ocean shipping industry, import-export agricultural traffic management techniques, government regulations, documentation, and financial considerations. Spring semester.

AEC 4713/6713. Quantitative Economics. (3) Prerequisites: AEC 3113, EC 3113, and EC 3123. Three hours lecture. Investigation of the basic mathematical methods and techniques currently used to analyze economic problems.

AEC 4723/6723. Modeling for Agricultural Management. (3) Prerequisite: AEC 3113. Three hours lecture. Application of mathematical programming techniques to problems confronted by firms and industries involved in the production, processing, and marketing of agricultural commodities.

AEC 4733/6733. Econometric Analysis in Agriculture Economics. (3) Prerequisite: AEC 3113. Three hour lectures. Applications of single-equation estimation techniques to problems in agricultural economics.

AEC 4990/6990. Special Topics in Agricultural Economics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

AEC 4711. Agri-Marketing Practicum. (1) Two hours laboratory. Design and preparation of marketing plan for presentation at National Agri-Marketing Association meeting. Development of plan includes market research, budgeting, and advertising layouts.

AEC 7000. Directed Individual Study. Hours and credits to be arranged.

AEC 8000. Thesis Research/Thesis. Hours and credits to be arranged.

AEC 8122. Agribusiness Strategy Field Study. (2) Prerequisite: MGT 8121 or equivalent. A group project-based, field study of strategic issues currently facing a participating agribusiness organization.


AEC 8143. Agricultural Production Economics. (3) Prerequisites: EC 3123 or EC 3333 and AEC 4343/6343. Three hours lecture. Theory of production as related to agricultural production and resource use. Emphasis upon optimal organization of agricultural firms.

AEC 8153. Research Philosophy and Methodology in Economics. (3) Prerequisite: Graduate standing or consent of instructor. Three hours lecture. A study of undergirding philosophies and important methodologies in applied economic research. Case studies will focus on implications for constructing, reviewing, and evaluating research.

AEC 8163. Consumers, Producers, and Markets. (3) Prerequisite: EC 3123. Three hours lecture. Focuses on economic theory related to production, consumption, and markets for products. Extension into market structure, welfare economics, and non-market goods will also be discussed.

AEC 8312. Economic and Social Environment of the Agribusiness Firm. (2) Prerequisites: EC 8103 or equivalent. Two hours lecture. The course focuses on the economic, social, political and legal forces which shape the environment in which agribusiness firms compete.


AEC 8532. International Agricultural Trade and Policy. (2) (Prerequisite: EC 8163). Two hours lecture. Examination of international trade theories, policies affecting agriculture, international trade, world trade negotiations, barriers to trade, and the role of agricultural trade in economic development.

AEC 8542. Agribusiness Risk Management. (2) (Prerequisite: EC 8103 or equivalent). A review of risk management concepts and techniques for managing risks faced by agribusiness firms, with emphasis on futures and options.

AEC 8611. Research Seminar I. (1) Selection of the research topic, development of the research proposal. Each semester.

AEC 8621. Research Seminar II. (1) Final preparation of the research proposal and presentation of the proposal. Each semester.

AEC 8712. Topics in Applied Economics: Production and Supply. (2) (Prerequisites: EC 8163 and EC 8133, or consent of instructor). Two hours lecture. Focuses on applying microeconomic theory to applied production-oriented problems. Emphasis is placed on using analytical tools to empirical data and reporting results.

AEC 8722. Topics in Applied Economics: Marketing and Demand. (2) (Prerequisites: EC 8163 and EC 8133, or consent of instructor). Two hours lecture. Focuses on problem-solving skills using applied economic metrics. Emphasis is placed on applications of welfare economics.

AEC 8813. Advanced Production and Risk Analysis. (3) (Prerequisite: Consent of instructor). Three hours lecture. Focuses on problem-solving skills using applied econometrics. Emphasis is placed on applications of welfare economics.

AEC 8823. The International Economy. (3) (Prerequisite: Consent of instructor). Three hours lecture. Economic theory and analysis of government policies related to international trade with emphasis on the causes and consequences of globalization.

AIS 3803. Leadership Development in Agriculture and Life Sciences. (3) Three hours lecture. Fall semester. Dynamic interactions of personal characteristics, knowledge and expertise; interpersonal influence; professional commitment; organizational planning and goals; and power for effective leadership in agricultural professions.

AIS 4000. Directed Individual Study. (Hours and credit to be arranged.)

AIS 4103/6103. Objectives and Procedures of Programs in Agricultural Information Science and Education. (3) (Prerequisite: Junior standing). Three hours lecture. Focuses on problem-solving skills using applied computer technology. Emphasis is placed on applications of welfare economics.

AIS 4203/6203. Applications of Computer Technology to Agricultural Information Science and Education. (3) (Prerequisites: CSE 1013 or BIS 3713 or equivalent). Two hours lecture and two hours laboratory. Application of microcomputer technology in agricultural and extension education; data storage and retrieval; and use of canned computer programs in agricultural and educational settings.

AIS 4303/6303. Applications of Information Technologies in Agricultural Learning Systems. (3) (Prerequisites: AIS 4203/6203 or consent of instructor). Two hours lecture. Three hours laboratory. Advanced applications of computer and related information technologies in agricultural learning systems; designing and developing hypermedia-based materials for formal and nonformal agricultural instruction.

AIS 4403/6403. Development of Youth Programs. (3) Three hours lecture. Needs and interests of youth; developing, managing, and evaluating formal and informal youth education programs; volunteer and paraprofessional staff development; securing and developing supportive resources.

AIS 4424. Teaching Methods in Agriculture & Human Sciences. (4) (Prerequisite: Junior standing in CALS major). Three hours lecture. Two hours laboratory. Planning instruction; selecting teaching techniques; developing teaching plans; teaching agricultural/human science topics; using instructional technologies; and evaluating learner progress. (Same as HS 4424).

AIS 4443/6443. Vo-Ed Curricula and Techniques of Teaching the Rural Disadvantaged. (3) Organizing training programs in agricultural occupations for rural disadvantaged persons; developing teaching techniques adaptable to such programs and persons. Occupational opportunities for the rural disadvantaged.

AIS 4453/6453. Cooperative Programs in Occupations Served by Agricultural Information Science. (3) Procedures and techniques in organizing and coordinating cooperative vocational education programs in agricultural occupations; application at the local level.

AIS 4503/6503. International Agricultural Education. (3) Three hours lecture. Examination of formal and nonformal agricultural education systems and related situations and processes which influence agricultural development in developing countries.

AIS 4873. Professional Seminar in Agricultural Information Science and Education. (3) (Prerequisite: Admission to Teacher Education and senior standing). Three hours lecture. Legal, professional, administrative and curricular issues in agricultural and extension education. Includes needs assessment, community involvement and problem solving to plan formal and informal programs.

AIS 4886, 4896. Teaching internship in Agriculture Information Science and Education(6,6) (Both courses to be taken concurrently). (Prerequisites: Admission to Teacher Education and senior standing). Supervised observation and directed teaching in respective field of endorsement.
AN 4990/6990. Special Topics in Agricultural Information Science and Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

AN 7000. Directed Individual Study. Hours and credits to be arranged.

AN 8000. Thesis Research/Thesis. Hours and credits to be arranged.

AN 8203. Advanced Communication in Agricultural Information Science and Education. (3) Two hours lecture. (1 1/2 hours each). Updating of principles of communicating information in the fields of agriculture/agribusiness, natural resources, and home economics; review and updating of communications techniques.

AN 8243. Administration and Supervision in Agricultural Information Science and Education. (3) Three hours lecture. Principles in developing and administering programs in agricultural and extension education with attention to federal-state-local relationships and supervisory procedures.

AN 8263. Public Relations in Agricultural Information Science and Education. (3) Three hours lecture. Publics to be dealt with, public relations media; methods and techniques of establishing and maintaining desirable public relations.

AN 8403. Directing Learning Experiences in Agricultural Information Science and Education. (3) Two hours lecture. Two hours laboratory. Theory and practice in directing learning activities. Using instructional technology. Delivering instruction for formal and non-formal groups.

AN 8503. Program Planning and Development in Agricultural Information Science and Education. (3) Three hours lecture. Principles, theory, and practice in developing local and state programs of vocational, technical, and extension education.

AN 8523. Teaching Out-of-School Groups in Agricultural Information Science and Education. (3) Three hours lecture. Organizing, planning, and instructing out-of-school groups in agricultural and extension education; identifying and assessing needs of clientele; and evaluating effectiveness.

AN 8533-8543. Workshop in Agricultural Information Science and Education. (3-6) (A total of six semester hours may be earned in AN 8533-8543). One hour lecture. Four hours laboratory. Studying current problems in agricultural and extension education; investigating and analyzing problems; preparing comprehensive reports on problems; planning for local application.

AN 8593. History, Philosophy, and Policy of Agricultural Information Science and Education. (3) Three hours lecture. Philosophy, history, and development of Agricultural and Extension Education; implications, influences, and evaluation of forces and policies impacting Agricultural and Extension Education.

AN 8606. Teaching internship in Agricultural Information Science and Education. (6) (Prerequisites: Admission to the graduate certification program, teacher education and teaching internship). Supervised observation and directed teaching in Agricultural Information Science and Education.

AN 8703. Evaluation of Agricultural Information Science and Education Programs. (3) Three hours lecture. Evaluation principles and procedures used in developing and analyzing vocational, technical, and extension education programs.

AN 8803. Applying Research Methods to Agricultural Information Science and Education. (3) Three hours lecture. Principles and techniques for planning, conducting, and reporting research; development of effective design of research problems; emphasis on understanding and evaluating scientific reports.

AN 8990. Special Topics in Agricultural Information Science and Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

AN 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

ANTHROPOLOGY

Office: 206 Cobb Institute of Archaeology
Professor Rafferty; Associate Professors Hogue, Loewe and Peacock; Instructor Marcus

AN 1103. Introduction to Anthropology. (3) Three hours lecture. The fields, theories, and methods of anthropology; man’s biological and cultural development; survey of technological, economic, political, social, religious, and linguistic systems.

AN 1143. Introduction to Cultural Anthropology. (3) Three hours lecture. Introduction to the study of social, political, and economic organization, magic, religion, personality, and art.

AN 1173. Introduction to Gender Studies. (3) Three hours lecture. An introduction to theoretical concepts in Gender Studies. This course will examine the influence of the women’s movement on the academic development of Gender Studies (Same as WS 1173 and SO 1173).

AN 1343. Introduction to Biological Anthropology. (3) Three hours lecture. The biological nature of man, study of human origins; fossil evidence, genetic mechanism; cultural association; comparative primate anatomy and behavior; concepts of race. Note: Unacceptable for Natural Science requirement in Arts and Sciences.

AN 1543. Introduction to Archaeology. (3) Three hours lecture. A survey of early cultural development throughout the world; emphasis on archaeological techniques, interpretations and theories of development.

AN 2203. Cultural and Racial Minorities. (3) (Prerequisite: Three hours in an introductory social science). Three hours lecture. Origins of minor- nority groups and racial attitudes. Biological and cultural concepts of race and minority groups; problems of adjustment in interracial and multiethnic societies. (Same as SO 2203).

AN 2510. Archaeological Field Methods: Survey. (1-6) Credit to be arranged. Archaeological surface survey methods in field setting, including map-reading, shovel-testing, collection techniques, controlled surface collection, artifact recognition.

AN 2990. Special Topics in Anthropology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

AN 3113. Societies of the World. (3) (Prerequisite: AN 1103 or its equivalent or consent of instructor). Three hours lecture. A survey of principal culture types and their distribution.

AN 3123. North American Indians. (3) (Prerequisite: AN 1103 or consent of instructor). Three hours lecture. Ethnographic survey of the Indians of North and Mesoamerica.

AN 3133. Anthropology of Latin America. (3) Three hours lecture. A survey of societies in Latin America with an emphasis on indigenous peoples, their relationship to contemporary social and economic development.

AN 3513. African Art and Culture. (3) (Prerequisite: AN 1103 or consent of instructor). Three hours lecture. An examination of the role of traditional art in the beliefs and customs of representative African cultures. (Same as ART 3513).

AN 3323. Contemporary Woman. (3) Three hours lecture. Introductory course for the Concentration in Women’s Studies. Major topics are women’s heritage, identity, culture, and vulnerabilities. (Same as SO 3323).

AN 3333. Primate Behavior. (3) Three hours lecture. In-depth study of non-human primate evolution, social behavior, and communication. Field studies and conservation efforts will be examined.

AN 3510. Archaeological Field Methods: Excavation. (1-6) Credit to be arranged. Excavation methods in field setting, including mapping, recording, recovery and proveniencing techniques, field research strategies.

AN 3513. Artifact Analysis. (3) Two hours lecture. Two hours laboratory. Introduction to artifact recognition and analysis, focusing on prehistoric and historic ceramics, stone tools and debris, glass, nails, animal bones, shell, and environmental indicators.

AN 3523. North American Archaeology. (3) (Prerequisite: AN 1103 or consent of instructor). Three hours lecture. A survey of the prehistoric cultures of North America including the influences of the high civilizations of Mesoamerica.

AN 3533. Rise of Civilization. (3) Three hours lecture. Survey of prehistoric cultures and their contributions to the rise of civilizations in Latin America, China, Africa, India, and the Middle East.

AN 3540. Archaeological Travel and Participation Program. (1-6) Participation in excavations in the Near East and related lecture program. (Same as REL 3540).

AN 3553. Near Eastern Archaeology. (3) Three hours lecture. Introduction to the contributions made by archaeological research to ancient Near Eastern history and prehistory, with special emphasis on the Syro-Palestinian area. (Same as REL 3553).

AN 4000. Directed Individual Study. Hours and credit to be arranged.

AN 4123/6123. Anthropological Theory. (3) (Prerequisite: AN 1103 or its equivalent or consent of instructor). Three hours lecture. A history of the development of anthropological theory; an analysis of contemporary theoretical formulations and approaches.

AN 4133/6133. Medical Anthropology. (3) (Prerequisite: AN 1103 or consent of instructor). Three hours lecture. The cross-cultural study of health, sickness, and medicine from a holistic perspective emphasizing interactions...
between culture and biology and between biomedicine and local healing traditions.

AN 4143/6143. Ethnographic Methods. (3) (Prerequisites: AN 1103 or AN 1143 or consent of instructor). Three hours lecture. An overview of methods and techniques for conducting ethnographic research.

AN 4163/6163. Anthropology of International Development. (3) (Prerequisite: Senior standing or consent of instructor). Three hours lecture. Role of anthropologist in international development including origins of the Third World, development theory, current issues in international development, case studies.

AN 4173/6173. Environment and Society. (3) (Prerequisite: AN 1103, SO 1003 or consent of instructor). Three hours lecture. A study of the interaction between human society and the environment including the social aspects of environmental problems. (Same as SO 4173/6173).

AN 4303/6303. Human Variation and Origins. (3) Three hours lecture. An examination of human origins, genetics, and other principal factors that contribute to physical variation within and between human populations.

AN 4313/6313. Forensic Anthropology. (3) Two hours lecture and three hours laboratory. Identification of each human bone and its fragments. Study of sex differences, age changes in bone and dentition, dermatoglyphics, blood group systems, and paleopathology.

AN 4403/6403. Introduction to Linguistics. (3) (Prerequisite: AN 1103 or its equivalent or consent of instructor). Three hours lecture. The descriptive and historical study of language; linguistic analysis and comparison; language classification; language in its social and cultural setting. (Same as EN 4403/6403).

AN 4523/6523. Public Archaeology. (3) (Prerequisite: AN 1543 or consent of instructor). Three hours lecture. Survey of cultural resource management practices, Federal and State historic preservation laws, research proposals design, significance assessments, professional ethics, employee/client relationships, and public education.

AN 4623/6623. Language and Culture. (3) (Prerequisite: AN 1103 or consent of instructor). Three hours lecture. Examination of language as a part of culture, a source of knowledge about other aspects of culture, and a social behavior. (Same as EN 4623/6623 and SO 4623/6623).

AN 4633/6633. Sociolinguistics. (3) (Prerequisites: AN 1103 or consent of instructor). Three hours lecture. Examination of the relationship between language and society, and how, when, and why people in speech communities use language varieties. (Same as EN 4633/6633 and SO 4633/6633).

AN 4990/6990. Special Topics in Anthropology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

AN 7000. Directed Individual Study. Hours and credit to be arranged. 5

AN 8000. Thesis Research and Thesis. Hours and credits to be arranged.

AN 8103. Applied Cultural Anthropology. (3) (Prerequisites: AN 1103 or AN 1143 or consent of instructor). Three hours lecture. An overview of the application of anthropological theory and method of contemporary social problems.

AN 8203. Reading and Research in Applied Anthropology. (3) Three hours lecture. An overview of sub-disciplines within applied anthropology, including medical anthropology, development, forensics, education and cultural resource management.

AN 8216. Internship in Applied Anthropology. (6) A minimum of nine weeks of supervised professional anthropology experience in an appropriate setting.

AN 8303. Seminar in Bio-archaeology. (3) Three hours lecture. Overview of applications in bio-archaeology, including paleodemography, paleopathology, and paleonutrition.

AN 8513. Southeastern Archaeology. (3) Three hours lecture. Prehistoric and Southeastern U.S. from entry of first people to European contact. Changes in technology, settlement, subsistence, demography, and environment examined using archaeological evidence.

AN 8523. Environmental Archaeology. (3) Three hours lecture. Coverage of method and theory in environmental archaeology, including elements of palynology, geoarchaeology, floral and faunal analysis, landscape ecology, historical ecology, cultural ecology, and taphonomy.

AN 8533. Readings in Archaeology: Theory. (3) Three hours lecture. Archaeological theory and its implications for practice, focusing on evolutionary archaeology but also including culture history, processual, reconstructionist, and post-processual approaches.

AN 8553. Readings in Archaeology: Applications. (3) Three hours lecture. Review of literature related to materials science in archaeology, including thin sectioning and petrography, raw material sourcing, organic residues, dating techniques, and preservation technology.

AN 8990. Special Topics in Anthropology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

AGRICULTURAL PEST MANAGEMENT

(For departmental information, see Department of ENTOMOLOGY and PLANT PATHOLOGY.)

APM 2990. Special Topics in Agricultural Pest Management. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

APM 4021. APM Senior Seminar. (1) (Prerequisite: CP 2203). One hour lecture. Fall semester. Review and discussion of co-op experiences. Includes discussion of contemporary topics in pest management and development of professional skills.

APM 4990/6990. Special Topics in Agricultural Pest Management. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

SCHOOL OF ARCHITECTURE

Professors West (Dean), Berk; Associate Professors Barrow, Buege, Greenwood, Lewis, McCann, Monson, Perkes, Poros; Assistant Professors Brown, Callendar, and Mathew

Visiting Professors: Dye, Kellum and Kumar

ARC 1013. Architectural Appreciation. (3) Three hours lecture. Illustrated study of architecture’s role in shaping the quality of man’s environment. Architectural history, design theory, and process as it affects daily life. Intended for non-majors.

ARC 1536-1546. Architectural Design I-A and I-B. (6,6) (Prerequisites: Letters of Acceptance into design studio and consent of Associate Dean of Architecture). Two hours lecture. Ten hours studio. Introduction to creative process, design principles and methods. Design projects emphasize verbal and visual communication; observing, analyzing, representing, and making of form, space, materials.

ARC 1586-1596. Honors Architectural Design I-A and I-B. (6,6) (Prerequisites: Letter of Acceptance into design studio and consent of Associate Dean of Architecture). Two hours lecture. Ten hours studio. Independent investigation and presentation of an approved research topic in addition to the content described under ARC 1536-1546.

ARC 2313. History of Architecture I. (3) Three hours lecture. A survey of man’s effort to mold his environment from prehistory through the Early Middle Ages.

ARC 2536-2546. Architectural Design II-A and II-B. (6,6) (Prerequisite: ARC 1546 or equivalent or consent of the dean). One hour lecture. Eleven hours studio. Introduction to fundamental aspects of building including structural-spatial ordering systems. Projects emphasize linkage between people and spaces through investigation of perceptual-conceptual issues.

ARC 2586-2596. Honors Architectural Design II-A and II-B. (6,6) (Prerequisite: ARC 1546 or 1596). One hour lecture. Eleven hours studio. Independent investigation and presentation of an approved research topic in addition to the content described in ARC 2536.

ARC 2713. Passive Building Systems. (3) (Prerequisite: For architecture majors- ARC 1546 and PH 1123; for non-architecture majors- consent of instructor). Three hours lecture. Investigation of the morphological impacts of various environmental energies on building forms and systems. Included are light, climatic, structural, and ecological factors.

ARC 2723. Materials. (3) (Prerequisites: ARC 2536 and ARC 2713). Three hours lecture. Analyzing how materials and systems are designed to respond to both environmental energies and needs. Included are soils, concrete, wood, masonry, and metals.

ARC 2990. Special Topics in Architecture. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).
ARC 3313. History of Architecture II. (3) (Prerequisite: ARC 2313). Three hours lecture. Survey of major developments in architecture and city planning from the Medieval Period through the Eighteenth Centuries.

ARC 3322. History of Architecture III. (3) (Prerequisite: ARC 3313). Three hours lecture. Survey of major developments in American architecture and survey of major developments in European architecture during the Nineteenth and Twentieth Centuries.

ARC 3343. The Architecture of Housing. (3) Three hours lecture. An historical, social, and typological investigation of the evolution of housing as an architectural and cultural phenomenon.

ARC 3536-3546. Architectural Design III-A and III-B. (6,6) (Prerequisite: ARC 2546 or equivalent or consent of the dean). One hour lecture. Eleven hours laboratory. The development of building design as a synthesis of environmental concerns, behavioral responses, functional requirements, and technical systems. Studies using small and intermediate scale projects.

ARC 3556-3566. Accelerated Studies in Architectural Design III-A and III-B. (6,6) (Prerequisite: ARC 2546 or equivalent or consent of dean). One hour lecture. Eleven hours studio. Individualized studies in architectural design for students enrolled in Accelerated Studies Program.

ARC 3573. The Art/Architecture of Packaging. (3) Three hours lecture. Investigations into theories, techniques, and procedures of packaging (with emphasis on portfolio design) through traditional, mechanical, and digital means.

ARC 3713. Assemblies, (3) (Prerequisites: ARC 2546 and ARC 2723). Two hours lecture and one field study. Fabrication and construction are explored in the relationship between nature of materials and methods of assembly.

ARC 3723. Active Building Systems. (3) (Prerequisites: ARC 3536 or ARC 3566 and ARC 3713 or for non-architecture majors- consent of instructor). Three hours lecture. Concentrates on defining the mechanical and electrical (active) techniques available to architects for integrating thermal comfort and life safety into the built form.


ARC 3914. Structures II. (4) (Prerequisite: ARC 3904). Three hours lecture. Three hours laboratory. Design and analysis of structural elements as part of frames and other structural systems.

ARC 4000. Directed Individual Study. Hours and credits to be arranged with approval of College of Architecture Dean.

ARC 4114/6114. Professional Practice Strategies. (4) Four hours lecture. Exploration of the students’ career goals relative to emerging technology impact and design/architectural practice trends.

ARC 4152/6152. Digital Design I Laboratory. (2) (Prerequisite: Undergraduate-consent of instructor; graduate-none). Four hours laboratory. Laboratory exploration of digital input and output devices concentrating on conceptual design, design development, and manufacturing/construction CAD/CAM processes using automated machines and devices.

ARC 4162/6162. Digital Design II Laboratory. (2) (Prerequisite: ARC 4152/6152). Four hours laboratory. Advanced laboratory exploration of digital input and output devices concentrating on conceptual design, design development, and manufacturing/construction CAD/CAM processes using automated machines and devices.

ARC 4313. Architectural Theory. (3) (Prerequisite: ARC 3323 or ARC 3313 and consent of instructor). Three hours lecture. A critical investigation of writings that have shaped architectural theory.

ARC 4536-4546. Architectural Design IV-A and IV-B. (6,6) (Prerequisite: ARC 3546 or equivalent or consent of dean). One hour lecture. Eleven hours laboratory. Design of architectural elements integrating building systems, social concerns, and environmental factors. Studies involve intermediate to large scale projects in realistic architectural situations.

ARC 4633/6633. Architecture and Virtual Spaces. (3) Three hours lecture. Exploration of physical and virtual worlds from a theoretical, technical, communication, and design perspective.

ARC 4733. Site Planning for Architects. (3) (Prerequisite: ARC 2546). Three hours lecture. Introduces the natural ecological systems as they relate to human’s impact on them, along with the natural systems’ resistance to human’s impact.

ARC 4990/6990. Special Topics in Architecture. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ARC 5353. Philosophy of Architecture. (3) Three hours lecture and field visits. The philosophical issues of meaning, appreciation, and the distinctive characteristics of the artistic creation.

ARC 5383. Legal Aspects of Architecture. (3) Three hours lecture. Investigation and research regarding architectural issues including architectural law, contracts, litigation, case studies and other topical issues.

ARC 5443. Thesis Programming. (1) One hour lecture. Six hours laboratory. Advanced study of analytical and intuitive methods of programming, leading to development of thesis program to be used in ARC 5589.

ARC 5493. Architectural Practice. (3) Three hours lecture. Investigation into issues facing the graduate architect including: responsibilities to the community and the profession; project and business management; client relations; and delivery of services.


ARC 5623. Theory of Urban Design. (3) Three hours lecture. General introduction into field of urban design. Course divided into two areas of theory and practice as they relate to contemporary urban development.

ARC 7000. Directed Individual Study. Hours and credits to be arranged.

ARC 8000. Thesis Research/Thesis. Hours and credits to be arranged.

ARC 8013. Seminar in Visualization Theory. (3) (Prerequisite: Consent of the instructor). One hour lecture. Four hours laboratory. Lectures and presentation of student papers and projects related to a selected specialized topic.

ARC 8023. Seminar in Digital Design Applications. (3) (Prerequisite: Consent of the instructor). One hour lecture. Four hours laboratory. Lectures and presentations of student papers and projects related to a selected specialized topic in digital design applications.


ARC 8124. Digital Design II. (4) (Prerequisite: ARC 8114). Four hours lecture. Exploration of digital input and output devices concentrating on conceptual design, design development, and manufacturing/construction CAD/CAM processes using automated machines and devices.

ARC 8143. Physically-Based Modeling. (3) One hour lecture. Four hours laboratory. Applications of existing software to generate motion studies of dynamic and physically based phenomena. Simulation of these events in a 3D-computing environment.

ARC 8224. Research and Writing in Architecture. (4) Four hours lecture. Provides the student with a general grounding in the process of research, problem identification, writing and development of a formal argument in design and architecture.

ARC 8233. Computational Media I. (3) Three hours studio. Application of the design process to the creation of interactive computational artifacts with an emphasis on visual literacy, aesthetics and communication theory.

ARC 8243. Computational Media II. (3) Three hours studio. Continuation of ARC 8233. Emphasis is placed upon the creation of web-based ‘interactive illustrations’, narrative form, and VRML/QTVR artifacts.

ARC 8433. Digital Compositing. (3) (Prerequisite: ARC 8513). One hour lecture. Four hours laboratory. Study of digital compositing and image processing, using software-based editing packages. Concepts of video editing and post production in a software computing environment.

ARC 8444. Interactive Media. (4) (Prerequisite: ARC 6633). Three hours lecture. Two hours laboratory. Exploration of media and interaction design solutions through case studies and congruent design concepts.

ARC 8463. Story Telling in Computer Animation. (3) (Prerequisite: Consent of the instructor). One hour lecture. Four hours laboratory. Customization of existing software/production tools for the transformation of a script into computer graphics imagery.

ARC 8643. Problem Solving in Virtual Space. (3) (Prerequisite: ARC 4523/6523). One hour lecture. Four hours laboratory. Use of virtual environment technology to solve architectural problems. Investigations of architectural form, space, lighting, and acoustics through class research projects.

ARC 8990. Special Topics in Architecture. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisite(s)</th>
<th>Credit(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1013</td>
<td>Art History I</td>
<td>ART 1213 or ART 1123 or ARC 1536</td>
<td>3</td>
<td>Three hours lecture. The study of art from prehistoric times to the Renaissance through the architecture, sculpture, painting and minor arts of the western world.</td>
</tr>
<tr>
<td>ART 1023</td>
<td>Art History II</td>
<td></td>
<td>3</td>
<td>Three hours lecture. Art from the Renaissance to the present studied chronologically through the architecture, painting, sculpture, and minor arts of the western world.</td>
</tr>
<tr>
<td>ART 1113</td>
<td>Art Appreciation</td>
<td></td>
<td>3</td>
<td>Three hours lecture. An illustrated lecture course dealing with periods, styles, and personalities in painting, sculpture, and architecture. Honors section available through invitation only.</td>
</tr>
<tr>
<td>ART 1123</td>
<td>Design I</td>
<td></td>
<td>3</td>
<td>Six hours studio. A basic study of the fundamental elements and principles of design with an emphasis on composition.</td>
</tr>
<tr>
<td>ART 1133</td>
<td>Design II</td>
<td>ART 1123</td>
<td>3</td>
<td>Six hours studio. A continued study of the fundamental elements and principles of design with an emphasis on the theory and application of color.</td>
</tr>
<tr>
<td>ART 1153</td>
<td>Three-Dimensional Design</td>
<td>ART 1123 or ARC 2536</td>
<td>3</td>
<td>Six hours studio. A study of the organization of the principles and elements of art as they apply to three-dimensional artwork.</td>
</tr>
<tr>
<td>ART 1213</td>
<td>Drawing I</td>
<td></td>
<td>3</td>
<td>Six hours studio. A freehand drawing course for students interested in visual arts. Basic vocabulary for graphic notation as explored utilizing observation, black and white media, and perspective.</td>
</tr>
<tr>
<td>ART 1223</td>
<td>Drawing II</td>
<td>ART 1213</td>
<td>3</td>
<td>Six hours studio. A continuation of ART 1213 further developing conceptual and perceptual use of drawing tools, processes and materials. Black and white, and color media explored.</td>
</tr>
<tr>
<td>ART 2013</td>
<td>Painting I</td>
<td>ART 1123 and ART 1213</td>
<td>3</td>
<td>Six hours studio. The fundamentals of oil painting and composition.</td>
</tr>
<tr>
<td>ART 2103</td>
<td>Photography I</td>
<td>ART 1123 and ART 1213</td>
<td>3</td>
<td>One hour lecture. Four hours studio. The fundamentals and aesthetics of black and white photography relating to graphic design and the fine arts.</td>
</tr>
<tr>
<td>ART 2203</td>
<td>Rendering</td>
<td>Sophomore Standing</td>
<td>3</td>
<td>Six hours studio. A course dealing with the concepts, techniques, and media used in executing interior and exterior renderings.</td>
</tr>
<tr>
<td>ART 2213</td>
<td>Life Drawing I</td>
<td>ART 1213 and ART 1223</td>
<td>3</td>
<td>Six hours studio. A drawing class with emphasis on the basic forms and proportions of the human figure.</td>
</tr>
<tr>
<td>ART 2233</td>
<td>Painting III</td>
<td>ART 1223</td>
<td>3</td>
<td>Six hours studio. A continuation of ART 1223 to develop further drawing skills, use of mixed-media, surface variety and explorative concepts for advanced students.</td>
</tr>
<tr>
<td>ART 2303</td>
<td>Printmaking I</td>
<td>ART 1123, ART 1133 and ART 1223</td>
<td>3</td>
<td>Six hours studio. Introduction to the basic techniques and concepts of lithography, relief printing-woodcut and linocut.</td>
</tr>
<tr>
<td>ART 2403</td>
<td>Sculpture I</td>
<td>ART 1123 and ART 1153 or permission of instructor</td>
<td>3</td>
<td>Six hours studio. Introduction to the basic concepts, materials, and processes of sculpture by exploring modeling, casting, carving and constructing.</td>
</tr>
<tr>
<td>ART 2503</td>
<td>Ceramic Art I</td>
<td></td>
<td>3</td>
<td>Six hours studio. Introduction to the processes of ceramic art including hand built forms, wheel thrown pottery and glazing.</td>
</tr>
<tr>
<td>ART 2803</td>
<td>Introduction to Computing for Art</td>
<td>ART 1133 and ART 1223 or permission of instructor</td>
<td></td>
<td>One hour lecture. Four hours studio. Introduction to desktop computer hardware, operating systems, and application software in the visual arts and design.</td>
</tr>
<tr>
<td>ART 2990</td>
<td>Special Topics in Art</td>
<td></td>
<td>1-9</td>
<td>Credit and title to be arranged.</td>
</tr>
<tr>
<td>ART 3023</td>
<td>Painting II</td>
<td>ART 1213</td>
<td>3</td>
<td>Six hours studio. Intermediate painting with further emphasis on the skills and techniques of painting.</td>
</tr>
<tr>
<td>ART 3033</td>
<td>Painting III</td>
<td>ART 3023</td>
<td>3</td>
<td>Six hours studio. Intermediate painting with further emphasis on the skills and techniques of painting.</td>
</tr>
<tr>
<td>ART 3043</td>
<td>Painting IV</td>
<td>ART 3033</td>
<td>3</td>
<td>Six hours studio. A continuation of ART 3023 to further develop skill in the use of the medium and formal organization of subject matter in painting.</td>
</tr>
<tr>
<td>ART 3053</td>
<td>Watercolor Painting</td>
<td>ART 1133 and ART 1223</td>
<td>3</td>
<td>Six hours studio. The technique and use of various water-soluble painting mediums.</td>
</tr>
<tr>
<td>ART 3143</td>
<td>Italian Renaissance Art History</td>
<td></td>
<td>3</td>
<td>Three hours lecture. The history of art in Italy in the fifteenth and sixteenth centuries, emphasizing the religious monuments of the period. (Same as REL 2143).</td>
</tr>
<tr>
<td>ART 3153</td>
<td>African Art and Culture</td>
<td>AN 1103 or consent of instructor</td>
<td>3</td>
<td>Three hours lecture. An examination of the role of traditional art in the beliefs and customs of representative African cultures. (Same as AN 2153).</td>
</tr>
<tr>
<td>ART 3203</td>
<td>Photography II</td>
<td>ART 2103 or permission of instructor</td>
<td>1</td>
<td>One hour lecture. Four hours studio. Advanced techniques of photographic processes in black and white with emphasis on aesthetics.</td>
</tr>
<tr>
<td>ART 3213</td>
<td>Life Drawing II</td>
<td>ART 2213</td>
<td>3</td>
<td>Six hours studio. Further study in rendering the human figure.</td>
</tr>
<tr>
<td>ART 3303</td>
<td>Printmaking II</td>
<td>ART 2303</td>
<td>3</td>
<td>Six hours studio. Continued exploration of the print as a medium of creative expression.</td>
</tr>
<tr>
<td>ART 3313</td>
<td>Graphic Art Design I</td>
<td>ART 1123, ART 1213 and ART 1223</td>
<td>3</td>
<td>Six hours studio. Introduction to the processes and techniques of commercial art. Beginning lettering and layout.</td>
</tr>
<tr>
<td>ART 3323</td>
<td>Graphic Art Design II</td>
<td>ART 3313</td>
<td>3</td>
<td>Six hours studio. The execution of personal design projects promoting an awareness of different forms of printed visual communication.</td>
</tr>
<tr>
<td>ART 3423</td>
<td>Color Photography I</td>
<td>ART 2103 or permission of the instructor</td>
<td>1</td>
<td>One hour lecture. Four hours studio. The techniques and aesthetics of basic photographic processes in color.</td>
</tr>
<tr>
<td>ART 3443</td>
<td>Illustration</td>
<td>ART 2013 and ART 3053</td>
<td>3</td>
<td>Six hours studio. A course introducing issues and instrumentations related to standards in the professional field of illustration emphasizing mixed-media processes.</td>
</tr>
<tr>
<td>ART 3503</td>
<td>Ceramic Art II</td>
<td>ART 2503</td>
<td>3</td>
<td>Six hours studio. Elementary glaze formulation, surface decoration, kiln firing, wheel thrown and hand built form.</td>
</tr>
<tr>
<td>ART 3513</td>
<td>Sculpture II</td>
<td>ART 2403</td>
<td>3</td>
<td>Six hours studio. Further exploration of concepts and processes of sculpture, including mold making and armature building, beginning development of personal language of expression.</td>
</tr>
<tr>
<td>ART 3603</td>
<td>Directed Writings in Modern Art History</td>
<td>ART 1013 and ART 1023</td>
<td>3</td>
<td>Three hours lecture. History of 20th Century art with emphasis on scholarly writing, reading, and analysis of contemporary models and varieties of writing.</td>
</tr>
<tr>
<td>ART 3803</td>
<td>Gallery Management</td>
<td>ART 1123 and ART 1213</td>
<td>3</td>
<td>One hour lecture. Four hours laboratory. The study of gallery operations, techniques of curation, artists ethics, installation procedures and gallery management of an art gallery.</td>
</tr>
<tr>
<td>ART 3873</td>
<td>Digital Photography</td>
<td>ART 2103 and ART 3423 or permission of instructor</td>
<td>3</td>
<td>Six hours studio. The techniques and aesthetics of digital imagery emphasizing the use of traditional photographic input and output processes.</td>
</tr>
<tr>
<td>ART 4000</td>
<td>Directed Individual Study</td>
<td></td>
<td>3</td>
<td>Hours and credits to be arranged.</td>
</tr>
<tr>
<td>ART 4013/6013</td>
<td>Advanced Painting</td>
<td>ART 3043</td>
<td>3</td>
<td>Six hours studio. Advanced study in painting with emphasis on the student’s personal needs and interests.</td>
</tr>
<tr>
<td>ART 4083</td>
<td>Senior Honors Research in Art</td>
<td>Senior standing, and consent of instructor</td>
<td></td>
<td>The application of research methods for the fine artist in contemporary society.</td>
</tr>
<tr>
<td>ART 4093</td>
<td>Senior Honors Thesis in Art</td>
<td>ART 4083 or consent of instructor</td>
<td></td>
<td>The proposal, development and execution of a project or exhibition.</td>
</tr>
<tr>
<td>ART 4103/6103</td>
<td>The Art of Typography and Layout I</td>
<td>ART 1213</td>
<td>3</td>
<td>Six hours studio. The art and process of presenting written communication in graphic form.</td>
</tr>
<tr>
<td>ART 4113/6113</td>
<td>The Art of Typography and Layout II</td>
<td>ART 4103/6103</td>
<td>3</td>
<td>Six hours studio. Advanced problems in presenting written communication in graphic form. Advanced problems as well as additional projects will be required for graduate credit.</td>
</tr>
<tr>
<td>ART 4223/6223</td>
<td>Photography III</td>
<td>ART 2103 or permission of the instructor</td>
<td></td>
<td>One hour lecture. Four hours studio. Alternative photographic processes in black and white with emphasis on aesthetics.</td>
</tr>
<tr>
<td>ART 4343/6343</td>
<td>Drawing IV</td>
<td>ART 2233 at both levels and consent of instructor for 6343</td>
<td>3</td>
<td>Six hours studio. A continuation of ART 2233 to develop further skills for advanced students.</td>
</tr>
</tbody>
</table>
ART 4403/6403. Advertising Design I. (3) (Prerequisite: ART 3323, ART 4103/6103, and consent of instructor). Six hours studio. Course requiring ideational, image making, graphic design and typographic skills to meet rigorous conceptual/visual standards pertinent to creating a brand of a company’s identity.

ART 4413/6413. Advertising Design II. (3) (Prerequisite: ART 4403/6403 and consent of instructor). Six hours studio. An advanced course requiring interaction on a professional level, working with realistic agency-client situations in order to develop efficient, distinguishable and competitive promotional campaigns.

ART 4433/6433. Color Photography II. (3) (Prerequisite: ART 3423 or permission of the instructor). One hour lecture. Four hours studio. Advanced techniques of photographic processes in color with emphasis on aesthetics.

ART 4443/6443. Alternative Color. (3) (Prerequisites: ART 2103 and ART 3423 and permission of instructor). One hour lecture. Four hours studio. Advanced theoretical problems for photography utilizing the dye transfer and polaroid processes. Additional projects for graduate credit.

ART 4523/6523. Internship in Graphic Art Design. (3) (Prerequisites: ART 3313, senior standing and consent of the instructor). Supervised instruction in graphic design. Advanced problems will be required for graduate credit.

ART 4533. Ceramic Art III. (3) (Prerequisites: ART 3503). Six hours studio. Advanced problems in glaze formulation, kiln technology and wheel thrown and hand built forms.

ART 4543/6543. Art and Architecture of Japan. (3) (Prerequisite: ART 1113, 1013, 1023, or consent of instructor). Three hours lecture. Discussion of the major developments in the art and architecture of Japan.

ART 4563/6563. Art of India and Southeast Asia. (3) (Prerequisite: One of the following: ART 1113, REL 1103, 3453). Three hours lecture. Discussion of the major developments in the art and architecture of India and Southeast Asia, 200 B.C. to 1200 A.D.

ART 4573/6573. Critical Issues in Recent Art. (3) (Prerequisite: ART 3603 or an equivalent course on 20th century art and consent of the instructor). Three hours lecture. Discussion of major developments and issues in contemporary art focusing on the period 1980 to present.

ART 4600/6600. Advanced Studio - Drawing. (3-9) May be taken for credit more than once. Hours and credit to be arranged and shall not exceed a total of nine hours for all advanced studies in any one semester. (Prerequisites: ART 3433 and permission of instructor). Six hours studio. Advanced study in drawing. Further development of studio skills. Course encourages analysis and criticism of aesthetic, social, ethical and related issues.

ART 4610/6610. Advanced Studio - Painting. (3-9) May be taken for credit more than once. Hours and credit to be arranged and shall not exceed a total of nine hours for all advanced studies in any one semester. (Prerequisites: ART 3433 and permission of instructor). Six hours studio. This course develops advanced studio skills and professional practice. Course encourages analysis and criticism of aesthetic, social, ethical and related issues.

ART 4620/6620. Advanced Studio - Printmaking. (3-9) May be taken for credit more than once. Hours and credit to be arranged and shall not exceed a total of nine hours for all advanced studies in any one semester. (Prerequisites: consent of instructor). Six hours studio. This course develops advanced studio skills and professional practice. Course encourages analysis and criticism of aesthetic, social, ethical and related issues.

ART 4630/6630. Advanced Studio - Sculpture. (3-9) May be taken for credit more than once. Hours and credit to be arranged and shall not exceed a total of nine hours for all advanced studies in any one semester. (Prerequisites: consent of instructor). Six hours studio. Further development of a personal sculptural aesthetic through media of choice.

ART 4640/6640. Advanced Studio - Graphic Design. (3-9) May be taken for credit more than once. Hours and credit to be arranged and shall not exceed a total of nine hours for all advanced studies in any one semester. (Prerequisite: consent of instructor). Six hours studio. This course develops advanced studio skills and professional practice. Course encourages analysis and criticism of aesthetic, social, ethical and related issues.

ART 4650/6650. Advanced Studio - Ceramics. (3-9) May be taken for credit more than once. Hours and credit to be arranged and shall not exceed a total of nine hours for all advanced studies in any one semester. (Prerequisite: consent of instructor). Six hours studio. This course develops advanced studio skills and professional practice. Course encourages analysis and criticism of aesthetic, social, ethical and related issues.

ART 4660/6660. Advanced Studio - Photography. (3-9) May be taken for credit more than once. Hours and credit to be arranged and shall not exceed a total of nine hours for all advanced studies in any one semester. (Prerequisite: consent of instructor). Six hours studio. This course develops advanced studio skills and professional practice. Course encourages analysis and criticism of aesthetic, social, ethical and related issues.

ART 8103. Multimedia III. (3) (Prerequisite: ART 6813 and ART 6823 or permission of the instructor). Two hours lecture. Four hours studio. Independent assignments in interactive multimedia authoring incorporating multiple elements: content development, graphic design, image editing and compositing, digital video, sound editing.

ART 8123. Multimedia Installation and Performance. (3) (Prerequisite: ART 8103 or consent of instructor). One hour lecture. Five hours studio. Coursework relates advanced interactivity concepts in computer-based multimedia to the broader context of performance art and installation for alternate as well as gallery settings.

ART 8163. Advanced Digital Imaging. (3) Six hours studio. Application of existing software to generate electronic images captured by traditional and non-traditional photographic means.

ART 8603. Advanced Figurative Studio. (3) (Prerequisite: Six hours undergraduate life drawing courses or consent of instructor). Six hours studio. An advanced studio course in drawing, painting, and/or digital media utilizing the human figure as subject.

ART 8990. Special Topics in Art. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

AIR FORCE AEROSPACE STUDIES

Office: Second Floor, Middleton Hall
Lt. Col. Dickensheet, Capt. Sandlin and Capt. Ethridge


AS 2012. Air and Space Power-I. (2) Fall semester. One hour lecture. One hour practicum. Study of air power development and employment in support of national objectives and an examination of the evolution of air power concepts and doctrine.

AS 2022. Air and Space Power-II. (2) Spring semester. One hour lecture. One hour practicum. A continuation of AS 2012 with emphasis on air power since WWII.

AS 2990. Special Topics in Aerospace Studies. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

AS 3013. Air Force Leadership Studies-I. (3) (Prerequisites: AS 1012, AS 1022, AS 2012, and AS 2022 or permission of instructor). Fall semester. Three hours lecture. Two hours practicum. An integrated management course emphasizing leadership/management concepts and skills. Examines motivational and behavioral processes, leadership communication, decision making, ethics, organizational power, and managerial strategy.


AS 4990. Special Topics in Aerospace Studies. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

Department of AEROSPACE ENGINEERING

Office: 330 Walker Engineering Laboratories
Professors Cinnella, Edwards, Koenig, Lawrence, Newman, Jr., Raiss-Rohani, J. Thompson, Vizzini (head); Associate Professors Bridges, Janus, King, Newman III, D. Thompson; Assistant Professors Lacy, C. Olsen, G. Olsen, Sullivan; Instructor Hannigan

ASE 1013. Introduction to Aerospace Engineering. (3) (Prerequisite: credit or co-registration in MA 1713). Three hours lecture. Three hours laboratory. Historical perspectives of aerospace engineering and fundamentals of aerodynamics, the standard atmosphere, computer modeling and manufacturing, information technology, programming environments, computational tools.

ASE 1023. Introduction to Flight Mechanics. (3) (Prerequisite: ASE 1013, grade of C or better in MA 1713, and current enrollment or grade of C or better in both MA 1723 and PH 2213). Three hours lecture. Three hours laboratory. Introduction to airfoils, wings, and other aerodynamic shapes, elements of airplane performance, principles of stability and control, applications of computer modeling, computational tools, historical perspectives.

ASE 1501. Student Design Competition. (1) (Prerequisite: ASE student or permission of instructor). One hour practicum. Students participate in a department-sponsored design competition, contributing to design and fabrication tasks, writing weekly progress reports, contributing to competitive report and giving presentations.

ASE 2013. Astrodynamics, Propulsion and Structures. (3) (Prerequisite: ASE 1023 and a grade of C or better in MA 1723 and PH 2213). Three hours lecture. Three hours laboratory. Introduction to space flight (aerodynamics), propulsion, flight vehicle structures and materials, and hypersonic vehicles; applications of computer modeling, computational tools, with historical perspectives.

ASE 2113. Flight Mechanics I—Performance. (3) (Prerequisite: EM 2413). Three hours lecture. Introduction to general aerodynamics, propulsive and structural considerations of flight mechanics, quasi-steady flight; non-steady flight; maneuvering flight; high performance vehicles.

ASE 2990. Special Topics in Aerospace Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ASE 3123. Static Stability and Control. (3) (Prerequisites: ASE 1023, EM 2433, credit or registration in EM 3413). Three hours lecture. Longitudinal, directional, and lateral static stability and control; related aerodynamics; maneuvering flight; introduction to dynamic stability and control analysis methods; general equation of unsteady motion.


ASE 3223. Aircraft Structures II. (3) (Prerequisite: EM 3213). Three hours lecture. Stress analysis of elastic and inelastic structures under different loading conditions. Shear flow distribution in thin-wall structures. Influence of design on stress and shear flow distributions.

ASE 3313. Incompressible Aerodynamics. (3) (Prerequisite: EM 3313). Three hours lecture. Potential theory of bodies; airfoil theory and applications; finite wing theory and applications; introduction to Navier-Stokes equations; laminar boundary layers; turbulent boundary layers.

ASE 3333. Aerothermodynamics. (3) (Prerequisites: MA 2733, PH 2213). Three hours lecture. Energy; first and second laws of thermodynamics; entropy; properties of ideal gases; mixtures; gas power cycles; one-dimensional compressible flow; introduction to heat transfer.

ASE 4000. Directed Individual Study. Hours and credits to be arranged.

ASE 4113. Aerospace Engineering Laboratory I. (3) (Prerequisites: Credit or registration in EM 3413 and GE 3513). Six hours laboratory. Experimental techniques used in aerospace engineering.

ASE 4123. Dynamic Stability and Control. (3) (Prerequisite: ASE 3123). Three hours lecture. Methods of dynamic analysis; stability of steady flight; response to actuation of the controls (open loop); closed-loop control; human pilots and handling qualities.

ASE 4133/6133. Automatic Control of Aerospace Vehicles. (3) (Prerequisite: ASE 4123). Three hours lecture. Optimization techniques; structural flexibility effects; statistical design; sample-data control systems.

ASE 4143. Astrodynamics I. (3) (Prerequisites: EM 2433, MA 3253). Three hours lecture. Particle mechanics; Keplerian mechanics; geometry of spatial orbits; orbit determination; orbits determined from relative velocity; elements of analytical dynamics.

ASE 4163/6163. Introduction to Flight Test Engineering. (3) (Prerequisite: ASE 3313, ASE 4123). Three hours lecture. Introduction to the techniques of aeronautical flight test engineering. Supplements Aerospace curriculum Pitot/static systems, and introduces fixed-wing flight test engineering, data reduction, certification, flight-test risk assessment/mitigation, and flight crew-station analysis procedures.

ASE 4243/6243. Astrodynamics II. (3) (Prerequisite: ASE 4143) Three hours lecture. Orbital mechanics, orbit determination, perturbations and numerical integration. Global positioning system, launch performance, and optimization.


ASE 4343. Compressible Aerodynamics. (3) (Prerequisites: ASE 3333, EM 3313). Three hours lecture. Equations of motion for multidimensional flow; oblique shock waves; Prandtl Meyer flow; internal flow; method of characteristics; linearized flows; compressible wing theory; compressible boundary layers.

ASE 4413. Aerospace Propulsion. (3) (Prerequisites: ASE 3333 and ASE 4343). Three hours lecture. Aerothermodynamics of aircraft and rocket engines; propellers; nozzles; engines; turbines; compressors; diffusers; liquid propellants, solid propellants, rocket engine design.

ASE 4423/6423. Introduction to Computational Fluid Dynamics. (3) (Prerequisite: Consent of instructor). Three hours lecture. Elementary aspects of computational fluid dynamics (CFD); review of numerical analysis and fluid mechanics as pertinent to CFD; numerical solution of selected fluidodynamic problems.

ASE 4433/6433. Fundamentals of Numerical Grid Generation. (3) (Prerequisite: Consent of instructor). Three hours lecture. Discrete representation of partial differential equations and applications of grid generation in their computer-oriented solutions; coordinate transformations, computer geometry design techniques.

ASE 4513. Aerospace Vehicle Design I. (3) (Prerequisites: ASE 3123, ASE 3313, ASE 3223). Two hours lecture. Three hours laboratory. Introduction to the principles and techniques of aerospace vehicle design. Introduction to systems engineering and requirements analysis; design optimization; layout; weight; performance.

ASE 4523. Aerospace Vehicle Design II. (3) (Prerequisite: ASE 4513). One hour lecture. Five hours laboratory. Continuation of ASE 4513. Students make use of principles and techniques covered in ASE 4513 to create a design of an aerospace vehicle.


ASE 4721. Aerospace Engineering Laboratory II. (1) (Prerequisite: ASE 4113). Three hours laboratory. Experimental techniques used in aerospace engineering; course requirements include individual research and formal research papers.

ASE 4990/6990. Special Topics in Aerospace Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ASE 6013. Directed Project in Aerospace Engineering. (3). Contact hours and title to be arranged. An individual professional project open only to candidates for the Master of Science degree (non-thesis option). Formal written and oral project reports are required.

ASE 7000. Directed Individual Study. Hours and credits to be arranged.

ASE 8000. Thesis Research/Thesis. Hours and credits to be arranged.

ASE 8313. Advanced Compressible Aerodynamics I. (3) (Prerequisite: ASE 4343 or equivalent). Three hours lecture. Derivation of complete equations for compressible fluid flow; unsteady one-dimensional flows; method of characteristics; flow about two-dimensional, and axis-symmetric shapes; integral methods.

ASE 8323. Advanced Compressible Aerodynamics II. (3) (Prerequisite: ASE 8313). Three hours lecture. Perturbation theory for wings and bodies; optimum wing and body shapes; wing-body interference; transonic flows, hypersonic flows.

ASE 8343. Incompressible Viscous Laminar Flow. (3) (Prerequisite: Consent of instructor). Three hours lecture. Incompressible Navier-Stokes equations; properties and exact solutions; laminar boundary layer equations; two- and three-dimensional solutions; time-dependent solutions; approximate solutions; boundary layer control.

ASE 8353. Turbulent Flow. (3) (Prerequisite: ASE 8343). Three hours lecture. Origins of turbulence; stability statistical theory of turbulence; isotropic and non-isotropic turbulence; equations of turbulent flow; turbulent boundary layer; free turbulent flow.

ASE 8363. Computational Heat Transfer. (3) (Prerequisite: Consent of instructor). Three hours lecture. Application of numerical techniques to elliptic and parabolic problems in engineering heat transfer and fluid flow. Discretization techniques; linearization; stability analysis. (Same as ME 8363).

ASE 8413. Computational Fluid Dynamics I. (3) (Prerequisite: Consent of instructor). Three hours lecture. Review of relevant numerical analysis; one-dimensional methods; compressible inviscid methods, Euler Equations; inviscid-viscous interaction methods; current literature.

ASE 8423. Computational Fluid Dynamics II. (3) (Prerequisite: ASE 8413 or equivalent). Three hours lecture. Compressible viscous methods; Navier-Stokes equation models; turbulence models; incompressible methods; panel methods; finite element methods, current literature.

ASE 8533. Advanced Numerical Grid Generation. (3) (Prerequisite: ASE 4433/6433 or consent of instructor). Three hours lecture. Structured-unstructured hybrid composite grid configurations, truncation error analysis, direct-indirect grid generation methods, grid refinement, adaptive gridding.

ASE 8990. Special Topics in Aerospace Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ASE 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

Department of BIOCHEMISTRY and MOLECULAR BIOLOGY

Office: 402 Dorman Hall
Professors Boyle (Head), Luthe, Ma, and Willeford;
Assistant Professors Braasch, Jung, Li and Peng

BCH 1001. Introduction to Biochemistry. (1) One hour lecture. A course to acquaint the beginning students with the overall concepts of biochemistry and molecular biology. Current research will be described. Offered every year.

BCH 2990. Special Topics in Biochemistry. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

BCH 3613. Elementary Biochemistry. (3) (Prerequisite: CH 2503). Three hours lecture. A terminal course which deals with a study of the structural and metabolic relationships of carbohydrates, lipids, protein, nucleic acids, enzymes, and vitamins.

BCH 3901. Senior Seminar. (1) (Prerequisite: BCH 4414/6414). Each student will prepare and present a formal paper based on independent study of the literature and undergraduate research investigations.

BCH 4000. Directed Individual Study. Hours and credits to be arranged.

BCH 4414/6414. Protein Methods. (4) (Prerequisite: Coregistration in BCH 4603/6603). Two hours lecture. Four hours laboratory. A comprehensive course to teach the student the modern methods of protein biochemistry.

BCH 4603-4613/6603-6613. General Biochemistry. (3-3) (Prerequisite: CH 4523/6523 or consent of instructor). Three hours lecture. BCH 4603/6603 must be completed before student may enroll in BCH 4613/6613. Detailed studies of the structure and metabolism of carbohydrates, lipids, proteins, nucleic acids, enzymes, and coenzymes.

BCH 4623/6623. Biochemistry of Specialized Tissues. (3) (Prerequisite: Coregistration in BCH 4613/6613). A continuation of BCH 4613/6613 to include a study of specialized tissues, hormones, acid-base balance in animals and other physiological parameters of biochemistry.

BCH 4713/6713. Molecular Biology (3) (Prerequisite: Coregistration in BCH 4613/6613). Three hours lecture. A study of basic molecular process
such as synthesis of DNA, RNA, and protein in both prokaryotic and eukaryotic cells. Offered fall semester. (Same as GNS 6713).

**BCH 4804/6804. Molecular Biology Methods.** (4) (Prerequisite: Coregistration in BCH 4613/6613). Two hours lecture. Four hours laboratory. A comprehensive course to teach the student the modern methods of molecular biology. (Same as GNS 4804/6804).

**BCH 4990/6990. Special Topics in Biochemistry.** (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**BCH 7000. Directed Individual Study.** Hours and credits to be arranged.

**BCH 8000. Thesis Research/Thesis.** Hours and credits to be arranged. **BCH 8101. Seminar.** (1) Review of current literature; individual presentation of research or classical topics.

**BCH 8243. Molecular Biology of Plants.** (3) (Prerequisite: Coregistration in BCH 4613/6613). Three hours lecture. A study of plant development at the molecular level. Emphasis is to be placed on the influence of nucleic acid metabolism on plant development.

**BCH 8633. Enzymes.** (3) (Prerequisites: BCH 4613/6613). Three hours lecture. A study of enzymes; their purification, classification, kinetics and mechanisms.

**BCH 8643. Molecular Genetics.** (3) (Prerequisites: PO 3103, or BIO 3103, and Coregistration in BCH 4613/6613). Three hours lecture. Study of the gene and its expression with emphasis on structure and function in higher organisms. (Same as GNS 8643).

**BCH 8654. Intermediary Metabolism.** (4) (Prerequisite: BCH 4613/6613). Four hours lecture. An advanced in-depth study of anaerobic and catabolic pathways involved in cellular metabolism. Bioenergetics and control mechanisms will be emphasized.

**BCH 8990. Special Topics in Biochemistry.** (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**BCH 9000. Dissertation Research/Dissertation.** (1-9) Hours and credits to be arranged. **BCH 9000. Dissertation Research/Dissertation.** (1-9) Hours and credits to be arranged.

### Department of BIOLOGICAL SCIENCES

Office: 130 Harned Biology Building

Professors Buddington, Chambers*, Champlin, Diehl, Downer, Gavini (Head), Pulakat, St. Cyr Coats, and Wise; Associate Professors Munn, Taylor and Williams

Instructors Fuquay, Holder, Reese and Williamson

**BIO 1001. Biology Laboratory.** (1) Three hours laboratory. Accompaniments BIO 1033. May be used also as AP credit to satisfy one hour Biology, Botany, or Zoology laboratory. Selected exercises to illustrate fundamental concepts of biology.

**BIO 1004. Anatomy and Physiology.** (4) Three hours lecture. Two hours laboratory. For non-science majors. The structure and function of the human body with special emphasis on the muscular, nervous, circulatory, respiratory, digestive, urinary and reproductive systems.

**BIO 1023. Plants and Humans.** (3) Two hours lecture. Two hours laboratory. For non-science majors. Students may not have credit for both BIO 1023 and BIO 1203 nor for both BIO 1023 and BIO 1033, nor for both BIO 1023 and general biology courses transferred from other institutions. A survey of botany intended to introduce students to the world of plants, particularly emphasizing their relationships with humans and society.

**BIO 1033. Biological Science.** (3) Three hours lecture. Students may not have credit for both BIO 1033 and BIO 1023, nor for both BIO 1033 and BIO 1123. Basic principles and modern concepts pertaining to levels of biological organization from cell to biosphere and life forms of biological kingdoms.

**BIO 1123. Animal Biology.** (3) Two hours lecture. Two hours laboratory. For non-science majors. Students may not have credit for both BIO 1123 and BIO 1124. Basic understanding of life processes, diversity, inheritance, reproduction, ecology, and evolution.

**BIO 1203. Plant Biology.** (3) Two hours lecture. Three hours laboratory. (Students may not have credit for both BIO 1023 and BIO 1203.) An introduction to the biology of flowering plants. Topics include plant physiology, anatomy and morphology, development, genetics and evolution.

**BIO 1301. Perspectives in Medical Technology.** (1) One hour lecture. A survey of all aspects of medical technology. (Fall).

**BIO 1504. Principles of Zoology.** (4) Three hours lecture. Three hours laboratory. For science majors. Students may not have credit for both BIO 1123 and BIO 1504. Introduction to animal biology, including genetics, embryology, physiology, cell biology, ecology and behavior.

**BIO 2004. Human Anatomy.** (4) Three hours lecture. Three hours laboratory. The study of the structure of the human body. The gross and microscopic anatomy of each organ system will be presented.

**BIO 2014. Human Physiology.** (4) Three hours lecture. Three hours laboratory. Survey of physiological systems and principles and their interrelationships in humans. Designed for paramedical and pre-nursing students and dietetic majors.

**BIO 2103. Cell Biology.** (3) (Prerequisites: 6 hours of biology, CH 1223). Three hours lecture. A comparative study of cell structure among plant, animal and bacterial systems. (Fall/spring).

**BIO 2213. Survey Plant Kingdom.** (3) Two hours lecture. Two hours laboratory. A survey of algae, bryophytes, vascular plants, and fungi, with emphasis on morphology, internal anatomy, life cycles fossil record, and evolutionary relationships. (Spring).

**BIO 2503. Environmental Quality.** (3) (Prerequisite: One course in biology). Three hours lecture. Relevance of ecological principles to environmental problems and relationships of humans with their environment with emphasis on preservation of environmental quality.

**BIO 2990. Special Topics in Biology.** (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**BIO 3013. Professional Writing for Biologists.** (3) (Prerequisite: Junior/Senior standing in BIO, MEC, or MDT, or consent of instructor). Three hours lecture. Refinement of writing skills for more effective communications. Assignments to include routine and specialized correspondence, technical reports, and speech preparation and delivery.

**BIO 3103. Genetics I.** (3) (Prerequisites: MA 1313. BIO 1504 or BIO 1203, or equivalents). (Same as PO 3103 and GNS 3103).

**BIO 3104. Ecology.** (4) (Prerequisite: BIO 1504). Three hours lecture. Three hours laboratory. A general survey of ecological principles and concepts pertaining to plants and animals with reference to ecosystem structure and function, and interactions among ecosystem components.

**BIO 3113. Marine Biology.** (3) (Prerequisite: BIO 1504 or equivalent.) Three hours lecture. An introduction to marine environments, the diversity of life in the different marine habitats and human utilization of marine resources.

**BIO 3303. Parasitology.** (3) (Prerequisite: BIO 1504 or equivalent). Two hours lecture. Three hours laboratory. A survey of parasitology to include parasites of importance to the health of humans and domestic animals. (Fall).

**BIO 3304. General Microbiology.** (4) (Prerequisites: CH 1053 or CH 1223). Two hours lecture. Four hours laboratory. For science majors. Fundamentals; techniques in staining and culture of microorganisms.

**BIO 3404. Bacterial Cultivation.** (4) (Prerequisites: BIO 3043 and CH 4513 or coregistration in CH 4513). Two hours lecture. Four hours laboratory. A continuation of 3304. General principles of microbiology with emphasis on cultivation of bacteria.

**BIO 3504. Comparative Anatomy.** (4) (Prerequisite: BIO 1504). Two hours lecture. Six hours of laboratory. The vertebrate animals; relationships of organs and systems; and their phylogenetic significance. (Fall).

**BIO 3514. Invertebrate Zoology.** (4) (Prerequisite: BIO 1504). Three hours lecture. Three hours laboratory. Invertebrate organisms with emphasis on structure, function, taxonomy, phylogeny and life histories.

**BIO 3524. Biology of Vertebrates.** (4) Two hours lecture, three hours laboratory. Evolution, systematics, ecology and behavior of vertebrates. Laboratory includes classification of major groups, identification of species, field trips, and experiments in behavior and physiological ecology.

**BIO 4000. Directed Individual Study.** Hours and credits to be arranged.

**BIO 4011. Senior Thesis in Biological Sciences.** (1) (Prerequisites: BIO 4013 with a grade of B or better and consent of department head and thesis committee). Writing of the undergraduate thesis under the direction of the major advisor.

**BIO 4013. Senior Research in Biological Sciences.** (3) (Prerequisites: Senior standing, consent of department head, 3.00 GPA in biology courses, and major in biological sciences). Conduct original research for eventual writing of undergraduate thesis.

**BIO 4100. Med Tech Clinicals.** (3-19) (Prerequisite: consent of instructor). Medical Technology Clinical Internship.

**BIO 4103/6103. Experimental Genetics.** (3) (Prerequisites: BIO 3103 or consent of instructor). Six hours laboratory. Mechanisms of transmission
of genetic information with first-hand experience in inducing such mecha-
nisms from experimental data. Emphasis is on lab.

**BIO 4113/6113. Evolutionary Biology. (3)** Three hours lecture. His-
torical development of evolutionary theory; variation and natural selection
in populations; speciation; current concepts of phylogeny and systematics.

**BIO 4114/6114. Cellular Physiology (4)** (Prerequisites: Seven hours of
zoology and two semesters of organic chemistry). Three hours lecture. Three
hours laboratory. A study of the morphology and function of the cell. (Fall).
(Same as PHY 6114).

**BIO 4133/6133. Human Genetics. (3)** (Prerequisite: BIO 1504 or con-
sent of instructor). Three hours lecture. Principles of Mendelian and molecu-
lar genetics as applied to humans. Description and causes of human genetic
diseases and other anomalies. (Same as GNS 4133/6166).

**BIO 4203/6203. Taxonomy of Spermatophytes. (3)** (Prerequisites: BIO
1203 and BIO 2213). Two hours lecture. Three hours laboratory. Classifi-
cation and nomenclature of seed plants; introductory methods of collection;
laboratory studies of representative plant families.

**BIO 4204/6204. Plant Anatomy. (4)** (Prerequisites: BIO 1203 and BIO
2213). Two hours lecture. Four hours laboratory. Structure and development
of cell types, tissues, roots, stems, leaves, flowers, and fruits of seed plants,
with emphasis on angiosperms.

**BIO 4213/6213. Plant Ecology. (3)** (Prerequisite: BIO 4203). Two hours
lecture. Three hours laboratory. Plant behavior in relation to environment;
developmental variations; successional trends; stabilization of plant commu-
nities.

**BIO 4214/6214. General Plant Physiology. (4)** (Prerequisites: BIO
1203 and CH 1213). Three hours lecture. Three hours laboratory. Chemical
and physical activities of the plant; absorption; transpiration; mineral nutri-
tion; photosynthesis; translocation; growth processes.

**BIO 4223/6223. Freshwater Algae. (3)** (Prerequisite: BIO 1203). Two
hours lecture. Three hours laboratory. Cytology, morphology, physiology,
reproduction and ecology of major groups of freshwater algae; laboratories
emphasize identification of common freshwater algal genera.

**BIO 4303/6303. Bioinstrumentation. (3)** (Prerequisite: BIO 4304/6304).
Two hours lecture. Two hours laboratory and demonstrations. Theory and
practical application of electrical, optical and other instruments employed in
microbiology and medical technology. (Spring).

**BIO 4304/6304. Quantitative Methods I. (4)** Three hours lecture. Two
hours laboratory. Application of mathematical and statistical techniques to
problem solving in the laboratory. (Fall).

**BIO 4314/6314. Quantitative Methods II. (4)** (Prerequisite: BIO
4304/6304). Two hours lecture. Four hours laboratory. Theory and applica-
tion of selected clinical laboratory methods. (Spring).

**BIO 4324/6324. Soil Microbiology. (4)** (Prerequisite: BIO 3304). Three
hours lecture. Three hours laboratory. Soil microorganisms and their impor-
tance in ammonification, nitrification, and other biological processes. (Same
as PSS 4314).

**BIO 4404/6404. Environmental Microbiology. (4)** (Prerequisite: BIO
3304). Two hours lecture. Four hours laboratory. Terrestrial, aquatic, and sub-
surface microbial ecosystems. Microbiology of water and wastewater treat-
ment, solid waste disposal, land farming, impact of hazardous waste, and
environmental reclamation.

**BIO 4405/6405. Pathogenic Microbiology. (5)** (Prerequisite: BIO
3304). Three hours lecture. Four hours laboratory. The microorganisms pro-
ducing disease in man and lower animals; means of transmission; protection
against disease. (Fall and Spring).

**BIO 4413/6413. Immunology. (3)** (Prerequisite: BIO 3304 and CH
4513). Three hours lecture. Survey of the functions of the immune system.
Emphasis on mammalian immunology, including T- and B-cell interactions
in humoral and cell mediated immunity.

**BIO 4414/6414. Microbiology of Foods. (4)** (Prerequisite: BIO 3304).
Two hours lecture. Four hours laboratory. Isolation and classification of the
microorganisms associated with spoilage of commercial and domestic pre-
served foods. Same as FNH 4414/6414. (Same as FNH 4414/6414).

**BIO 4433/6433. Principles of Virology. (4)** (Prerequisites: BCH 4603
and BIO 3103 or equivalents). Three hours lecture. Principles of viral infec-
tivity, multiplication, and chemical constitution.

**BIO 4442/6442. Bacterial Genetics Laboratory. (2)** (Prerequisite: BCH
4603, BIO 3304 and concurrent enrollment in BIO 4443/6443). Four hours
laboratory. The genetic and molecular manipulation of bacteria and their
viruses.

**BIO 4443/6443. Bacterial Genetics. (3)** (Prerequisites: BCH 4603, BIO
3304 or consent of instructor). Three hours lecture. The genetics of bacteria
and viruses including: replication, rearrangement, repair, transfer, regu-
lation, and methods of manipulation and analysis of DNA. (Fall)

**BIO 4463/6463. Bacterial Physiology. (3)** (Prerequisites: BIO 3404 and
BCH 4603). Three hours lecture. Structure and function relationships and
metabolic and anaerobic pathways of microorganisms.

**BIO 4502/6502. Toxicology. (2)** (Prerequisite: 8 hours biological sci-
cences and 8 hours chemistry [cell biology/physiology and biochemistry rec-
ommended]). Two hours lecture. An introduction to the field of toxicology,
including discussion of absorption, metabolism mode of action (acute and
chronic), environmental effects, and toxicity testing.

**BIO 4503/6503. Vertebrate Histology. (3)** (Prerequisite: BIO 1504).
Two hours lecture. Three hours laboratory. The histology of major groups
of vertebrates, structure, and function of major cell types and tissues. (Fall).

**BIO 4504/6504. Comparative Vertebrate Embryology. (4)** (Prerequi-
site: BIO 1504). Two hours lecture. Six hours laboratory. The embryology of
the vertebrates; the fertilization of the egg; stages of cleavage and the devel-
opment of organs and systems. (Spring).

**BIO 4513/6513. Ichthyology. (3)** (Prerequisite: BIO 1504 or equiva-
 lent). Two hours lecture. Three hours laboratory. Structure, evolution, clas-
sification, and life histories of fishes of the world with emphasis on North
American freshwater forms. (Fall).

**BIO 4514/6514. Animal Physiology. (4)** (Prerequisites: Ten hours of
zoology and organic chemistry). Three hours lecture. Three hours laboratory.
Function and interrelationship of the systems of the body. (Same as PHY
6514).

**BIO 4523/6523. Mammalogy. (3)** (Prerequisite for undergraduates: BIO
3524 or equivalent). Two hours lecture. Three hours laboratory. Evolution,
ecology, and systematics of mammals, with emphasis on North American
groups. (Fall).

**BIO 4543/6543. Ornithology. (3)** (Prerequisites: Eight hours of zool-
ogy). Two hours lecture. Three hours laboratory. Recent and fossil avifauna
of the world; its origin, distribution, classification, and biology. (Spring).

**BIO 4673/6673. Industrial Microbiology. (3)** Three hours lecture.
Introduction to microbial anatomy, physiology, and genetics. Use of micro-
organisms and their by-products. Identification and control of biofouling,
bioerosion, and biodegradation of products and processes. (Same as CHE
4673/6673).

**BIO 4713/6713. Field Botany for Teachers. (3)** (Prerequisite: Three
hours of biology). Two hours lecture. Three hours laboratory. Plants in their
natural habitats with emphasis on identification, ecological associations, life
histories and importance to man and other organisms. (Summer). Note: Will
not satisfy any Arts and Sciences core requirement.

**BIO 4990/6990. Special Topics in Biology. (1-9)** Credit and title to be
arranged. This course is to be used on a limited basis to offer developing
subject matter areas not covered in existing courses. (Courses limited to two
offerings under one title within two academic years).

**BIO 8011. Seminar. (1)** One hour. Required once of each on-campus
M.S. or Ph.D. student. Formal oral presentation of current topics in biology.

**BIO 8013. Scientific Writing for Biological Scientists. (2)** Three hours
lecture preparation of the journal article, thesis, presentation, grant propos-
als, and “litature search”. Scientific manuscript writing; scientific illus-
tration; oral presentation of a scientific paper.

**BIO 8103. Advanced Ecology. (3)** (Prerequisite: BIO 3104). Two hours
lecture. Three hours laboratory. Selected topics with special references to bio-
energetics, population and human ecology; with student research project.

**BIO 8104. Experimental Molecular Biology. (4)** (Prerequisite: Con-
sent of instructor). One hour lecture. Six hours laboratory. Practical experi-
ence with the molecular analysis of gene function.

**BIO 8113. Biogeography. (3)** Three hours lecture. Study of the geo-
graphic distribution of life. Emphasis placed on climatic, geologic, and hu-
mam influence, dispersal mechanisms and evolutionary history.

**BIO 8123. Physiological Ecology. (3)** (Prerequisite: One semester of
physiology or consent of instructor). Three hours lecture. An advanced study
of physiological and metabolic adaptations of animals to variable factors in
the environment. (Spring, even years).

**BIO 8213. Plant Water and Mineral Relations. (3)** (Prerequisite: BIO
4214). Three hours lecture. Membrane structure and functions; plant and soil
water relationships; absorption; translocation; transpiration; iron transport
and mineral nutrition. (Spring).

**BIO 8223. Plant Metabolism. (3)** (Prerequisites: BIO 4214 and organic
chemistry). Three hours lecture. Photosynthesis, respiration, nitrogen metab-
olism, and other metabolic processes. (Fall)

**BIO 8403. Advanced Microbial Physiology. (3)** (Prerequisite: BIO
4463 or the equivalent). Three hours lecture. Discussion of current concepts
regarding the molecular basis of prokaryotic macromolecular biosynthesis
and cell division and susceptibility of such processes to inhibition by antibiot-
ics. (Spring, odd years).
BIO 8453. Advanced Virology. (3) (Prerequisite: Cell Biology or equiv-
alent). Three hours lecture. Literature survey in virus research. (Spring, odd
years). 
BIO 8463. Advanced Bacterial Genetics. (3) (Prerequisites: BCH 4713 or
BIO 4443, or consent of instructor). Three hours lecture. Discussion of cur-
cent concepts of genetic transfer and regulation in various bacteria. Emphasis
will be on use of genetics as an experimental tool. (Fall, even years.)
BIO 8990. Special Topics in Biology. (1-9) Credit and title to be ar-
ranged. This course is to be used on a limited basis to offer developing subject
matter areas not covered in existing courses. (Courses limited to two offerings
under one title within two academic years).

Off Campus

The courses listed below are offered during the year of clinical training
at affiliate hospitals. (See list of affiliate hospitals.)
Offered during the Summer at Gulf Coast Research Laboratory.

BIO 4336/6336. Marine Invertebrate Zoology II. (6) (Prerequisite:
Sixteen hours of zoology and junior standing). Same as GCRL Zoology 361B.
All phyla from Ollusca through protocoradates are covered in this course.

BIO 4345/6345. Marine Ecology. (5) (Prerequisite: Sixteen hours of
biology including general botany and invertebrate zoology). Same as GCRL
Ecology 452. A consideration of the relationships of marine organisms to
their environment.

BIO 4526/6526. Marine Aquaculture. (6) (Prerequisites: General zool-
y, invertebrate and vertebrate zoology, or consent of instructor). Same as
GCRL Zoology 464. A course designed to acquaint advanced biology stu-
dents with the science of marine aquaculture.

BIO 4602. Urinalysis. (2) (Prerequisite: Completion of all preprofes-
sional requirements). One hour lecture. Two hours laboratory. A study of
urine as a diagnostic tool. (Spring).

BIO 4606. Clinical Microbiology. (6) (Prerequisite: Completion of all
preprofessional requirements). Three hours lecture. Six hours laboratory. Isola-
tion and identification of micro-organisms from clinical specimens. Includes
bacteriology, virology, mycology and parasitology. Second summer term.

BIO 4612. Special Topics. (2) (Prerequisite: Completion of all preprofes-
sional requirements). Four hours lecture or laboratory. An assigned project
determined by the needs or interests of the student. (Spring).

BIO 4614. Serology and Immunology. (4) (Prerequisite: Completion of
all preprofessional requirements). Two hours lecture. Four hours laboratory.
A study of the immune system of the human body. Diagnostic procedures us-
ing antigen-antibody reactions. (Fall).

BIO 4624. Immunohematology. (4) (Prerequisite: Completion of all
preprofessional requirements). Three hours lecture. Four hours laboratory.
Blood group serology, compatibility testing, and identification of atypcial
antibodies. Transfusion practices and blood group immunogenetics. (First
summer term.)

BIO 4626. Hematology. (6) (Prerequisite: Completion of all preprofes-
sional requirements). Four hours lecture. Eight hours of laboratory. Nor-
mal and abnormal blood and bone marrow cells. Coagulation mechanisms.
(Spring).

BIO 4636. Clinical Chemistry. (8) (Prerequisite: Completion of all
preprofessional requirements). Four hours lecture. Eight hours laboratory.
Normal and abnormal human body chemistry. Emphasis on instrumentation.
(Fall).

BIO 7000. Directed Individual Study. Same as GCRL Zoology 561.
Hours and credits to be arranged. Directed Individual Study courses usually
require prerequisites of BIO 4326/6326.

BIO 8000. Thesis research/Thesis. Same as GCRL Zoology 561. Hours
and credits to be arranged.

BIO 9000. Dissertation Research/Dissertation. Same as GCRL Zool-
yogy 561. Hours and credits to be arranged.

BUSINESS INFORMATION SYSTEMS

(For departmental information, see DEPARTMENT
of MANAGEMENT and INFORMATION SYSTEMS.)

BIS 1012. Introduction to Business Computer Systems. (2) One hour
lecture. Two hours laboratory. Overview of business information systems.
Integrating computer hardware, software, data, personnel, and procedures
is stressed. Instruction in personal productivity packages and the Internet is
provided.

BIS 1733. Visual Basic Applications. (3) (Prerequisite: a grade of B or
above in BIS 1012). Three hours lecture. Introduction to procedural, event
and object-oriented programming to develop business and e-commerce ap-
lications.

BIS 1753. Introduction to Business Applications Using COBOL. (3)
(Prerequisite: a grade of B or above in BIS 1733 or graduate standing). Three
hours lecture. Structured program design for business applications. Data edit-
ing, table handling, and file processing with sequential and random access
files will be stressed.

BIS 2990. Special Topics in Business Information Systems. (1-9) Credit
and title to be arranged. This course is to be used on a limited basis to offer
developing subject matter areas not covered in existing courses. (Courses
limited to two offerings under one title within two academic years).

BIS 3233. Management Information Systems. (3) (Prerequisite: BIS
1012). Three hours lecture. A survey of the components, functions, and pro-
cesses of Information Systems as they relate to managing modern organiza-
tion for increased efficiency and competitiveness.

BIS 3523. Advanced Languages I. (3) (Prerequisite: a grade of “B” or
above in BIS 1753, or graduate standing). Three hours lecture. Current and
advanced business programming topics. In-depth experience in programming
in one or more current state-of-the-art languages.

BIS 3713. Electronic Information Systems. (3) (Prerequisite: Junior
Standing and six hours of mathematics and/or statistics, or consent of instruc-
tor). Three hours lecture. Principles of business information systems using
computer equipment. Business problem solving, including problem defini-
tion, flow charting, basic programming and input-output design. (Credit for
this course may be earned only at the Meridian and Jackson branches of Mis-
sissippi State University. Credit will not be granted for this course and BIS
1012 or CSE 1013).

BIS 3753. Business Database Systems. (3) (Prerequisite: a grade of B
or above in BIS 1753). Three hours lecture. Introduction to business database
applications. Includes data modeling, design techniques, and data collection,
storage, manipulation, and retrieval strategies.

BIS 4000. Directed Individual Study. Hours and credits to be ar-
ranged.

(3) (Prerequisite: BIS 3233 or consent of instructor). Three hours lecture.
Concepts, skills, tools, and techniques involved in management of computer
security as it applies to today’s business environment.

BIS 4513/6513. Microcomputers and Networks. (3) (Prerequisite:
BIS 3523, or any 9 hours of university-level programming, or graduate stand-
ing). Three hours lecture. Current and advanced computer networks. Experi-
ce in building and maintaining microcomputers and networking hardware
and software components.

BIS 4523/6523. Advanced Languages II. (3) (Prerequisites: BIS 3523
or grade of B or higher in any 9 hours of university-level programming or
graduate standing). Three hours lecture. Current and advanced business pro-
gramming topics. In-depth experience in programming in one or more current
state-of-the-art languages.

BIS 4533. Management Support Systems. (3) (Prerequisites: BIS 3233
and BIS 4753). Three hours lecture. Theory and application of decision sup-
port, expert systems, and data mining using fifth and sixth generation com-
puting techniques. Hands-on experience in developing management support
systems.

BIS 4753. Structured Systems Analysis and Design. (3) (Prerequisite:
a grade of B or above in BIS 1753). Three hours lecture. Analysis/design of
computer based information systems with emphasis on problem identifi-
cation, requirements structuring, and solution generation in theory and in a
business project.

BIS 4763. Electronic Commerce Seminar. (3) (Prerequisite: Graduat-
ing Senior and 15 hours of BIS courses). Three hours lecture. Preparation for
IS careers, management of information systems, technical skill tuning, and
technology updates with emphasis on fundamentals of e-commerce technol-
y and e-commerce business models.

BIS 4990/6990. Special Topics in Business Information Systems. (1-9)
Credit and title to be arranged. This course is to be used on a limited basis to
offer developing subject matter areas not covered in existing courses. (Cours-
es limited to two offerings under one title within two academic years).

BIS 7000. Directed Individual Study. Hours and credits to be ar-
ranged.

BIS 8000. Thesis Research/Thesis. Hours and credits to be arranged.

BIS 8112. Managing Information Technology and Systems. (2) (Prre-
quisite: BIS 8022 or equivalent). Two hours lecture. Course includes the
description, acquisition or development and use of systems from a local and
global perspective. Technology-enabled concepts are used for student assign-
ments.

BIS 8113. Management Information Systems. (3) (Prerequisite: BIS
1012). Three hours lecture. Concepts and technology required by managers to

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interface with an organization’s MIS functions. Impact of various MIS strategies, operations, and controls are developed and evaluated.

**BIS 8122. Multimedia Presentation and Communication.** (2) (Prerequisite: BIS 8222 or equivalent). Two hours lecture. Emphasis on planning and delivering business presentations enhanced by multimedia. Concepts, design, and experience in developing multimedia presentations. Exposure to interactive multimedia.

**BIS 8213. Advanced Systems Analysis and Design.** (3) (Prerequisites: Six hours of programming and prerequisite or co-requisite BIS 8112). Three hours lecture. Analysis/design of computer-based information systems using structured methodologies and tools. Emphasis on problem definition, data collection, requirement structuring, solution generation and system design.

**BIS 8313. Advanced Database Design Administration.** (3) (Prerequisites: BIS 8213, BIS 8413 and BIS 8613). Three hours lecture. Design and management of local and distributed data resources, database design, definition, creation, maintenance, acquisition and use. Role of Database Administrator.

**BIS 8413. Decision Support and Expert Systems.** (3) (Prerequisites: Six hours of programming and prerequisite or co-requisite: BIS 8112). Three hours lecture. Analysis of information support systems which serve the manager/user providing quantitative and qualitative based information derived from databases and model bases.

**BIS 8513. Business Telecommunications.** (3) (Prerequisites: BIS 8213, BIS 8413 and BIS 8613). Three hours lecture. The evaluation, analysis and design of information systems utilizing data communications and networking concepts and techniques. Emphasis is on business applications and related considerations.

**BIS 8613. MIS Administration.** (3) (Prerequisites: Six hours of programming and prerequisite or co-requisite: BIS 8112). Three hours lecture. Administration of the MIS function in the business enterprise. Emphasis on activity of managing the IS function at all levels of the firm.

**BIS 8753. Information Systems Collaborative Project.** (3) (Prerequisites: BIS 8213, BIS 8413 and BIS 8613; co-requisites or prerequisites: BIS 8313 and BIS 8513). Three hours lecture. Capstone experience incorporating knowledge gained in prerequisite courses. Requires team participation using appropriate tools and methodologies in assisting organizations with real-world information systems related needs.

**BIS 8890. Special Topics in Business Information Systems.** (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**BIS 9000. Dissertation Research/Dissertation.** Hours and credits to be arranged.

**BIS 9113. Management Information Systems (MIS) Seminar.** (3) (Prerequisite: BIS 8213, BIS 8313). Three hours lecture. Penetrating review of issues, methodologies and new developments in design and operation of management information, decision support, and computer-based decision-making systems.

**BIS 9213. Advanced Topics in MIS.** (3) (Prerequisite: BIS 8213, BIS 8313). In-depth study of current MIS topics. Emphasis will be on project design and demonstration. Topics will change to reflect new directions in MIS.

**BUSINESS LAW**

(For departmental information see MARKETING, QUANTITATIVE ANALYSIS and BUSINESS LAW)

**BL 2413. The Legal Environment of Business.** (3) Three hours lecture. Environmental study of legal influences, concepts, institutions, emphasizing social forces shaping business law. Introduces business students to interrelationships of law and society, jurisprudence and business.

**BL 2990. Special Topics in Business Law.** (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**BL 3223. The Law of Commercial Transactions.** (3) (Prerequisite: Junior Standing). Three hours lecture. Commercial instruments in the economic process. Use of commercial and investment paper; documents of title, security instruments, notes, drafts, checks; integrated treatment of uniform statutes.

**BL 4000. Directed Individual Study.** (Prerequisite: Junior standing) Hours and credits to be arranged.

**BL 4243/6243. Legal Aspects of Entrepreneurship.** (3) (Prerequisite: BL 2413, MGT 3323, or consent of instructor). Three hours lecture. Business creation including legal aspects from permits and taxes to structure and sale with emphasis on Mississippi Law.

**BL 4253/6253. Real Estate Law.** (3) (Prerequisite: BL 2413 or consent of instructor). Three hours lecture. The legal principles applicable to real estate, including types of ownership and interests, mortgages, restrictions, and regulations.

**BL 4263/6263. Environmental Law.** (3) Three hours lecture. An introduction to how environmental law interfaces with the legal system. Overview of the major statutes, cases, and regulations pertaining to the environment.

**BL 4273/6273. International Business Law.** (3) Three hours lecture. An international commercial transactions course emphasizing trading, licensing and investment (contracts, financing, instruments, dispute resolution).

**BL 4990/6990. Special Topics in Business Law.** (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**BL 8112. Law, Business Ethics, and Dispute Resolution.** (2) Two hours lecture. Legal and ethical issues faced by the business firm with emphasis on prevention and resolution of disputes, including mediation, negotiation and alternative dispute resolution.

**BUSINESS QUANTITATIVE ANALYSIS**

(For departmental information see MARKETING, QUANTITATIVE ANALYSIS and BUSINESS LAW)

**BQA 2113. Business Statistical Methods I.** (3) (Prerequisite: MA 1613 and BIS 1012 or equivalent). Three hours lecture. Methods of describing numerical data; probability in business decisions; random variables; sampling distributions; introduction to estimation and hypothesis testing; computer statistical packages applied.

**BQA 2990. Special Topics in Business Statistics.** (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**BQA 3113. Introduction to Business Statistical Methods.** (3) (Prerequisite: MA 1613 or equivalent). Three hours lecture. Descriptive statistics; measures of central tendency, measures of dispersion, probability, discrete and continuous random variables, sampling, estimation, hypothesis testing, computer package applications. (Credit for this course may be earned only at the Meridian Campus. Credit will not be granted for this course and BQA 2113 or ST 2113).

**BQA 3123. Business Statistical Methods II.** (3) (Prerequisite: BQA 2113 or equivalent). Three hours lecture. Reviewing estimation and hypothesis testing; correlation and regression; chi-square tests; analysis of variance; non-parametric concepts; index numbers; time series analysis; computer statistical packages applied.

**BQA 4000. Directed Individual Study.** (Prerequisite: Junior standing) Hours and credits to be arranged.

**BQA 4990/6990. Special Topics in Business Statistics.** (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**BQA 7000. Directed Individual Study.** Hours and credits to be arranged.

**BQA 8112. Business Case Analysis Using Statistics.** (2) (Prerequisite: BQA 2113 and BQA 3123 or Equivalent and a knowledge of SAS). Two hours lecture. Descriptive statistics, data collection techniques estimation, hypothesis testing, analysis of variance, regression, time series, index numbers, forecasting, statistical process control applied to business case data.


**BQA 8563. Business and Economic Forecasting.** (3) (Prerequisite: BQA 8443 or equivalent). Three hours lecture. Overview of business and economic forecasting and its place in management decision making; evaluation of forecasting methods; time series analysis using various analytical methods and electronic computer.

**BQA 8583. Quantitative Methods for Research in Business.** (3) (Prerequisite: BQA 8443). Three hours lecture. Designed to familiarize the graduate student with the fundamentals of scientific research and the classical and modern quantitative methods of analysis useful in business research.

**BQA 8990. Special Topics in Business Statistics.** (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).
BQA 9533. Advanced Statistics for Business Decisions. (3) (Prerequisite: BQA 8443). Three hours lecture. Multivariate analysis; multiple regression analysis; multiple discriminant analysis; multivariate analysis of variance and covariance; factor analysis; cluster analysis.

COMMUNITY COLLEGE

(For departmental information, see INSTRUCTIONAL SYSTEMS, LEADERSHIP, and WORKFORCE DEVELOPMENT.)

CCL 8113. Community College History/Philosophy. (3) Three hours lecture. Objectives of the community college, philosophical/historical bases, changing roles, issues in higher education/workforce development/economic industry.


CCL 8233. Community College Legal Issues. (3) Three hours lecture. In-depth analysis of the legal/policy issues pertaining to students, faculty, and administrations of community colleges.

CCL 8333. Community College Administration. (3) Three hours lecture. In-depth analysis of community college governance, structure, functions, and its relationship with external groups, state government.

Department of CIVIL ENGINEERING

Office: 235 Walker Engineering Building
Professors White (head), Martin, Rendon, Sinno, and Truax;
Associate Professors Cole and Huddleston;
Assistant Professors Eamon, Magbanua, and Zhang

CE 1001. Introduction to Civil Engineering. (3) Three hours lecture. Introduction to the Civil Engineering profession, career opportunities, and curriculum. Engineering problem-solving, basic computing skills and tools as used in Civil Engineering. Oral, graphic, and written communications.

CE 2213. Surveying. (3) (Prerequisite: Credit or enrollment in CE 1001 or minimum grade of C in ABE 2873 (ABE students only)). Two hours lecture. Fours hours field and problem work. Fundamentals of field measurements. Theory, selection, and use of surveying instruments; theories used in the adjustment of surveys.

CE 2803. Environmental Engineering Issues. (3) (Prerequisite: Grade of C or better in CH 1223). Three hours lecture. An overview of the scientific, social and legal issues impacting environmental management and protection in the United States.

CE 2990. Special Topics in Civil Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CE 3113. Transportation Engineering. (3) (Prerequisite: Grade of C or better in CE 2213). Three hours lecture. An introduction to the general modes of transportation, the planning processes associated with the modes of transportation and design of transportation facilities.

CE 3313. Construction Materials. (3) (Prerequisite: Grade of C or better in CE 3414; credit or enrollment in ST 3123). Two hours lecture. Three hours laboratory. Physical and mechanical properties of basic civil engineering construction materials. Significance of and reasons for testing control and specifications of materials.

CE 3413. Soil Mechanics. (3) (Prerequisite: Credit or current enrollment in EM 3213). Three hours lecture. Three hours laboratory. Introduction to soil properties and behavior. Emphasis is placed on relating soil properties to compressibility and shear strength of soils.

CE 3601. Stress Analysis Laboratory. (1) (Prerequisite: Credit or current enrollment in EM 3213; current enrollment in CE 3603). Three hours lecture/laboratory. Concepts of stress, strain and deformations in bodies subjected to axial, bending, torsional and thermal effects. Stresses in pressure-loaded, thin-wall vessels. Buckling of columns.

CE 3603. Structural Mechanics. (3) (Prerequisite: Grade of C or better in EM 3213). Three hours lecture. Analytical and graphical methods of structural analysis; stress diagrams; influence lines; deflection; methods of work, moment distribution and slope-deflection.

CE 3801. Environmental Engineering and Water Resources Engineering Laboratory I. (1) (Co-requisite: Credit or concurrent enrollment in CE 3803). Three hours laboratory. A laboratory introduction to processes and operations used in systems for water supply and wastewater reclamation.

CE 3803. Environmental Engineering and Water Resources Engineering Laboratory II. (1) (Co-requisite: Credit or concurrent enrollment in CE 3813). Three hours laboratory. A laboratory introduction to the analysis and design of systems for hydraulic and hydrologic management.

CE 3813. Environmental and Water Resources Engineering Laboratory II. (3) (Prerequisite: Grade of C or better in CE 3803). Three hours lecture. Pressurized flow in pipe networks. Analysis and design of water distribution, stormwater collection and sanitary sewer systems.

CE 4000. Directed Individual Study. Hours and Credits to be arranged.

CE 4103/6103. Pavement Design. (3) (Prerequisite: Grade of C or better in CE 3313 and CE 3413). Three hours lecture. Analysis and design of both flexible and rigid pavement structures.


CE 4143/6143. Traffic Engineering. (3) (Prerequisite: Grade of C or better in CE 3113; credit in ST 3123). Three hours lecture. Human and vehicular characteristics as they affect highway traffic flow; traffic regulation, accident cause and prevention; improving flow on existing facilities; planning traffic systems.

CE 4183/6183. Waterborne Transportation Engineering. (3) (Prerequisite: Grade of C or better in CE 3113). Three hours lecture. Navigation vessels and their characteristics. Planning and design of Marine Transportation System facilities including navigation ports, channels and locks.

CE 4233/6233. Control Surveys. (3) (Prerequisite: Grade of C or better in CE 2213). Two hours lecture. Four hours laboratory. Methods and procedures for performing control surveys.

CE 4243/6243. Land Surveys. (3) (Prerequisite: Grade of C or better in CE 2213). Three hours lecture. Methods of surveying and describing property with emphasis on Mississippi's public land surveys.

CE 4303/6303. Stress Analysis. (3) (Prerequisite: Grade of C or better in EM 3213; credit in MA 3253). Two hours lecture. Three hours laboratory. Stress and strain at a point, theories of failure, shear center, elastic instability, columns, dynamic loads and theory of measurements.

CE 4313/6313. Advanced Concrete Materials. (3) (Prerequisite: Grade of C or better in CE 3313). Three hours lecture. Modern materials and methods for construction involving portland cement concrete, mechanical properties, durability considerations.

CE 4433. Foundations. (3) (Prerequisite: Grade of C or better in CE 3413; two hours lecture. Introduction to exploration and engineering evaluation of subsoil and groundwater conditions for selection and design of foundations for structures and earth masses.

CE 4513/6513. Engineering Hydrology. (3) (Prerequisite: Grade of C or better in CE 3803). Three hours lecture. Hydrologic processes; rainfall-runoff analysis; groundwater flow; frequency analysis; hydrologic design.

CE 4523/6523. Open Channel Hydraulics. (3) (Prerequisite: Grade of C or better in CE 3813). Three hours lecture. Continuity, energy and momentum principles in open channel flow; flow resistance; uniform and non-uniform flow; channel controls and transitions; unsteady flow routing.

CE 4533/6533. Computational Methods in Water Resources Engineering. (3) (Prerequisite: Grade of C or better in CE 3813). Three hours lecture. Review of relevant numerical analysis; numerical methods for kinematic wave, St. Venant, Bousinesq and depth-averaged equations; simulation of one- and two-dimensional free-surface flows.

CE 4543/6543. Advanced Reinforced Concrete. (3) (Prerequisite: Grade of C or better in CE 4533 or CE 4633). Three hours lecture. Two-way slab systems, shear walls, retaining walls, bi-axial bending of columns, torsion, brackets and corbels. Introduction to prestressed concrete.

CE 4563/6563. Sedimentation Engineering. (3) (Prerequisite: Grade of C or better in CE 4523/6523). Three hours lecture. Processes by which cohesive and non-cohesive sediments are transported in overland flow and in rivers, reservoirs, estuaries and coastlines. Deposition and erosion rates; design criteria.

CE 4601. Fundamentals of Structural Design. (1) (Prerequisites: ST 3123; a grade of C or better in CE 3603 and 3601; credit or current enrollment in CE 4623 or CE 4633). Three hours laboratory. Concepts of structural design common to all Civil Engineering structural design courses; advanced
load analysis in structural engineering; introduction to structural design software.

CE 4603/6603. Indeterminate Structures I. (3) (Prerequisite: Grade of C or better in CE 3603). Three hours lecture. A study of the several classical methods frequently used in the analysis and design of indeterminate structures. Introduction to matrix methods of structural analysis.

CE 4613/6613. Analysis of Structures for Forces of Nature. (3) (Prerequisite: Grade of C or better in CE 4601; credit or current enrollment in CE 4623 and CE 4633). Three hours lecture. Determination of structural design forces caused by effects of nature, with particular emphasis on wind and seismic forces. Application of current design codes and standards.

CE 4623. Steel Structures. (3) (Prerequisite: Grade of C or better in CE 3603 and 3601; credit or current enrollment in CE 4601). Three hours lecture. Analysis and design of metal structures, with emphasis on members and joints.

CE 4633. Concrete Structures. (3) (Prerequisite: Grade of C or better in CE 3603 and CE 3601; credit or current enrollment in CE 4601). Three hours lecture. Theory and problems in the analysis and design of concrete structures.

CE 4653/6653. Timber Design. (3) (Prerequisite: Grade of C or better in CE 3603 and CE 3601; credit or current enrollment in CE 4601). Three hours lecture. Engineering properties of wood. Design of wood structural members and connections. Wood structural systems.

CE 4663/6663. Matrix Methods of Structural Analysis. (3) (Prerequisite: Grade of C or better in CE 4603/6603, or consent of instructor). Three hours lecture. A unified treatment of beams, trusses, frames, and grids. Particular emphasis on stiffness methods.

CE 4673/6673. Bridge Design. (3) (Prerequisite: Grade of C or better in CE 4601 and CE 4633, or consent of instructor). Three hours lecture. AASHTO loading specifications. Designs of structural systems commonly used for bridge construction. Comprehensive design assignments for typical bridge layouts.

CE 4683/6683. Advanced Steel Design. (3) (Prerequisite: Grade of C or better in CE 4601 and CE 4623). Three hours lecture. Design theory and practice applied to complex structural steel systems.

CE 4693/6693. Reliability of Structures. (3) (Prerequisite: IE 4613; credit or current enrollment in CE 4623 or CE 4633, or consent of instructor). Three hours lecture. Introduction to the theory of structural reliability. Topics include probabilistic measures of safety, load models, resistance models, component and system reliability, optimization of design codes.

CE 4703/6703. Construction Engineering and Management. (3) (Prerequisite: Within 30 CE hours of graduation). Three hours lecture. Construction contracts and law, cost estimating, and project scheduling.

CE 4713. Forensic Engineering. (3) (Prerequisite: Within 30 CE hours of graduation). Three hours lecture. The practice of forensic engineering, litigation, arbitration and mediation, failure case studies, investigation of failure, forensic engineering procedures.

CE 4843/6843. Advanced Sanitary Analysis. (3) (Prerequisite: Grade of C or better in CE 3803). Three hours lecture. Introduction to advanced theoretical concepts in sanitary engineering analysis with special emphasis on inorganic, organic, and physical chemistry.

CE 4873/6873. Water and Wastewater Engineering. (3) (Prerequisite: Grade of C or better in CE 3803). Two hours laboratory. Evaluation of municipal water and waste-water characteristics and flows; application of various unit processes/unit operations for the treatment of municipal water and wastewater.

CE 4893/6893. Hazardous Waste Management. (3) (Prerequisite: Consent of instructor). Three hours lecture. Examination of state-of-the-art technologies available for the handling treatment, storage, and disposal of hazardous waste materials.

CE 4990/6990. Special Topics in Civil Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CE 4980/6980. Civil Engineering Comprehensive. (3) (Prerequisite: Graduation semester, or consent of instructor). Engineering, ethical and professional practice considerations in the planning, design and construction of civil engineering projects.

CE 7000. Directed Individual Study. Hours and credits to be arranged.

CE 8000. Thesis Research/Thesis. Hours and credits to be arranged.

CE 8133. Traffic Flow Theory. (3) (Prerequisite: Grade of C or better in CE 4143/6143). Three hours lecture. An analysis of the engineering and mathematical principles of traffic flow.

CE 8433. Advanced Foundations. (3) (Prerequisite: Grade of C or better in CE 4433). Three hours lecture. A continuation of CE 4433 with emphasis on unusual soil conditions and foundations.
CH 1051. Experimental Chemistry. (1) Three hours laboratory. A laboratory to accompany CH 1053. Experiments designed to illustrate the practical aspects of chemical techniques and experimental techniques to organic systems.

CH 1053. Survey of Chemistry II. (3) Three hours lecture. The nature of chemistry and its applications. Designed for non-chemistry majors.

CH 1141. Professional Chemistry: Paths. (1) Skills to be successful as chemistry major and possible careers in chemistry. Introduction to professional conduct of scientists and necessary computer skills.

CH 1211. Investigations in Chemistry I. (1) (Prerequisite: Credit or concurrent enrollment in CH 1213). Three hours laboratory. Selected experiments to illustrate the fundamentals of chemistry. Offered each semester.

CH 1212. Chemistry II. (3) (Prerequisites: CH 1211). Three hours lecture. The principles of atomic and molecular structure, energetics, dynamics, and synthesis as related to chemical systems. Designed as preparation for upper division chemistry courses. Offered each semester.

CH 2141. Professional Chemistry: Tools. (1) (Prerequisite: CH 1141). One hour lecture. Advanced computer skills including chemical literature searching. Introduction to oral communication and research in chemistry.

CH 2313. Introduction to Analytical Chemistry. (3) (Prerequisites: CH 1221 and CH 1223). Two hours lecture. Three hours laboratory. An introduction to quantitative methods in analytical chemistry and an abbreviated laboratory including titrimetric, spectrometric, separations, and electrochemical methods. For non-chemistry majors.

CH 2314. Analytical Chemistry I. (4) (Prerequisites: CH 1221 and 1223). Two hours lecture. Six hours laboratory. The principles of quantitative analytical chemistry and a laboratory including gravimetric, titrimetric, spectrometric, separations, and electrochemical methods. Required for chemistry majors.

CH 2501. Elementary Organic Chemistry Laboratory. (1) (Prerequisites: CH 1221 or CH 1051). Three hours laboratory. A laboratory course to accompany CH 2503.

CH 2503. Elementary Organic Chemistry. (3) (Prerequisites: CH 1223 or CH 1053). Three hours lecture. A terminal course in organic chemistry. Common aliphatic, aromatic, and heterocyclic compounds.

CH 2909. Special Topics in Chemistry. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CH 3141. Professional Chemistry: Literature. (1) (Prerequisite: CH 2141). One hour lecture. Advanced discussion of careers in chemistry, oral communication and searching the chemical literature. Introduction to scientific writing.

CH 3213. Inorganic Chemistry. (3) (Prerequisites: CH 2314 and MA 1713). Three hours lecture. A basic course in inorganic chemistry. Topics include periodicity, ionic interactions, systematic chemistry of the elements and solvent relations to acid-base and redox reactions.

CH 4000. Directed Individual Study. Hours and credits to be arranged.

CH 4103/6103. Chemical Literature. (3) (Prerequisite: Junior standing). Two hours lecture. Three hours laboratory. A study of sources of information in chemistry, primary and secondary, including books, journals, patents, and other printed material. Searching the chemical literature.

CH 4113. Advanced Chemistry Research Skills. (3) (Prerequisites: CH 4523 or CH 4523 and permission of instructor). One hour lecture. Six hours laboratory. Laboratory intensive course on modern research methods with oral and written presentations including a discussion component of the role and ethics of scientists in society.

CH 4141. Professional Chemistry: Research. (1) (Prerequisite: CH 3141). One hour lecture. Disseminating research results in chemistry. Advanced scientific writing, performing scientific research and professional conduct of scientists.

CH 4203/6203. Faculty Development in Secondary School Chemistry. (3) (Prerequisites: A year of chemistry plus experience as a secondary level science teacher). Two hours lecture. Three hours laboratory. A course designed for secondary school chemistry teachers. Topics covered are significant to a successful high school chemistry course.

CH 4212/6212. Advanced Inorganic Laboratory. (2) (Prerequisite: Prior credit or concurrent enrollment in CH 4212/6213). Six hours laboratory. Theory and practical application of modern experimental techniques to inorganic systems.

CH 4213/6213. Advanced Inorganic Chemistry I. (3) (Prerequisite: Consent of the instructor; CH 4413/6413). Three hours lecture. Primarily the study of the elements in light of the periodic law; emphasis on coordination number, molecular complexes, and nuclear chemistry.

CH 4303/6303. Environmental Chemistry I. (3) (Prerequisites: CH 4523/6523). Three hours lecture. A systematic study of the basic concepts of environmental chemistry. Topics include air, water, soil chemistry, pollution, and environmental regulations.

CH 4351/6351. Analytical Chemistry Laboratory II. (1) (Prerequisite: Concurrent registration in CH 4353/6353). Three hours laboratory. Laboratory course to accompany CH 4353/6353.

CH 4353/6353. Analytical Chemistry II. (3) (Prerequisites: CH 4423/6423 and either CH 2313 or CH 2314). Three hours lecture. Three hours laboratory. A study of instrument based methods in analytical chemistry.

CH 4404. Biophysical Chemistry. (4) (Prerequisites: PH 1123, CH 4523, MA 1723). Three hours lecture, one hour recitation. Principles of thermodynamics, solutions, electrochemistry, kinetics, transport processes, macromolecular solutions and electromagnetic properties as applied to biological systems.

CH 4411/6411. Physical Chemistry Laboratory I. (1) (Prerequisite: CH 4413/6413). Three hours laboratory. Laboratory course to accompany CH 4413/6413.

CH 4413/6413. Physical Chemistry I. (3) (Prerequisites: CH 1223, PH 2213 and MA 2733). Three hours lecture. A study of the quantitative and theoretical properties of matter. Topics include chemical thermodynamics, kinetics, and solutions.

CH 4421/6421. Physical Chemistry Laboratory II. (1) (Prerequisite: CH 4413/6413, CH 4411/6411). Three hours laboratory. Laboratory course to accompany CH 4423/6423.

CH 4423/6423. Physical Chemistry II. (3) (Prerequisites: CH 4413/6413). Three hours lecture. Topics include solid state, surface chemistry, macromolecules, quantum mechanics, spectroscopy, and statistical thermodynamics.

CH 4433/6433. Intermediate Physical Chemistry. (3) (Prerequisite: CH 4423/6423). Three hours lecture. A study of quantum mechanics, molecular spectroscopy, and statistical mechanics.

CH 4511/6511. Organic Chemistry Laboratory I. (1) (Prerequisites: CH 1221 and CH 1223). Three hours laboratory. A laboratory course to accompany CH 4513/6513 for premedical, biological, and chemical engineering students.

CH 4513/6513. Organic Chemistry I. (3) (Prerequisite: CH 1223). Three hours lecture. A systematic study of organic chemistry including aliphatic, aromatic, and heterocyclic compounds for majors in chemistry, chemical engineering, premedical, and biological sciences.

CH 4521/6521. Organic Chemistry Laboratory II. (1) (Prerequisites: CH 4513/6513). Three hours laboratory. A laboratory course to accompany CH 4523/6523 for premedical, biological, and chemical engineering students.

CH 4523/6523. Organic Chemistry II. (3) (Prerequisite: CH 4513/6513). Three hours lecture. A systematic study of organic chemistry including aliphatic, aromatic, and heterocyclic compounds for majors in chemistry, chemical engineering, premedical, and biological sciences.


CH 4544/6544. Qualitative Organic Analysis. (4) (Prerequisite: CH 4523/6523). Two hours lecture. Six hours laboratory. A course designed to develop techniques in the identification of organic compounds.

CH 4603. Undergraduate Research. (3) Nine hours laboratory. Original research project directed by a chemistry faculty member.

CH 4711. Senior Seminar. (1) (Prerequisite: CH 4411 or concurrent enrollment). One hour lecture. Submission of a written report and presentation of a seminar on either experimental results or a literature topic in chemistry.

CH 4990/6990. Special Topics in Chemistry. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CH 7000. Directed Individual Study. Hours and credits to be arranged.

CH 8000. Thesis Research/Thesis. Hours and credits to be arranged.

CH 8711-8741. Seminar. One hour lecture. Reports on recent literature by students and staff. All graduate students in chemistry required to attend.
One credit for each semester’s participation. Up to a total of six credits allowed for Ph.D. candidates, and three for M.S.

**CHE 8990. Special Topics in Chemistry. (1-9)** Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**CHE 9000. Dissertation Research/Dissertation.** Hours and credits to be arranged.

**Analytical Chemistry**

**CHE 8313. Advanced Analytical Chemistry. (3)** (Prerequisite: Consent of instructor). Three hours lecture. Basic principles and problems involved with chemical analysis.

**CHE 8333. Advanced Instrumental Analysis. (3)** (Prerequisite: CH 4353 or consent of instructor). Three hours lecture. Fourier transform and laser methods of spectroscopy, surface analysis, and their application to current analytical problems.

**CHE 8343. Electroanalytical Chemistry. (3)** (Prerequisite: consent of instructor). Three hours lecture. Fundamentals of electrochemistry and application of electrochemical methods to analytical chemistry.

**Inorganic Chemistry**

**CHE 8203. Advanced Inorganic Chemistry II. (3)** (Prerequisite: CH 4213/6213 and CH 4423/6423). Three hours lecture. A systematic study of coordination compounds with emphasis upon the techniques.

**Organic Chemistry**

**CHE 8513. Synthetic Organic Chemistry. (3)** (Prerequisite: 12 credits in organic chemistry). Three hours lecture. The scope and limitations of commonly employed organic preparative methods. New and unusual reagents.


**CHE 8573. Natural Products. (3)** (Prerequisite: 12 credits in organic chemistry). Three hours lecture. A study of the types of compound synthesized in nature. Methods of structure determination.

**Physical Chemistry**

**CHE 8423. Molecular Structure. (3)** (Prerequisites: CH 4423 and MA 3253). Three hours lecture. An introduction to various methods for studying molecular structure. Methods covered include quantum mechanics, statistical mechanics, molecular spectroscopy, and nuclear chemistry.

**CHE 8473. Quantum Chemistry I. (3)** (Prerequisites: PH 4723, MA 3353, MA 4153). Three hours lecture. Schroedinger theory, spherically symmetric systems, metrix mechanics, angular momentum and spin, time-independent perturbation theory.

Dave C. Swalm School of CHEMICAL ENGINEERING

Office: 330 Swalm Chemical Engineering Building

Professors George, Rogers, Schulz, and White (Director); Associate Professors Bricka, Elmore, H. Togniani and R. Togniani; Assistant Professors Hernandez, Hill, Minerick and Walters

**CHE 1101. CHE Freshman Seminar. (1)** One hour lecture. Seminar focused on student and professional development for chemical engineering freshman.

**CHE 1231. Design Concepts for CHE. (3)** One hour lecture. Introduction to principles of chemical engineering design and basic processes for manufacturing chemicals and other processed products. Includes project organization, environment considerations, and ethics.

**CHE 2114. Mass and Energy Balances. (4)** (Prerequisites: CH 1223 and CH 1221). Three hours lecture. Two hours laboratory. Application of systems of units, material balances, heats of reaction, energy balances, and chemical equilibria to typical industrial problems.

**CHE 2213. Chemical Engineering Analysis. (3)** (Prerequisites: MA 1723, credit or registration in CHE 2114). Three hours lecture. An introduction to the analysis of chemical engineering processes using numerical techniques and statistical techniques with the application of modern computational tools available to engineers.

**CHE 2990. Special Topics in Chemical Engineering. (1-9)** Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**CHE 3113. Chemical Engineering Thermodynamics I. (3)** (Prerequisites: CH 1223, MA 2733 and PH 2213, credit or registration in CHE 2114). Three hours lecture. The thermodynamic properties of substances, energy relationships, applications of the first and second law of thermodynamics, flow processes, power cycles, refrigeration and liquefaction.

**CHE 3123. Chemical Engineering Thermodynamics II. (3)** (Prerequisite: MA 2743, PH 2223, C or better in CHE 3113). Three hours lecture. Treatment of non-ideal effects. High pressure behavior of pure substances. Thermodynamics of ideal and non-ideal mixtures, phase equilibria and chemical equilibria.


**CHE 3213. Heat Transfer Operations. (3)** (Prerequisite: CHE 3203; Consent: CHE 3113). Three hours lecture. Fundamentals of heat transfer in chemical engineering processes and process equipment. Special emphasis given to the economics of heat exchanger design and heat recovery.

**CHE 3222. Chemical Engineering Laboratory I. (2)** (Prerequisite: C or better in CHE 3203, C or better in CHE 3213). Four hours laboratory. Experiments in chemical engineering unit operations related to fluid flow and heat transfer. Experimental design/statistical treatment of data. Health/safety concerns in the laboratory.

**CHE 3223. Mass Transfer Operations. (3)** (Prerequisite: CHE 3203; Credit or registration in CHE 3213.) Three hours lecture. Quantitative relationships for equilibrium stage operations such as extraction and distillation. Applications of principles of mass transfer, diffusion, and absorption. Application to equipment design.

**CHE 3323. Chemical Engineering Laboratory II. (2)** (Prerequisites: C or better in CHE 3222, C or better in CHE 3213, C or better in CHE 3232). Four hours laboratory. Experiments in chemical engineering unit operations related to heat transfer, mass transfer, kinetics, and process control. Statistical design of experiments. Instrumentation and data acquisition.


**CHE 3413. Engineering Materials. (3)** (Prerequisites: CH 1223 and PH 2213). Three hours lecture. The physical, chemical, and mechanical properties of engineering materials. The influence of these properties on the behavior of materials that have been placed in service.

**CHE 4000. Directed Individual Study.** Hours and credits to be arranged.

**CHE 4113/6113. Chemical Reactor Design. (3)** (Prerequisites: MA 3253, C or better in CHE 3123). Three hours lecture. The fundamentals of chemical reaction kinetics with applications.

**CHE 4134/6134. Process Design. (4)** (Prerequisite: IE 3193, C or better in CHE 3223, C or better in CHE 3223). Three hours lecture. Two hours laboratory. Design and analysis of chemical and environmental engineering processes utilizing momentum, energy, and mass transport principles.

**CHE 4223/6223. Process Instrumentation and Control. (3)** (Prerequisites: MA 3253, C or better in CHE 3213, C or better in CHE 3233). Three hours lecture. Measurement of process variables; characteristics of control elements; automatic control instruments; dynamic behavior of process equipment; process control systems.

**CHE 4233/6233. Chemical Plant Design. (3)** (Prerequisite: grade of C or better in both CHE 4134 and CHE 4113). Three hours lecture. Application of scientific and engineering principles to the design and economic evaluation of industrial chemical plants.

**CHE 4423/6423. Fundamentals of Industrial Corrosion. (3)** (Prerequisite: CHE 3413). Three hours lecture. Identifying and eliminating the different types of corrosion that lead to the failure of engineering structures.

**CHE 4513/6513. Pulp and Paper Manufacturing Processes. (3)** (Prerequisite: CHE 2114 and consent of instructor). Three hours lecture. A study of pulping and paper making processes with emphasis on application of basic engineering techniques to special problems of pulp and paper industry.

**CHE 4613/6613. Air Pollution Control Design: Theory and Practice. (3)** (Prerequisite: Consent of instructor). Three hours lecture. A study of the unit operations of air pollution control systems with a specific emphasis on air pollution dynamics, equipment design, and equipment operation.

**CHE 4624/6624. Experimental Methods in Materials Research. (4)** (Prerequisite: CHE 3413 or ABE 3813 or ME 3403 or consent of instructor). Three hours lecture. Three hours laboratory. Introduction to research methodologies commonly used in the evaluation of treatments and mechanical testing. (Same as ABE 4624/6624 and ME 4624/6624).

**CHE 4673/6673. Industrial Microbiology. (3)** Three hours lecture. Introduction to microbial anatomy, physiology, and genetics. Use of microorganisms and their by-products. Identification and control of biofuelling.
biocorrosion, and biodegradation of products and processes. (Same as BIO 4673/6673).

CHE 4990/6990. Special Topics in Chemical Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CHE 7000. Directed Individual Study. Hours and credits to be arranged.

CHE 8000. Thesis Research/Thesis. Hours and credits to be arranged.

CHE 8011. Chemical Engineering Seminar. (1) (Prerequisite: Graduate standing). Library assignments and reports on the current chemical engineering literature.

CHE 8113. Advanced Chemical Engineering Thermodynamics. (3) (Prerequisites: CHE 3123 and CHE 4111 or equivalent). Three hours lecture. Advanced study of fundamental laws of thermodynamics as applied to unit operations, non-idea fluids and solids, chemical equilibria, electrochemistry and similar topics.

CHE 8123. Chemical Kinetics and Dynamics. (3) (Prerequisite: consent of instructor). Three hours lecture. Theory and interrelations of phenomenological chemical kinetics and molecular reaction dynamics.


CHE 8990. Special Topics in Chemical Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CHE 9000. Dissertation Research/Dissertation. Hours and credit to be arranged.

COMPUTATIONAL ENGINEERING

Office: 8 Engineering Research Center

Professors: Cinnella, Harden, Horstmeyer, King, Marcum, Moorhead, Novotny, Oppenheimer, D. Reese, and J. Thompson

Associate Professors: Banicescu, L. Bruce, Burgeon, Fowler, Haupt, Janus, Lacy, Newman III, O’Hare, and D.Thompson

Assistant Professors: Fang, Gullett, Luke, Rajendran, Remotigue, Sheng and Wu

CME 2990. Special Topics in Computational Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CME 4000. Directed Individual Study. Hours and credits to be arranged.

CME 4413/6413. Principles and Practice of Computational Field Simulation. (3) (Prerequisite: CME 3413 or senior standing in College of Engineering). Two hours lecture. Two hours laboratory. A broad-based treatment of the principles of computational simulation, with emphasis on applications to realistic engineering problems. Interactive classroom experience coupled with outside projects.

CME 4990/6990. Special Topics in Computational Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CME 7000. Directed Individual Study. Hours and credits to be arranged.

CME 8000. Thesis Research/Thesis. Hours and credits to be arranged.

CME 8113. Computational Geometry. (3) (Prerequisite: consent of instructor). Three hours lecture. Computer aided geometric design techniques and their applications in engineering and general computational field simulation.

CME 8990. Special Topics in Computational Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).


Department of COMMUNICATION

Office: 130 McComas Hall

Anthony, Brown, Defore, J. Durst, W. Durst, Edgerton-Webster, Edmonds, Flick, Forde (head), Fountain, Goodman, Harris, Hill, Huttonstine, Kern, Kleinnmann, Mann, McCormick, McDavid, M. Smith, P. Smith, Ulmer, Walton, Williams

CO 1003. Fundamentals of Public Speaking. (3) Three hours lecture. The psychological processes and adjustments necessary in preparing, organizing, wording, and delivering effective speeches.

CO 1093. Honors Oral Communication. (3) (Prerequisite: Open through invitation only). Three hours lecture. Same as CO 1003. Available only to students in the University Honors Program.

CO 1223. Introduction to Communication Theory. (3) (Prerequisite: CO 1003 or CO 2253). Three hours lecture. A comprehensive introduction to the bases of contemporary communication theory.

CO 1403. Introduction to the Mass Media. (3) Three hours lecture. How American newspapers, magazines, radio, television, and film industries are organized to collect and distribute news, editorial, and entertainment materials.

CO 1423. History of the Mass Media. (3) Three hours lecture. The origin and development of newspapers, magazines, radio, television, and film in America as a means to mass communications.

CO 1503. Introduction to Theater. (3) Three hours lecture. A comprehensive view of the theater, including plays, playwrights, directing, acting, and technicians.

CO 1533. Theater Practicum #3. (3) Nine hours laboratory. Preparation for and participation in department production activities.

CO 1543. Theater Practicum #4. (3) Nine hours laboratory. Preparation for and participation in department production activities.

CO 1553. Theater Practicum #5. (3) Nine hours laboratory. Preparation for and participation in department production activities.

CO 1563. Theater Practicum #6. (3) Nine hours laboratory. Preparation for and participation in department production activities.

CO 1903. Introduction to Cinema. (3) Three hours lecture. A multi disciplinary study of the film, with emphasis on linguistics, psychological, philosophical, and general intellectual aspects.


CO 2213. Small Group Communication. (3) (Prerequisite: CO 1003 or junior standing). Three hours lecture. A study of the problems and techniques of participation in and leadership of small groups.

CO 2253. Fundamentals of Interpersonal Communication. (3) Three hours lecture. Emphasis on two-person interactions to increase student’s understanding and appreciation of communication principles.

CO 2333. Television Production. (3) (Prerequisite: CO 1403). Two hours lecture. Two hours laboratory. Elementary principles, practices of television production in varied program formats.

CO 2343. Writing for Radio, Television, and Film. (3) (Prerequisite: CO 1403). Three hours lecture. Study and practice of the principles and techniques of documentary and dramatic script writing.

CO 2413. Introduction to News Writing and Reporting. (3) (Prerequisite: CO 1403, two semesters composition, and ability to type). Three hours lecture. Practice in writing simple news stories and the place of the reporter in the news-gathering organization.

CO 2423. News Editing, Typography, and Makeup. (3) (Prerequisite: CO 2413). Three hours lecture. Editing newspaper copy, writing headlines, and using type and pictures in makeup of newspaper pages.


CO 2524. Stagecraft and Lighting. (4) (Prerequisite: CO 1503). Three hours lecture. Forty hours work on a major production. Theory and practice of set construction, scene design and stage lighting and its application to theater production.

CO 2574. Summer Theater Workshop. (4) Three hours lecture. Two hours laboratory. Daily observation and practice of acting and technical work in preparation of a production. May be repeated one semester.

CO 2613. Introduction to Oral Interpretation. (3) (Prerequisite: CO 1503). Three hours lecture. Basic principles of comprehending and communicating literature to a listening audience.

CO 2990. Special Topics in Communications. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CO 3203. Communication and Group Leadership. (3) (Prerequisite: CO 2213). Three hours lecture. A study of communication as related to the functions and styles of group leadership.

CO 3293. Corporate Communication. (3) (Prerequisite: Junior standing). Study of applied communication techniques related to the development and proficiency of oral corporate communication skills.


CO 3333. Advanced Television Production. (3) (Prerequisite: CO 2333). Three hours lecture. Two hours laboratory. Advanced principles, techniques of producing and directing television programs.

CO 3403. Introduction to Photography as Communication. (3) Three hours lecture. Study and practice of fundamentals of photography as a communicative art.

CO 3423. Feature Writing. (3) (Prerequisite: CO 2413). Three hours lecture. Feature markets and practice in preparing and writing features for newspapers and magazines.

CO 3443. Advanced News Writing and Reporting. (3) (Prerequisite: CO 2423). Three hours lecture. Practice in writing more complex news stories and the responsibilities of the reporter in news gathering and writing.

CO 3803. Principles of Public Relations. (3) (Prerequisite: CO 1403 or consent of instructor). Three hours lecture. The role and origin of public relations in society, the identification and influence of publics, and applications of public relations principles to campaigns and organizations.

CO 3813. Public Relations Case Problems. (3) (Prerequisite: CO 3803). Three hours lecture. The written analysis, presentation, and group discussion of specific and hypothetical cases using public relations theory as a base.

CO 3823. Public Relations Copy and Layout. (3) (Prerequisites: CO 2413 and CO 3803). Three hours lecture. Practice of written communication skills in public relations. Includes experience in writing and producing news releases, brochures, speeches and other devices.

CO 3833. Interviewing in Communication. (3) (Prerequisite: CO 1223). Three hours lecture. The communicative processes and adjustments necessary in preparing, organizing, wording, and participating in various types of interviews from the interviewer and the interviewee perspectives.

CO 3843. Media Relations. (3) (Prerequisite: CO 3833). Three hours lecture. Study of interviewing and communication skills for reporters and the issues, problems, and strategies employed by interviewees related to radio, television, and print interviews.

CO 3903. Advanced Cinema Studies. (3) (Prerequisite: CO 1903 or EN 2434). Three hours lecture. A study of the forms, styles, and criticism of cinema.

CO 4000. Directed Individual Study. Hours and credits to be arranged.

CO 4053/6053. Internship in Communication. (3) (Prerequisites: CO 2323 or CO 2333 for Radio/TV students or Communication majors only). Supervised work in production, sales or related fields for radio/TV students or in newspaper or magazine writing, editing or photography for journalism studies.

CO 4203/6203. Nonverbal Communication. (3) (Prerequisite: CO 1223 or PSY 1013). Three hours lecture. Study of nonverbal cues as they affect the communication interface in numerous contexts including social events, political campaigns, and dramatic productions.

CO 4213/6213. Political Communication. (3) (Prerequisite: CO 1223). Three hours lecture. Analysis and evaluation of the verbal and non-verbal dimensions of political communication in the United States since 1609.


CO 4243/6243. Rhetorical Theory. (3) (Prerequisite: CO 1223). Three hours lecture. Survey and criticism of the theories of public speaking found in the works of Plato, Aristotle, Cicero, Quintilian, and St. Augustine.

CO 4253/6253. Elements of Persuasion. (3) (Prerequisite: CO 1223). Three hours lecture. A study of the motivation of audiences and techniques of persuasive campaigns and communications.

CO 4273/6273. Intercultural Communication. (3) (Prerequisite: CO 1223 and senior standing). Three hours lecture. A study of how communication behaviors differ between cultures. Frameworks for studying intercultural communication will be provided by studying one specific culture.

CO 4313/6313. Mass Media Law. (3) (Prerequisite: Junior standing). Three hours lecture. Study and analysis of laws and regulations significantly affecting newspapers, magazines, motion pictures, and broadcasting in America.

CO 4323/6323. Mass Media and Society. (3) (Prerequisite: Junior standing). Three hours lecture. The effects of mass communication on social and cultural institutions.

CO 4373/6373. Practicum in Television News. (3) (Prerequisites: CO 2333, 15 additional hours of CO courses and consent of the instructor). Two hours lecture, two hours laboratory. Theory and practice of producing a television news program.

CO 4403/6403. Journalism Ethics. (3) (Prerequisite: CO 2413). Three hours lecture. Examination of ethical problems in contemporary journalism.

CO 4504/6504. History of the Theater. (4) (Prerequisite: Junior standing). Four hours lecture. A survey of the theater with emphasis on the physical structure, production problems and theatrical personalities.

CO 4524/6524. Directing. (4) (Prerequisite: CO 2524 and junior or senior standing). Three hours lecture. Two hours laboratory. Evaluation of dramatic styles and analysis of stage composition. Supervised hours in actual directing experience.

CO 4533/6533. Advanced Acting. (3) (Prerequisite: CO 2503). Three hours lecture. Intensive study of the theories and techniques of acting in the various dramatic styles.

CO 4573/6573. Theater Management. (3) (Prerequisite: Junior standing). Two hours lecture. Two hours laboratory. Business organization and management for the educational (secondary and university), community, and professional theater, including budgeting, publicity, public relations and box office principles.

CO 4583/6583. Playwriting. (3) (Prerequisite: Completion of freshman composition and CO 1503). Three hours lecture. Practice in the fundamentals of dramatic composition. Reading, discussion, and analysis of written work.

CO 4803/6803. Research in Public Relations and Advertising. (3) (Prerequisite: CO 3803 or MKT 3013 or consent of instructor, or graduate standing). Three hours lecture. Theory and practice of primary and secondary research methods in public relations and advertising, including qualitative and quantitative methods and uses of new technologies.

CO 4813/6813. Public Relations in Organizations. (3) (Prerequisites: CO 3813, CO 4253/6253). Three hours lecture. Studies in using various communication techniques for image building and campaign development for profit and non-profit organizations.

CO 4990/6990. Special Topics in Communications. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CO 7000. Directed Individual Study. Hours and credit to be arranged.

CO 8000. Thesis Research/Thesis. Hours and credit to be arranged.

CO 8213. Seminar in Communication Theory. (3) (Prerequisite: CO 4223/6223). Analysis of intra personal, interpersonal, and mass communication variables. In-depth comparative study of the scientific and theoretical models for understanding communication processes and effects.

CO 8253. Seminar in Persuasion. (3) (Prerequisite: CO 4253/6253 or equivalent). Theoretical and research literature in attitude formation and change through communication.

CO 8990. Special Topics in Communications. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).
DEPARTMENT OF COUNSELOR EDUCATION, EDUCATIONAL PSYCHOLOGY & SPECIAL EDUCATION

Office: 508 Allen Hall
Head and Major Advisor: Thomas W. Hosie
Professors: Dooley, Hendren, Houseley, Underwood; Associate Professors: Palmer, Young; Assistant Professors: Sheperis, Hermann, Callais

NOTE: Several courses in Counselor Education are open to advanced undergraduates, but the courses are designed primarily as graduate work.

COE 1323. Career Planning. (3) Three hours lecture. Provides students with a basis for making career decisions and selecting an academic major.

COE 2990. Special Topics in Counselor Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

COE 3313. Rehabilitation Services. (3) Three hours lecture. Concepts, philosophies, and methods of rehabilitation services for physically, emotionally, or mentally disabled people.

COE 4013/6013. Facilitative Skills Development. (3) Three hours lecture. Introduction to the theory and practice of helping with emphasis on the development of basic communication skills. Applicable to a variety of settings.

COE 4023/6023. Introduction to Counseling. (3) Three hours lecture. Overview of counseling as a profession including specialty areas. Theories and techniques used in counseling. This course is not for Counselor Education majors.

COE 4050/6050. Seminar for Guidance Counselors. (1-6) Three hours lecture. Hours to be arranged. A study of current issues and trends in the field of guidance.

COE 4303/6303. Rehabilitation of Visually Impaired Persons. (3) Three hours lecture. Special issues and procedures related to vocational rehabilitation of persons with visual impairments.

COE 4353/6353. Assistive Technology in the Rehabilitation Process. (3) (Prerequisites: Undergraduates: COE 3313. Graduates: COE 6393, COE 8373 or permission of the instructor). Three hours lecture. Diverse applications of technologies are reviewed for potential impact with all forms of disability. Examines various roles played by technology in total rehabilitation process.

COE 4363/6363. Introduction to Sign Language. (3) Development of basic sign language skills, study of special needs of deaf persons, and understanding use of interpreters. (Same as EDX 4953/6953).

COE 4513/6513. Paraprofessionals in Student Affairs. (3) (Prerequisite: Consent of instructor). Three hours lecture. Fundamental concepts and philosophies underlying the paraprofessional's role in college student affairs. Includes supervised and paraprofessional experience.

COE 4713/6713. Issues in Aging. (3) Three hours lecture. An examination and integration of gerontological issues related to mental health of the elderly.

COE 4723/6723. Group Dynamics. (3) Three hours lecture. Experience and instruction in the dynamics of group counseling.

COE 4743/6743. Gender Issues in Counseling. (3) Three hours lecture. Overview of gender issues and their relationship to the counseling process.

COE 4903/6903. Developmental Counseling and Mental Health. (3) Three hours lecture. One hour laboratory. Methods of identifying and meeting normal emotional and social needs of children and adults. Emphasis on maintaining better mental health conditions in schools.

COE 4990/6990. Special Topics in Counselor Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

COE 6313. Resources for Visually Impaired Persons. (3) Three hours lecture. Survey of issues, techniques, and resources for independent living, orientation and mobility, and communication of visually impaired persons.

COE 6373. Vocational Assessment of Special Needs Persons. (3) (Prerequisite: EPY 8263 or equivalent). Two hours lecture. Two hours laboratory. Comprehensive vocational assessment, counseling, and individual planning for special needs persons. Job training analysis, vocational interest/aptitude tests, work samples, and situational assessment. (Same as TKT 8653).

COE 6383. Work Samples in Vocational Assessment. (3) (Prerequisites: CO 8083 or equivalent; and CO 6373 or consent of instructor). Two hours lecture and two hours laboratory. Administration scoring, and interpretation of commercial work samples systems in vocational assessment to include: VALPAR, SINGER, JEVS McCarron-Dial. Development of job simulations and work samples. (Same as EDX 8663).

COE 7000. Directed Individual Study. Hours and credits to be arranged.

COE 8000. Thesis Research/Thesis. Hours and credits to be arranged.

COE 8013. Counseling Skills Development. (3) (Prerequisite: COE 6013 and COE 8023). Three hours lecture. Theory and practice of counseling with emphasis on development of advanced skills required for assisting clients.

COE 8023. Counseling Theory. (3) Three hours lecture. Study of the major counseling theories.

COE 8043. Group Techniques and Procedures. (3) (Prerequisite: COE 8023). Three hours lecture. Group counseling theory, dynamics, processes, and leadership functions.

COE 8053. Practicum. (3) (Prerequisites: COE 8013, 8023, and consent of department). Seminar and supervised field experience.

COE 8063. Research Techniques for Counselors. (3) Three hours lecture. Methods of research and evaluation in counseling.

COE 8073. Cultural Foundations in Counseling. (3) Three hours lecture. Examination of individual differences due to socialization acquired in distinct cultural and socioeconomic environments. Implications for counseling.

COE 8093. Seminar in Counseling. (3) (Prerequisite: COE 8023 or equivalent). Seminar in counseling trends and approaches with application to various settings and problems.

COE 8150. Academic School Year Field Experience Semester I - Practicum. (1-9) (Prerequisites: COE 8043, COE 8083 and EPY 8263). First semester of the supervised academic year field experience in school counseling. (Variable credit)

COE 8163. Spirituality in Counseling. (3) Three hours lecture. Didactic instruction of developmental models and clinical interventions related to the interface of spirituality and counseling.

COE 8173. Counseling Gifted Students. (3) Three hours lecture. Counseling functions that relate to the total development of gifted students. Directed Individual Study and utilization of resources necessary for optimal growth.

COE 8183. Utilizing Art and Art Therapy in Counseling. (3) Three hours lecture. Didactic instruction of development models, theoretical approaches and practical intervention related to the interface of creative arts and counseling practice.

COE 8203. Placement and Career Development Counseling. (3) Three hours lecture. Studies of career development and academic/job placement; occupational classification schemes; trends in the world of work; counseling and utilizing career information in counseling.

COE 8293. Supervised Project. (3) (Prerequisite: Consent of department). Study of a topic in counseling or student development.

COE 8303. Family Counseling Theory. (3) (Prerequisite: COE 8023). Three hours lecture. Study of the theory and practice of family counseling.

COE 8353. Vocational Rehabilitation Counseling. (3) Three hours lecture. Rehabilitation legislation and the rehabilitation counseling process.


COE 8393. Advanced Practicum. (3) (Prerequisite: COE 8053 and consent of department). Advanced supervised field experience.

COE 8413. Personal, Social, and Work Adjustment Counseling. (3) Two hours lecture. Two hours laboratory. Personal, social, work adjustment counseling and employability skills training for disabled persons and others with special needs. Includes individual, group, and situational techniques. (Same as EDX 8413 and TKT 8413).

COE 8553. Student Affairs in Higher Education. (3) Three hours lecture. Overview of student development programs in higher education. Emphasis on philosophical foundations, organization, and the role of each service within a student development program.

COE 8553. Student Development Theory. (3) Three hours lecture. Overview of theories of student development in higher education.

COE 8553. Literature of Student Affairs. (3) Three hours lecture. Provides an overview of student affairs in higher education through extensive reading in the field and individual study of specific aspects.

COE 8543. Legal Issues. (3) Three hours lecture. Legal and ethical issues in student affairs and counseling.
COE 8573. College Counseling Services. (3) Three hours lecture. Counseling, prevention and student development services on the university and community college campuses.

COE 8623. Advanced and Ethical Issues in Counseling. (3) Three hours lecture. Advanced study of professional, legal, and ethical issues in counseling.

COE 8633. Psychosocial Rehabilitation. (3) Three hours lecture. Counseling techniques that assist in the community adjustment of seriously mentally ill clients.


COE 8730. Internship. (1-9) (Prerequisite: COE 8053.) Supervised field experience.

COE 8740. Academic Year Field Experience Semester II - Internship. (1-9) (Prerequisite: COE 8150 or its equivalent). Second semester of the supervised academic year field experience in school counseling. (Variable credit)

COE 8750. Internship. (1-9) (Prerequisite: Consent of department). Supervised field experience for Ed.S students.

COE 8763 Counseling the Sexually Abused Client. (3) (Prerequisite: COE 8023). Three hours lecture. Diagnosis and treatment of persons who have been sexually abused.

COE 8773. Counseling Chemically Dependent Client. (3) Three hours lecture. Information about the etiology, diagnosis, and treatment of chemical dependence.

COE 8783. Counseling the Chemically Dependent Family. (3) (Prerequisite: COE 8773.) Three hours lecture. Provide information on the effects of chemical dependence on the family and counseling programs for this disorder.

COE 8813. Counseling Elderly Clients. (3) Three hours lecture. Concepts, attitudes, and skills needed to provide counseling for elderly clients.

COE 8903. School Counseling Services. (3) Three hours lecture. Overview of a comprehensive school counseling program.

COE 8913. Counseling Children. (3) Three hours lecture. Didactic instruction and discussion of counseling techniques useful in community and school settings to work with early school-aged children.

COE 8990. Special Topics in Counselor Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

COE 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

COE 9013. Counseling Supervision. (3) (Prerequisite: COE 8730 and 8013). Three hours lecture. Theory and practice of providing counseling supervision for practicing counselors and student development professionals.


COE 9033. Advanced Seminar. (3) Three hours lecture. Advanced study of a topic in counseling.

COE 9043. Advanced Group Work and Systems. (3) (Prerequisites: COE 8023, COE 8013, COE 8043, and Educational Specialist or Doctoral standing, or consent of instructor). One hour lecture. Four hours laboratory. Advanced studies in group counseling theory, systems theory, group leadership, and standards of training and practice for group workers.

COE 9053. Advanced Multicultural Counseling. (3) (Prerequisites: COE 8013, COE 8023, COE 8043, COE 8053, COE 8063 or an equivalent course, COE 8073 or an equivalent course, OE 8730, and Educational Specialist or Doctoral standing or consent of instructor). Three hours lecture. The course emphasizes advanced multicultural knowledge, skill development, and research competencies for counselors.

COE 9083. Advanced Assessment Techniques for Counseling. (3) (Prerequisites: COE 8063 and EPY 8124 or equivalent courses; Educational Specialist or Doctoral standing or consent of instructor). Three hours lecture. Advanced knowledge, skill and practice in selecting, administering, scoring, and interpreting personality, behavioral, career, and family assessments.

COE 9740. Advanced Doctoral Practicum. (1-9) (Prerequisite: Consent of department). First supervised field experience for doctoral students.

COE 9750. Internship. (1-9) (Prerequisite: Consent of department). Second supervised field experience for doctoral students.

CRIMINAL JUSTICE and CORRECTIONS

Office: 207 Bowen Hall
Professors Dunaway and Wood; Associate Professor Unnever; Assistant Professor Rader

COR 2990. Special Topics in Corrections. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

COR 3103. The Criminal Justice System. (3) (Prerequisites: Six hours of social sciences and consent of instructor). Three hours lecture. The interrelationships of law enforcement, prosecution, and the courts, particularly how each affects the correctional process.

COR 3310. Field Work. (1-6) (Prerequisites: SO 4513). One to six hours practicum within selected Corrections agencies, individually supervised performance and self-development in relation to clients, agency workers, and provisions of Correctional services.

COR 3343. Gender, Crime, and Justice. (3) Three hours lecture. Gender differences in criminal behavior, victimization, and criminal justice processing, emphasizing the unique experiences of women in all of these areas. (Same as SO 3343).

COR 3320. Field Work. (1-6) (Prerequisites: COR 3310). One to six hours practicum within selected Corrections agencies, individually supervised performance and self-development in relation to clients, agency workers, and provisions of Correctional services.

COR 3503. Violence in the United States. (3) Three hours lecture. In-depth study of violence, including types of violence, categories of offenders and victims, it social causes and potential solutions. (Same as SO 3503).

COR 4000. Directed Individual Study. Hours and credits to be arranged.

COR 4233/6233. Juvenile Delinquency. (3) (Prerequisites: Six hours of Sociology or related courses and consent of instructor). Three hours lecture. Critical study of problems, causes, ways of handling; attitudes, roles and relationships of persons involved, including youthful offender, social worker, court and law enforcement officials. (Same as SO 4233/6233).

COR 4990/6990. Special Topics in Corrections. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

COOPERATIVE EDUCATION PROGRAM

Office: 222 Walker Engineering Building
Director: Luther B. Epiting, Associate Director: John Michael Mathews, Assistant Director: Beth C. Callahan, Coordinators: Becky Davis, Mary Loyd Lowrey

CP 2103. First Work Semester. (3) (Prerequisite: Approval of the Cooperative Education Office, acceptance by employing organization, and admission to the University).

CP 2203. Second Work Semester. (3) (Prerequisite: CP 2103).

CP 3303. Third Work Semester. (3) (Prerequisite: CP 2203).

CP 3403. Fourth Work Semester. (3) (Prerequisite: CP 3303).

CP 4503. Fifth Work Semester. (3) (Prerequisite: CP 4503).

CP 4603. Sixth Work Semester. (3) (Prerequisite: CP 4503).

CP 4703. Seventh Work Semester. (3) (Prerequisite: CP 4603).

CP 4803. Eighth Work Semester. (3) (Prerequisite: CP 4703).

CP 8013. First Work Semester. (3) (Prerequisite: Approval of the Cooperative Education Office, acceptance by employing organization, and admission to the University and Graduate School).

CP 8023. Second Work Semester. (3) (Prerequisite: CP 8013).

CP 8033. Third Work Semester. (3) (Prerequisite: CP 8023).

CP 8043. Fourth Work Semester. (3) (Prerequisite: CP 8033).

CP 8053. Fifth Work Semester. (3) (Prerequisite: CP 8043).
CSE 1213. Computer Programming with Fortran. (3) (Prerequisite: MA 1313 or equivalent). Three hours lecture. Problem solving methods, algorithm development, debugging and documentation in the Fortran programming language; applications. (Not recommended to students with credit in CSE 1233 or CSE 1253 or equivalent).

CSE 1233. Computer Programming with C. (3) (Prerequisite: MA 1313 or equivalent). Three hours lecture. Problem-solving methods, algorithm development, debugging and documentation in the C Programming language; applications. (Not recommended to students with credit in CSE 1213 or CSE 1253 or equivalent).

CSE 1273. Computer Programming with Java. (3) (Prerequisite: MA 1313 or equivalent). Three hours lecture. Problem-solving methods, algorithm development, debugging and documentation in the Java programming language; applications. (Not recommended to students with credit in CSE 1213 or CSE 1253 or equivalent).


CSE 1384. Intermediate Computer Programming. (4) (Prerequisite: CSE 1264 with a grade of C or better). Three hours lecture. Three hours laboratory. Object-oriented problem solving, design, and programming. Introduction to data structures, algorithm design and complexity. Second course in sequence designed for CSE, CPE and CE majors.

CSE 2383. Data Structures and Analysis of Algorithms. (3) (Prerequisite: CSE 1384 and MA 1713 both with a grade of C or better). Three hours lecture. Non-linear data structures and their associated algorithms. Trees, graphs, hash tables, relational data model, file organization. Advanced software design and development.

CSE 2813. Discrete Structures. (3) (Prerequisite: CSE 1284 with a grade of C or better and MA 1313 or equivalent). Three hours lecture. Concepts of algorithms, induction, recursion, proofs; topics from logic, set theory, combinatorics, graph theory fundamental to study of computer science.

CSE 2990. Special Topics in Computer Science. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CSE 3183. Systems Programming. (3) (Prerequisite: CSE 2383 with a grade of C or better). Three hours lecture. Overview of contemporary systems programming concepts, tools, and techniques. Shell programming, systems administration tools, distributed systems, and Internet concepts.

CSE 3213. Software Engineering Senior Project I. (3) (Prerequisite: CSE 4214 with grade of C or better). Six hours laboratory. Software requirements elicitation and specification, cost estimation, scheduling, development of project management and quality assurance plans, reviews.

CSE 3223. Software Engineering Senior Project II. (3) (Prerequisite: CSE 4214 with grade of C or better). Six hours laboratory. Team work, software design, construction, implementation of project management and quality assurance plans, and configuration management.

CSE 3324. Distributed Client/Server Programming. (4) (Prerequisite: CSE 2383 with a grade of C or better). Three hours of lecture. Three hours laboratory. Design of software systems for use in distributed environments. Client/Server models, multi-threaded programming, server-side web programming, graphical user interfaces; group projects involving client/server systems.

CSE 3813. Introduction To Formal Languages and Automata. (3) (Prerequisite: CSE 3813 or CSE 2813, both with a grade of C or better). Three hours lecture. The theoretical foundations of computer science: formal languages and automata, parsing of context-free languages; Turing machines; introduction to computability and complexity.

CSE 3981. Social and Ethical Issues in Computing. (1) (Prerequisite: Senior standing.) One hour lecture. Study of major social and ethical issues in computing, including history of computing, impact of computers on society, and the computer professional’s code of ethics.

CSE 4000. Directed Individual Study. Hours and credits to be arranged.

CSE 4153/6153. Data Communications and Computer Networks. (3) (Prerequisites: CSE 1384 or ECE 3712, and ECE 3724, both with a grade of C or better). Three hours lecture. The concepts and practices of data communications and networking to provide the student with an understanding of the hardware and software used for data communications. (Same as ECE 4833/6833).

CSE 4163/6163. Designing Parallel Algorithms. (3) (Prerequisites: CSE 1264 or CSE 4733/6733 with a grade of C or better). Three hours lecture. Techniques for designing algorithms to take advantage efficiently of different parallel architectures. Includes techniques for parallelizing sequential algorithms and techniques for matching algorithms to architectures.

CSE 4214/6214. Introduction to Software Engineering. (4) (Prerequisite: CSE 2383 with a grade of C or better). Three hours lecture. Two hours laboratory. Introduction to software engineering: planning, requirements analysis and specification, design; testing; debugging; maintenance; documentation. Alternative design methods, software metrics, software project management, reuse and reengineering.

CSE 4233/6233. Software Architecture and Design Paradigms. (3) (Prerequisite: CSE 4214/6214 with a C or better). Three hours lecture. Topics include software architectures, methodologies, model representations, component-based design, patterns, frameworks, CASE-based designs, and case studies.

CSE 4243/6243. Information and Computer Security. (3) (Prerequisite: CSE 4733/6733 with a grade of C or better). Three hours lecture. Topics include techniques and systems, operating system security, database security, network security, electronic commerce, system threats, and risk avoidance procedures.


CSE 4283/6283. Software Testing and Quality Assurance. (3) (Prerequisite: CSE 4214/6214 with a grade of C or better). Three hours lecture. Topics include methods of testing, verification and validation, quality assurance processes and techniques, methods and types of testing, and ISO 9000/SEI CMM process evaluations.

CSE 4413/6413. Principles of Computer Graphics. (3) (Prerequisites: CSE 2383 with a grade of C or better and MA 3113). Three hours lecture. Graphics hardware; algorithms; graphics primitives; windowing and clipping; transformations; 3D graphics; shading; hidden surfaces; standards.

CSE 4503/6503. Database Management Systems. (3) (Prerequisites: CSE 2383 and CSE 2813, both with a grade of C or better). Three hours lecture. Modern database models; basic database management concepts; query languages; database design through normalization; advanced database models; extensive database development experience in a team environment.

CSE 4633/6633. Artificial Intelligence. (3) (Prerequisite: CSE 2383 and CSE 2813 with a grade of C or better). Three hours lecture. Study of the computer in context with human thought processes. Heuristic programming; search strategies; knowledge representation; natural language understanding; perception; learning.

CSE 4653/6653. Cognitive Science. (3) (Prerequisite: CSE 4633/6633 or PSY 4713 or PHI 4143/6143 or AN 4623/6623 or EN 4403/6403). Three hours lecture. The nature of human cognition from an interdisciplinary perspective, primarily utilizing a computational model, including insights from philosophy, psychology, linguistics, artificial intelligence, anthropology, and neuroscience. (Same as PSY 4653/6653).

CSE 4663/6663. Human-Computer Interaction. (3) (Prerequisite: CSE 3813 for Computer Science majors with a grade of C or better, consent of instructor for non-majors). Three hours lecture. Conceptual models formed by oracles, aspects of computing which affect interaction, interface design and evaluation, and examples and critiques of specific interfaces.

CSE 4673/6673. Psychology of Human-Computer Interaction. (3) (Prerequisites: PSY 3713 or CSE 4663/6663 or IE 4113/6113 or consent of the instructor). Two hours lecture. Two hours laboratory. Exploration of psychological factors that interact with computer interface usability. Interface design techniques and usability evaluation methods are emphasized. (Same as IE 4123/6123 and PSY 4743/6743).

CSE 4713/6713. Programming Languages. (3) (Prerequisites: ECE 3724 and CSE 3813, both with a grade of C or better). Three hours lecture. An introduction to programming language specification and analysis. Additional topics include control structures, data types and structures, run-time environments, binding strategies, compilers, and interpreters.

CSE 4723/6723. Compiler Construction. (3) (Prerequisite: Credit or registration in CSE 4713/6713). Formal treatment of context-free program-
CSE 4733/6733. Operating Systems I. (3) (Prerequisites: CSE 2383 and ECE 3724, both with a grade of C or better). Three hours lecture. Histori-cal development of operating systems to control complex computing systems; process management, communication, scheduling techniques; file system concepts and operation; data communication, distributed process manage-ment.

CSE 4743/6743. Operating Systems II. (3) (Prerequisites: CSE 4733/6733 with a grade of C or better). Three hours lecture. Integrated treat-ment of hardware and software concepts in operating systems design; pro-cedure implementation; creation and control of processes; name and space management.

CSE 4833/6833. Introduction to Analysis of Algorithms. (3) (Prerequisi-tes: CSE 2383, CSE 2813, and MA 2723, all with a grade of C or better). Three hours lecture. Study of complexity of algorithms and algorithm design. Tools for analyzing efficiency; design of algorithms, including recurrence, divide-and-conquer, dynamic programming, and greedy algorithms.

CSE 4990/6990. Special Topics in Computer Science. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer devel-oping subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CSE 7000. Directed Individual Study. Hours and credits to be ar-ranged.

CSE 8000. Thesis Research/Thesis. Hours and credits to be arranged.

CSE 8011. Seminar. (1) One hour. Reports on recent advances and prob-lems in computer science by guest speakers, faculty and students; student partici-pation, general discussion.

CSE 8080. Directed Project in Computer Science. (1-3) Hours and credits to be arranged. An individual professional project open only to can-didates for the Master of Science degree (project option). Formal written and oral project reports are required.

CSE 8153. Advanced Data Communications. (3) (Prerequisite: CSE 4153/6153 or equivalent). Three hours lecture. A study of advanced concepts and practices of data communications with particular emphasis on Local Area Networks and Transmission Control Protocol/Internet Protocol (TCP/IP).


CSE 8243. Software Specification. (3) (Prerequisite: CSE 4214/6214). Three hours lecture. Writing software specifications, transforming specifications into code, and verifying transformations using formal methods.

CSE 8253. Software Design. (3) (Prerequisite: CSE 4214/6214). Three hours lecture. Software design principles, attributes, models, and methodolo-gies; object-oriented designs; real-time system design; user interface design; design verification; reusability issues; tools; current issues.

CSE 8263. Software Verification and Validation. (3) (Prerequisites: CSE 3813 and either CSE 4214/6214 or CSE 8253). Three hours lecture. The theory and practice of ensuring high-quality software products, including quality assessment, proof of correctness, testing, and verification and validation methodology.

CSE 8273. Software Requirements Engineering. (3) (Prerequisites: CSE 4214/6214 with a grade of C or better). Three hours lecture. An in-depth study of current research and practice in requirements elicitation, require-ments analysis, requirements specification, requirements verification and validation, and requirements management.

CSE 8413. Visualization. (3) (Prerequisite: CSE 4413/6413). Three hours lecture. Essential algorithms for three-dimensional rendering and mod-eling techniques; viewing transformations, illumination, surface modeling; methodologies for visualization of scalar and vector fields in three dimen-sions.

CSE 8433. Advanced Computer Graphics. (3) (Prerequisites: CSE 4413/6413). Three hours lecture. Realistic, three-dimensional image genera-tion; modeling techniques for complex three-dimensional scenes; advanced illumination techniques; fractal surface modeling; modeling and rendering of natural phenomena.

CSE 8533. Database System Design. (3) (Prerequisite: CSE 4504/6504). Three hours lecture. Query processing; transactions and concurrency control; crash recovery; distributed database issues; security and integrity; contempor-ary research issues.

CSE 8543. Current Issues in Database Systems. (3) (Prerequisites: CSE 4504/6504). Three hours lecture. Extensive reading and discussion; ad-vanced data models; query languages; cooperative databases; data mining; data warehousing; user interfaces; web databases.

CSE 8613. Cognitive Models of Skill. (3) (Prerequisite: Graduate stand-ing). Three hours lecture. Introduction to cognitive modeling, with a focus on computational models of skill acquisition and expert skill (Same as PSY 8723).

CSE 8633. Natural Language Processing. (3) (Prerequisite: CSE 4633/6633). Three hours lecture. Automated processing of natural language including syntax, semantics, pragmatics, and disclosure analysis; survey of current literature.

CSE 8663. Neural Computing. (3) (Prerequisite: CSE 4633/6633). Three hours lecture. Introduction to non-traditional methods of simulating human cognitive processes on the computer. Discussions of connectionism, neural networks, and other models of cognition such as cellular automata.

CSE 8673. Machine Learning. (3) (Prerequisite: CSE 4633/6633). Three hours lecture. Introduction to machine learning, including computa-tional learning theory, major approaches to machine learning, evaluation of models, and current research.

CSE 8733. Advanced Systems Programming. (3) (Prerequisite: CSE 4733/6733). Three hours lecture. Concepts of multi-programming, multi-pro-cessing, time-sharing; topics to include interruptibility, priority scheduling, error recovery procedures, storage management, input-output.

CSE 8813. Formal Languages and Automata Theory. (3) (Prere-qusite: CSE 3813). Three hours lecture. Alphabetets, languages, grammars; finite state machines, regular grammars; pushdown automata, context-free languages; linear bounded automata, context-sensitive languages; Turing ma-chines; unsolvability; closure properties of languages.

CSE 8823. Introduction to Combinatorics and Graph Theory. (3) (Prerequisites: CSE 3813, and MA 1723 or consent of instructor). Three hours lecture. Permutations, combinations, generating functions, recurrence relations, inclusion and exclusion, graphs, trees, circuits and cutsets, planar and dual graphs, special topics.

CSE 8833. Algorithms. (3) (Prerequisites: CSE 4833/6833). Three hours lecture. Advanced techniques for designing and analyzing algorithms; advanced data structures; case studies, NP-completeness including reduc-tions; approximation algorithms.


CSE 8890. Special Topics in Computer Science. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CSE 9000. Dissertation Research and Dissertation. Hours and credits to be arranged.

CSE 9133. Topics in High Performance Computing. (3) (Prerequisite: Consent of Instructor). Three hours lecture. Reading and study of current work related to the area of high performance computing. Intended for doc-toral students. (May be taken for credit more than once).

CSE 9253. Topics in Software Engineering. (3) (Prerequisite: Consent of instructor.) Three hours lecture. Reading and study of current work related to the area of software engineering. Intended for doctoral students. (May be taken for credit more than once.)

CSE 9413. Topics in Computer Graphics and Visualization. (3) (Prer-equisite: Consent of instructor). Three hours lecture. Reading and study of current work related to the area of computer graphics and visualization. Intended for doctoral students. (May be taken for credit more than once.)

CSE 9633. Topics in Artificial Intelligence. (3) (Prerequisite: Consent of instructor). Three hours lecture. Reading and study of current work related to the area of artificial intelligence. Intended for doctoral students. (May be taken for credit more than once.)
**CVM 2114. Small Animal Medical Techniques.** (4) Four hours practicum. Supervised rotation through the Medical Service of the Small Animal Clinic. Students participate in all technical aspects of patient diagnosis and care. (Offered to students enrolled in the Veterinary Technology Program ONLY).

**CVM 2124. Equine Medical Techniques.** (4) Four hours practicum. Supervised rotation through the Equine section of the Large Animal Clinic. Students participate in all technical aspects of patient diagnosis and care. (Offered to students enrolled in the Veterinary Technology Program ONLY).

**CVM 2134. Food Animal Medical Techniques.** (4) Four hours practicum. Supervised rotation through the Food Animal Unit of the Large Animal Clinic. Students participate in all technical aspects of food animal diagnosis, herd health assessment and management. (Offered to students in the Veterinary Technology Program ONLY).

**CVM 2144. Surgical Techniques.** (4) Four hours practicum. Supervised rotation through the Surgical Service of the Animal Health Center. Students participate in all technical aspects of surgery setup, patient care and surgical preparation. (Offered to students enrolled in the Veterinary Technology Program ONLY).

**CVM 2154. Anesthetic Techniques.** (4) Four hours practicum. Supervised rotation through the Anesthesia Service of the Animal Health Center. Students participate in all technical aspects of preanesthetic evaluation, anesthetic maintenance and recovery. (Offered to students enrolled in the Veterinary Technology Program ONLY).

**CVM 2164. Radiologic and Imaging Techniques.** (4) Four hours practicum. Supervised rotation through the Radiology Service of the Animal Health Center. Students participate in all technical aspects of radiography, ultrasound imaging and radiotherapy. (Offered to students enrolled in the Veterinary Technology Program ONLY).

**CVM 2172. Technical Laboratory Services.** (2) Two hours practicum. Supervised rotation through the Laboratory Service of the College of Veterinary Medicine. Students participate in all technical aspects of laboratory sample collection and analysis. (Offered to students enrolled in the Veterinary Technology Program ONLY).

**CVM 2182. Techniques with Laboratory Animals.** (4) Two hours practicum. Supervised rotation through the Laboratory Animal Health Unit of the College of Veterinary Medicine. Students participate in all technical aspects of laboratory animal care and management. (Offered to students in the Veterinary Technology Program ONLY).

**CVM 2202. Pharmacy Techniques.** (4) Two hours practicum. Supervised rotation through the Pharmacy of the College of Veterinary Medicine. Students participate in all technical aspects of pharmaceutical preparation, dispensing, inventory and management. (Offered to students in the Veterinary Technology Program ONLY).

**CVM 2212. Necropsy Techniques.** (2) Two hours practicum. Supervised rotation through the Necropsy Section of the Diagnostic Laboratory. Students participate in all aspects of necropsy preparation, performance, record keeping, sample collection and cleanup. (Offered to students in the Veterinary Technology Program ONLY).

**CVM 2302. Animal Health Technical Procedures.** (2) One hour lecture. One hour laboratory. Orientation to basic animal health technical procedures including: patient records, diagnostic, therapeutic and animal nursing procedures. (Offered to students in the Veterinary Technology Program ONLY).

**CVM 2312. Laboratory Animal Care.** (4) Two hours practicum. Orientation to basic principles of laboratory animal care. An introduction to the scientific basis of laboratory animal use. An overview of animal welfare regulations. (Offered to students in the Veterinary Technology Program ONLY).

**CVM 2321. Veterinary Business Procedures.** (2) One hour practicum. Supervised clinical rotation involving the business procedures in a veterinary practice. (Offered to students in the Veterinary Technology Program ONLY).

**CVM 2990. Special Topics in Veterinary Medicine.** (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**CVM 4180/6180. Emergency Preparedness in Animal Health.** (1-5) Introduction to emergency preparedness concerning health/well-being of animals. Incident Command System (ICS) leading to subjects pertinent to animal health during natural/man-made disasters.

**CVM 4263/6263. Wildlife Diseases.** (3) Two hours lecture. Four hours laboratory, alternate weeks. Effects and management of parasites and diseases in wild bird and mammal populations. (Same as WF 4263/6263).

**Doctor of Veterinary Medicine**

**YEAR 1: Summer**

**CVM 5026-5036. Basic Concepts in Veterinary Medicine.** (6,6) Six hours practicum. The study of fundamental concepts in veterinary medicine including anatomy perspectives, homeostasis, cell biology, concepts of health and disease, and principles of embryology.

**YEAR 1: Fall**

**CVM 5011. Professional Development I.** (1) (Prerequisite: Enrollment in the professional veterinary degree program). One hour lecture. This course will include COPE, personality profiles and understanding personality, dealing with stress, and study skills.

**CVM 5012. Veterinary Informatics and Evidence-based Medicine.** (2) (Prerequisite: Enrollment in the professional veterinary degree program). Two hours lecture. This course will include concepts and applications in medical informatics, evidence-based medicine, veterinary problem solving, and critical thinking.

**CVM 5023. Immunology and Mechanisms of Infectious Agents.** (3) (Prerequisite: Enrollment in the professional veterinary degree program). Three hours lecture. Principles regarding immune responses and the classification, pathophysiological mechanisms, control and diagnosis of viruses, bacteria and fungi of importance in veterinary medicine.

**CVM 5033. Veterinary Physiology I.** (3) (Prerequisite: Enrollment in the professional veterinary degree program). Three hours lecture. Presentation of fundamental concepts, principles and issues in veterinary physiology specifically related to cellular, membrane, muscle, cardiovascular, respiratory, and renal physiology.


**CVM 5073. Veterinary Histology.** (3) (Prerequisite: Enrollment in the professional veterinary degree program). Two hours lecture. Two hours laboratory. Basic microscopic anatomy of cells, tissues, organs, and organ systems.

**YEAR 1: Spring**

**CVM 5013. Veterinary Neuroscience.** (3) (Prerequisite: Enrollment in the professional veterinary degree program). Two hours lecture. One hour laboratory for the entire course. Basic anatomic and physiologic concepts foundational to understanding animal behaviors and veterinary neurology.

**CVM 5021. Professional Development II.** (3) (Prerequisite: Enrollment in the professional veterinary degree program). One hour lecture. This course will include presentations and discussions on ethics, jurisprudence, business, and professionalism.

**CVM 5022. Veterinary Epidemiology.** (2) (Prerequisite: Enrollment in the professional veterinary degree program). Two hours lecture. Presentation of basic concepts and principles of epidemiology and the relationship to animal and human health.

**CVM 5044. Veterinary Pathology.** (4) (Prerequisite: Enrollment in the professional veterinary degree program). Four hours lecture. Introduction to the host response to endogenous and exogenous injury. Emphasis will be on general and systematic anatomic pathology.


**CVM 5083. Veterinary Physiology II.** (3) (Prerequisite: CVM 5033). Three hours lecture. Presentation of fundamental concepts, principles, and issues in veterinary physiology specifically related to digestive, endocrine and reproductive physiology.

**CVM 5093. Veterinary Agents of Infectious Disease.** (3) (Prerequisite: CVM 5023). Three hours lecture. A systematic presentation of viruses, bacteria, and fungi causing diseases of importance in veterinary medicine.

**YEAR 2: Fall**

**CVM 5122. Anesthesiology & Pharmacology I.** (2) (Prerequisite: Enrollment in the professional veterinary degree program). Two hours lecture. Basic principles of drugs action, absorption and metabolism will be covered, along with anesthesiology, including an introduction to patient management, anesthetic induction, and anesthesia equipment.

**CVM 5123. Veterinary Clinical Pathology.** (3) (Prerequisite: Enrollment in the professional veterinary degree program). Three hours lecture.
This course covers the basic concepts of hematology, clinical chemistry, and cytology. The interpretation of laboratory methods used in evaluation will also be covered.

CVM 5133. Veterinary Preventive Medicine. (3) (Prerequisite: Enrollment in the professional veterinary degree program). Three hours lecture. Management and prevention of animal diseases that impact animal and human health.

CVM 5142. Equine and Medicine Surgery I. (2) (Prerequisite: Enrollment in the professional veterinary degree program). Two hours lecture. The principles of diagnosis and the medical and surgical management of multi-systemic disorders involving the equine cardiovascular, endocrine, gastrointestinal, immune, and urinary systems.

CVM 5143. Theriogenology. (3) (Prerequisite: Enrollment in the professional veterinary degree program). Two hours lecture. Two hours laboratory. The pathogenesis, diagnosis, pathology, medical and surgical treatment, and prevention of diseases related to the urogenital system of domestic species.

CVM 5152. Toxicology. (2) (Prerequisite: Enrollment in the professional veterinary degree program). One hour lecture. Two hours laboratory. Diagnosis and management of animal intoxications.

CVM 5185. Small Animal Medicine and Surgery I. (5) (Prerequisite: Enrollment in the professional veterinary degree program). Four hours lecture. Two hours laboratory. This course covers diagnosis and treatment of medical and surgical conditions of the cardio-respiratory, dermatological and urogenital systems.

YEAR 2: Spring

CVM 5132. Anesthesiology & Pharmacology II. (2) (Prerequisite: Enrollment in the professional veterinary degree program). Two hours lecture. Principles of anesthetic techniques in various species along with systems-oriented anesthesia. Mechanisms of antimicrobial action with an emphasis on antimicrobial therapy.

CVM 5153. Equine Medicine & Surgery II. (3) (Prerequisite: Enrollment in the professional veterinary degree program). Two hours lecture. Two hours laboratory. The principles of diagnosis and the medical and surgical management of disorders involving the equine skin, and the musculoskeletal, nervous, ophthalmic, and respiratory systems.

CVM 5162. Diagnostic Imaging. (2) (Prerequisite: Enrollment in the professional veterinary degree program). Two hours lecture. This course introduces the fundamental principles of radiographic diagnosis of abnormal body systems. Included are the physics and principles of interpretation and visual perception.

CVM 5163. Veterinary Parasitology. (3) (Prerequisite: Enrollment in the professional veterinary degree program). Two hours lecture. Two hours laboratory. Presentation of principles essential to understanding the classification, pathophysiological mechanisms, control and diagnosis of parasites of importance in veterinary medicine.

CVM 5175. Food Animal Medicine and Surgery. (5) (Prerequisite: Enrollment in the professional veterinary degree program). Four hours lecture. Two hours laboratory. Diseases and common surgical conditions of food animals including history, clinical signs, diagnostic methods, medical treatment, surgical correction, prognosis, and prevention.

CVM 5183. Special Species. (3) (Prerequisite: Enrollment in the professional veterinary degree program). Three hours lecture. This course will cover applied anatomy, physiology, husbandry and common diseases in avian, aquatic, reptiles, amphibians, rodents and other minor species.

CVM 5195. Small Animal Medicine and Surgery II. (5) (Prerequisite: Enrollment in the professional veterinary degree program). Four hours lecture. Two hours laboratory. Course covers diagnosis and treatment of medical and surgical conditions of the musculoskeletal, digestive, and endocrine systems.

YEAR 3: The Clinical Problem

Services and Practices

CVM 5214. Laboratory Services. (4) Four hours practicum. Supervised rotation through the Diagnostic Laboratory of the Animal Health Center. Responsibilities include diagnostic techniques and data interpretation in clinical pathology, pathology, parasitology and bacteriology.

CVM 5224. Radiology. (4) Four hours practicum. Supervised rotation in Radiology. Areas of study include radiographic and ultrasound techniques and interpretation and radiotherapy.

CVM 5234. Anesthesiology. (4) Four hours practicum. Supervised rotation in anesthesiology. Areas of study include pre-anesthetic patient evaluation, anesthetic induction, maintenance and monitoring and postanesthetic patient management.

CVM 5246. Community Practice. (6) Six hours practicum. Supervised rotation through the Community Practice service of the Small Animal Clinic. Students participate in all aspects of patient care and health management.


CVM 5266. Equine Medicine & Surgery. (6) Six hours practicum. Supervised rotation through the Equine unit of the Large Animal Clinic. Students participate in the receiving, analysis, and management of patients referred for care.


YEAR 4: Career Options

CVM 5000. Directed Individual Study in Veterinary Medicine. (1-6) Variable hours practicum. (May be repeated for credit). Research projects and/or literature reviews supervised by a faculty mentor in the student’s selected area of interest.

CVM 5302. Professional Development IV. (2) One hour lecture. Three hours laboratory. Advanced communications skills. Professional writing and public speaking to the scientific audience.

CVM 5310. Small Animal Emergency and Critical Care Medicine. (4-6) Variable hours practicum. Supervised clinical rotation in the small animal intensive care and emergency services. Emphasis on the evaluation and management of the critically ill or injured animal.

CVM 5380. Small Animal Internal Medicine 2. (6-8) Variable hours practicum. Advanced supervised rotation through the Small Animal Clinic. Students participate in the receiving, analysis, and management of patients referred for medical care.

CVM 5392. Pharmacy. (4) Two hours practicum. Supervised clinical rotation in the pharmacy of the Animal Health Center. Students participate in all activities of these units.

CVM 5420. Advanced Rotation in Radiology. (2,4) Two to four hours practicum. (Prerequisite: CVM 5204). (May be repeated for credit). Areas of study include advanced radiographic and ultrasound techniques and interpretation and use of radiotopes in therapy.

CVM 5430. Advanced Rotation in Anesthesiology. (1-6) Variable hours practicum. (Prerequisite: CVM 5414). (May be repeated for credit). Advanced rotation in Anesthesiology. Areas of study include pre-anesthetic patient evaluation, and advanced techniques in anesthetic induction, anesthetic maintenance, patient monitoring and post-anesthetic care.

CVM 5444. Clinical Small Animal Practice. (4) Four hours practicum. (May be repeated for credit). This rotation provides students opportunities to develop problem solving, psychomotor and interpretive skills in an environment that closely simulates a high-quality private small animal practice.

CVM 5454. Advanced Rotation in Small Animal Surgery. (4) Four hours practicum. (Prerequisite: Consent of instructor). (May be repeated for credit). Students assume primary responsibility for pre-anesthetic, diagnosis, treatment and management of small animal surgery patients.

CVM 5464. Advanced Rotation in Equine Medicine and Surgery. (4) Four hours practicum. (Prerequisite: CVM 5266). (May be repeated for credit). Students assume primary responsibility for the resolving, diagnosis, treatment and management of equine patients.

CVM 5474. Advanced Rotation in Food Animal Practice. (4) Four hours practicum. (Prerequisite: CVM 5276). (May be repeated for credit). Students assume primary responsibility in problem analysis, case management and development of health maintenance programs for food animals.

CVM 5484. Advanced Rotation in Small Animal Internal Medicine. (4) Four hours practicum. (Prerequisite: CVM 5256). (May be repeated for credit). Students assume primary responsibility for patient diagnosis and care in small animal internal medicine.

CVM 5510. Veterinary Medicine/Animal Industry Externship 1. (1-6) Variable hours practicum. Rotation through private industry dealing with one of the major animal commodities. Rotation may include poultry, cattle, swine, dairy, beef or other commercial animal operation.

CVM 5520. Veterinary Medicine/Animal Industry Externship 2. (1-6) Variable hours practicum. Rotation through private industry dealing with one of the major animal commodities. Rotation may include poultry, cattle, swine, dairy, beef or other commercial animal operation.

CVM 5530. Veterinary Medicine/Animal Industry Externship 3. (1-6) Variable hours practicum. Rotation through private industry dealing with one of the major animal commodities. Rotation may include poultry, cattle, swine, dairy, beef or other commercial animal operation.

CVM 5540. Veterinary Medicine/Animal Industry Externship 4. (1-6) Variable hours practicum. Rotation through private industry dealing with one of the major animal commodities. Rotation may include poultry, cattle, swine, dairy, beef or other commercial animal operation.
CVM 5550. Veterinary Medicine/Animal Industry Externship 5. (1-6) Variable hours practicum. Rotation through private industry dealing with one of the major animal commodities. Rotation may include poultry, catfish, swine, dairy, beef or other commercial animal operation.

CVM 5560. Advanced Clinical Rotation 1. (1-6) Variable hours practicum. (May be repeated for credit). Supervised rotation through one of the defined units of the Animal Health Center. Students assume primary responsibility for patient diagnosis and care.

CVM 5570. Advanced Clinical Rotation 2. (1-6) Variable hours practicum. (May be repeated for credit). Supervised rotation through one of the defined units of the Animal Health Center. Students assume primary responsibility for patient diagnosis and care.

CVM 5580. Advanced Clinical Rotation 3. (1-6) Variable hours practicum. (May be repeated for credit). Supervised rotation through one of the defined units of the Animal Health Center. Students assume primary responsibility for patient diagnosis and care.

CVM 5604. Professional Development III. (4) Four hours lecture. Comprehensive review for National Board Examinations. Will be graded on a Pass/Fail basis.

CVM 5612. Laboratory Animal Medicine. (2) Two hours lecture. An intensive in-depth review of veterinary responsibilities in institutional laboratory animal medicine. The course will emphasize laboratory animal problems seen in research colonies.

CVM 5622. Veterinary Diagnostic Toxicology. (2) (Prerequisite: Consent of instructor). Two hours lecture. Phase 2 elective emphasizes diagnosis and treatment of animal poisoning including environmental toxins.

CVM 5632. Advanced Large Animal Techniques. (2) (Prerequisite: Consent of instructor). Four hours laboratory. Provides students hands-on techniques experience required in a progressive large animal/equine referral practice or an internship position at a veterinary hospital.

CVM 5644. Applied Gross Anatomy. (4) (Prerequisite: Consent of instructor). Eight hours laboratory. Phase 2 elective emphasizes review and further study of anatomy with relation to clinical and diagnostic applications.

CVM 5654. Applied Veterinary Parasitology. (4) Four hours practicum. (Prerequisite: Consent of Instructor). Provides opportunities to use problem-solving skills in the diagnosis, treatment, and control of both newly emerging and commonly encountered parasitic diseases.

CVM 5662. Clinical Neurology. (2) (Prerequisite: Consent of instructor). Two hours lecture. Phase 2 elective emphasizes basic procedures and concepts required to diagnose and manage neurologic diseases.

CVM 5672. Veterinary Dentistry. (2) Two hours practicum. (Prerequisite: Consent of instructor). Phase 2 elective emphasizes diagnostic and therapeutic approach to dentistry in small animals and equine species.

CVM 5682. Veterinary Ophthalmology. (2) (Prerequisite: Consent of instructor). Two hours lecture. Phase 2 elective emphasizing the diagnosis and treatment of ophthalmic diseases.

CVM 5694. Veterinary Cytology. (4) Two hours lecture. Two hours laboratory. An intensive study of veterinary cytology as it relates to clinical diagnosis and case management.

CVM 5714. Advanced Small Animal Dermatology. (4) Three hour lecture. One hour laboratory. Advanced study of small animal dermatology. Emphasis will be disease conditions with primary impact on the integumentary system of small animals.

CVM 5722. Small Ruminant Production Medicine. (2) (Prerequisite: CVM 5276). Two hours practicum. An elective focused on sheep and goat production. Experience in common surgery/treatment procedures provided. Small ruminant production medicine topics and current literature review discussed.

CVM 5754. Advanced Small Animal Surgery. (4) One hour lecture. Three hours laboratory. Exercises to provide additional understanding and “hands-on” experience for students interested in orthopedic surgery, neurosurgery, plastic-reconstructive surgery, and other selected soft tissue procedures.

CVM 5764. Advanced Equine Reproduction. (4) (Prerequisite: Consent of instructor). Four hours lecture. Phase 2 elective emphasizing basic equine reproduction and exposure to advanced diagnostic and therapeutic procedures.

CVM 5772. Canine Theriogenology. (2) Two hour practicum. (Prerequisite: Consent of instructor). Advanced study of canine reproduction. Review of basic diagnostics and procedures followed by an introduction to assisted reproductive technology (ART).

CVM 5784. Clinical Behavioral Medicine. (4) (Prerequisite: Consent of Instructor). Four hours lecture and discussion. Case oriented study of normal and abnormal behaviors and underlying influences in domestic animals, with focus on dogs, cats, and horses.


CVM 5814. The Feline Patient. (4) Four hours lecture. Group discussion, and focused independent study on a variety of feline-related topics, with emphasis on medical problems which are unique to the cat.

CVM 5824. Diagnostic Ultrasound. (4) Four hours practicum. (Prerequisite: Senior Standing or Consent of Instructor). Develop advanced interpretative skills in diagnostic ultrasonography. Learn to perform a complete thoracic, abdominal, or musculoskeletal examination on the species of interest.

CVM 5834. Anesthesia Care and Techniques. (4) Four hours laboratory. Phase 2 elective emphasizing review of anesthesia cases and application of anesthesia techniques to the species of choice for each student.


CVM 5854. Aquarium Health Management. (4) (Prerequisite: Consent of instructor). Concepts and techniques for the maintenance of common aquarium species. This course will provide students opportunities to develop selected skills relating to aquarium medicine.

CVM 5862. Equine Lameness. (2) Two hour practicum. Advanced study of equine lameness. Provides opportunities to develop and use problem-solving skills in the diagnosis, treatment, and management of lameness and related topics.

CVM 5902. Job Search. (2) Two hours lecture. A proactive approach to developing a strategy for securing veterinary employment. Practice philosophy, resume preparation, interview skills, evaluation of potential employers, choosing the right position.

CVM 5912. Personal, Professional and Financial Success. (2) Two hours lecture. Develop an initial financial plan for first employment and beyond. Setting and achieving goals, expense budgets, contracts and contract negotiation, financial obligations, and investment strategy.


CVM 5990. Special Topics in Vet Med I. (1-6) Variable hours practicum. (May be repeated for credit). Special topics in veterinary medicine, offers the opportunity to explore selected veterinary topics in depth.

Graduate-Level Courses

CVM 4134/6134. Aquatic Animal Health Management. (4) (Prerequisite: One course in microbiology and one course in physiology). Three hours lecture. Three hours laboratory. Fundamentals concepts of preventing, diagnosing and treating economically important diseases in wild and cultured stocks and invertebrates through didactic and laboratory instruction.

CVM 4513/6513. Environmental Toxicology. (3) (Prerequisites: 8 hours biological sciences and 8 hours chemistry). Three hours lecture. The disposition and toxicological effects of environmentally-relevant toxics (such as agrochemicals, petroleum and industrial pollutants) within organisms, and aquatic and terrestrial ecosystems.

CVM 4523/6523. Basic Neuroscience. (3) Three hours lecture. This course is a targeted study of the mammalian nervous system, stressing cellular and molecular elements/function, neuronal development and regulation.

CVM 7000. Directed Individual Study. Hours and credits to be arranged.

CVM 8000. Thesis Research/Thesis. Hours and credits to be arranged.

CVM 8011. Seminar. (1) One hour lecture. A seminar which provides the student with a forum for presentation of current topics in veterinary medical research.

CVM 8031. Current Topics in Molecular Mechanisms of Disease. (1) 1.5 hours discussion. The molecular biology of pathogens, hosts and their interactions are covered by students presenting recently published papers. This course can be taken six times.

CVM 8091. Current Topics in Production Animal Medicine. (1) 1.5 hour discussion. (Prerequisite: Consent of Instructor). A weekly seminar to address issues of current interest in production animal medicine (i.e., cattle, swine, poultry, aquaculture). May be repeated four times for credit.

CVM 8113. Advanced Diseases of Poultry. (3) Three hours lecture. Advanced study of the major poultry diseases; the mechanisms of each disease, diagnosis, prevention and control.

CVM 8133. Avian Necropsy. (3) (Prerequisite: Consent of instructor). Three hour practicum. Identification of avian diseases will be learned through necropsy of birds submitted by the public. Confirmatory diagnostic tests and recommendations for clients are discussed. This course can be taken for repeated credit.
CVM 8134. Advanced Fish Diseases. (4) Prerequisite: CVM 6134 or permission. Three hours lecture. Three hours laboratory. Detailed investigations into the mechanisms involved in the development and management of infectious and non-infectious diseases in fish.

CVM 8143. Epidemiology/Biostatistics. (3) Three hours lecture. Fundamental principles of descriptive and analytical epidemiology.

CVM 8153. Histopathology of Fish Diseases. (3) (Prerequisite: CVM 4134/6134 or equivalent). Three hours lecture. (Prerequisite: CVM 6134 or equivalent). Study of the pathophysiology response of fish to a variety of environmental, infectious, parasitic and neoplastic diseases based upon histologic interpretation of case materials.

CVM 8190. Aquatic Diagnostic Investigation. (1-9) (Prerequisite: CVM 6134, equivalent, or consent of instructor). Variable hours practicum. (May be repeated for credit). A practical exercise in diagnosis and subsequent evaluation for health management and maintenance in aquatic animal medicine.

CVM 8301. Advanced Topics in Comparative Immunology. (1.5) Three hours discussion. Current controversies, discoveries, and experimental approaches in comparative immunology will be covered by students' presentations. This course can be taken 4 times for repeated credit.

CVM 8303. Advanced Immunology. (3) (Prerequisite: BIO 6143 or equivalent or consent from the instructor). Three hours lecture. Advanced theory and concepts of immunology, structure and function of immune mechanisms are discussed in detail.

CVM 8315. Immunological Techniques. (5) Two hours lecture. Six hours laboratory. An in-depth course to teach the student a variety of modern methods of immunology. (Same as BIO 8315).

CVM 8403. Principles of Pharmacology and Pharmacokinetics. (3) Three hours lecture. This course addresses basic principles of how the body reacts to the presence of a drug or toxin and the mathematical expression of drug residues.

CVM 8513. Applied Veterinary Epidemiology. (3) Three hours lecture. Applications of qualitative veterinary epidemiology in animal and human health. Includes uses of epidemiologic methodology in field investigations and disease control programs.


CVM 8533. Organ Systems Toxicology II. (3) Three hours lecture. The course covers an in-depth understanding of toxic responses of the nervous, reproductive, endocrine, eye, and skin systems.

CVM 8543. Mechanisms of Toxic Action. (3) Three hours lecture. The course covers the basic mechanisms underlying the toxicity of chemicals to animals.

CVM 8614. Helminthology. (4) (Prerequisite: BIO 1504 or equivalent). Three hours lecture. Three hours laboratory. The course will cover current concepts in morphology and identification, life cycle, and host-parasite relationships of helminth parasites.

CVM 8624. Protozoology. (4) (Prerequisite: BIO 1504 or equivalent). Three hours lecture, two hours laboratory. The course will cover the morphology and identification, life cycles, epidemiology and control of protozoans in vertebrates.

CVM 8701. Veterinary Histopathology Seminar. (1) (Prerequisite: CVM 5044 or permission of instructor). (Course can be repeated for credit). One hour lecture. A weekly seminar to present and discuss current topics relevant to veterinary pathology and diagnostic medicine. Emphasis on the characterization of disease using histopathology.

CVM 8735. Mechanisms of Disease. (5) (Prerequisites: Acceptance to Dual Degree DVM/MS Program or Consent of Instructor). Five hours lecture. The course covers basic mechanisms of disease production in mammals. Topics include host response to microbial and toxic injury.

CVM 8743. Emerging Infectious Diseases and Zoonoses. (3) (Prerequisite: Acceptance to dual degree program or consent of instructor). Three hours seminar. An advanced discussion of emerging and currently relevant veterinary health issues with emphasis on zoonoses.

CVM 8801. Seminars in Veterinary Anesthesiology. (1) (Prerequisite: DVM 5404 or equivalent degree, or consent of instructor). One hour seminar. Topics include physiology and pharmacology in veterinary anesthetic practice, anesthesia equipment, and anesthetic techniques.

CVM 8802. Canine Theriogenology. (2) (Prerequisite: consent of instructor). Two hours practicum. Advanced study of canine reproduction. Review of basic diagnostics and procedures followed by an introduction to assisted reproductive technology (ART).

CVM 8803. Advanced Small Animal Clinical Neurology. (5) (Prerequisite: Must already have registrable veterinary degree and consent of instructor). Five hours practicum. Advanced-level study of neurologic disease in small animals, with an emphasis on case management, oral and written presentation skills, and teaching internship.

CVM 8812. Equine Reproductive Ultrasound. (2) (Prerequisite: Consent of instructor). One hour lecture. Two hours laboratory. Advanced study of ultrasonics diagnostics of the equine urogenital systems in the male and female.

CVM 8825. Large Animal Urogenital Surgery. (5) (Prerequisite: Consent of instructor). Three hours lecture. Four hours laboratory. Urogenital surgery of the male and female in the equine and bovine species.

CVM 8890. Economic and Performance Medicine. (1-9) Variable hours practicum. (May be repeated for credit). (Prerequisite: Consent of instructor). Advanced training in the identification and management of health related problems in commercial food animal production units.

CVM 8890. Special Topics in Veterinary Medicine. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

CVM 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

DIVISION of TECHNOLOGY

DTF 4000. Directed Individual Study. Hours and credits to be arranged.

DTF 4613. Implementation of Technology. (3) (Prerequisite: Consent of instructor prior to internship). Three hours lecture. Theoretical and applied methods, techniques and analysis of field based technology research. Emphasis on the various research designs and preparation of project proposal.

DTF 4923. Technology Career Seminar. (3) (Prerequisite: DTF 4613). Three hours lecture. Critical evaluation of current issues in technology, examination of career opportunities and approved project completion status.

DTF 4936. Technology Field Practicum I. (6) (Co-requisite: DTF 4926). The course provides students opportunities to apply contemporary practices by completing a minimum of 340 supervised hours in an approved industry.

DTF 4946. Technology Field Practicum II. (6) (Prerequisite: DTF 4936 or concurrent enrollment in DTF 4936). The course provides students opportunities to apply contemporary practices by completing a minimum of 340 supervised hours in an approved industry.

DTF 4990. Special Topics in DTF. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years.)

DTM 4000. Directed Individual Study. Hours and credits to be arranged.

DTM 4213. Manufacturing Regulatory Agencies. (3) Three hours lecture. An introduction to the effects that regulatory agencies, both public and private, have on contemporary manufacturing operations.

DTM 4313. Transportation and Packaging. (3) Three hours lecture. A study of internal and external product transportation for a manufacturing facility. Emphasis on the reduction of time and cost to include protective packaging.

DTM 4413. Facilities Operations. (3) Three hours lecture. An introduction to the many facets of manufacturing facility operations. Emphasis on key areas such as maintenance, employee services, and public utility optimization.

DTM 4553. Production Standards & Measurement. (3) Three hours lecture. A study to focus upon the application of theoretical and contemporary methods of manufacturing production standards and appropriate measurement techniques.

DTM 4990. Special Topics in DTM. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years.)
EC 1033. Economics of Social Issues. (3) Three hours lecture. Basic economic principles introduced and developed through the study of important social issues such as unemployment, health care, poverty, crime, pollution, inflation, and government debt. (Not open to students with prior credit in Principles of Economics).

EC 2113. Principles of Microeconomics. (3) (Prerequisite: EC 2113 and Sophomore standing.) Three hours lecture. Introduction to microeconomics: emphasizes American industrial structure, demand and supply, pricing and output, income distribution, factor pricing, international trade.

EC 2990. Special Topics in Economics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EC 3113. Intermediate Macroeconomics. (3) (Prerequisites: EC 2113 and EC 2123). Measurement and determination of national income, employment, and output; economic significance of consumption, saving, investment, foreign trade, money and prices, fiscal and monetary policy.

EC 3123. Intermediate Microeconomics. (3) (Prerequisites: EC 2113 and EC 2123). Theory and application of microeconomics; demand, supply, optimal consumer choice, production, cost, profit-maximizing pricing and output decisions, employment of resources, externalities, efficiency and welfare.

EC 3213. Labor Economics. (3) (Prerequisites: EC 2113 and EC 2123.) Three hours lecture. Labor market behavior of households and firms. Emphasizes wage determination, optimal employment decisions, income distribution, unionization, human capital, and discrimination.

EC 3223. Introduction to Industrial Organization. (3) (Prerequisites: EC 2113 and EC 2123). Three hours lecture. Structure and performance of large corporations, economic effects of antitrust, governmental policy toward competitive practices, regulation of monopoly and natural resources.

EC 3333. Managerial Economics. (3) (Prerequisites: EC 2113 and EC 2123). Three hours lecture. The application and use of economic models in analyzing and solving selected problems of the firm such as product pricing, product mix, demand forecasting, market analysis.

EC 3423. Government and Business. (3) (Prerequisites: EC 2113 and EC 2123). Three hours lecture. Examination of the evolution and composition of the economic relationship between government and business in the U.S.; including the regulation of public utilities and antitrust.

EC 3513. Economic Systems of the World. (3) (Prerequisites: EC 2113 and EC 2123 or consent of instructor). Three hours lecture. Comparative analysis of economic systems ranging from capitalism to market socialism. Includes emerging market systems of Central and Eastern Europe, Asia, and Latin America.

EC 4000. Directed Individual Study. Hours and credits to be arranged.

EC 4183/6183. U.S. Economic History. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. An intensive study of economic change in the United States and its impact on political and social development. (Same as HI 4183/6183).


EC 4223/6223. Labor Law and Employment Policy. (3) (Prerequisites: Three hours credit of economics or consent of instructor). Three hours lecture. Examination of the legal and regulatory environment of the employment relationship in today's American economy: including, unionization, equal employment opportunity, occupational health and safety.

EC 4303/6303. Theory of Economic Development. (3) (Prerequisites: EC 2113 and EC 2123). Analysis of problems involving developing economies as they relate to the world economy: population, trade, agriculture, industry, and technology. Policies for promoting economic growth.

EC 4313/6313. Introduction to Regional Economics. (3) (Prerequisites: EC 2113, EC 2123, and MA 1463 or consent of instructor). Three hours lecture. Analysis of economic differences; location theory (industrial, agricultural, and residential); Land use patterns; Regional structure, growth, and methods of analysis; National assistance for regional economic development.


EC 4333/6333. Applied Regional Economics. (3) (Prerequisite: EC 4313/6313). Economic analysis and effects of regional resources and development potentials, economic factors affecting industrial location decisions, planning and organization of industrial development.


EC 4433/6433. Problems in State and Local Finance. (3) (Prerequisites: EC 2113 and EC 2123). Three hours lecture. Fiscal importance and economic effects of state and local budgets; trends in taxation, expenditures, fiscal administration, and budgeting fiscal economic development.

EC 4523/6523. History of Economic Thought. (3) (Prerequisites: EC 2113 or consent of instructor). Three hours lecture. Survey of economic ideas from Ancient Greece to present, emphasizing the changing foci and methodologies of economics relative to economic problems perceived at the time.

EC 4643/6643. Economic Forecasting and Analysis. (3) (Prerequisites: EC 2113, EC 2123 and BQA 2113 (or equivalent) or consent of instructor). Three hours lecture. Forecasting tools and econometric estimation techniques utilizing regression, exponential smoothing, decomposition, frontier analysis, etc. Real-world data, business applications, and model building are emphasized.

EC 4990/6990. Special Topics in Economics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EC 7000. Directed Individual Study. Hours and credits to be arranged.

EC 8000. Thesis Research/Thesis. Hours and credits to be arranged.

EC 8043. Survey of Economics. (3) (Prerequisite: Graduate standing). Three hours lecture. Introduction to macro and microeconomics, national income accounts, monetary system, macroeconomic policy, international trade, supply and demand, distribution of income, markets, pricing, and output.

EC 8103. Economics for Managers. (3) (Prerequisites: EC 2113, EC 2123). Three hours lecture. Primarily for masters-level candidates. Examination of the fundamental theoretical and analytical tools of economics used by business managers engaged in decision making.

EC 8113. Labor Theory and Analysis. (3) (Prerequisites: Graduate Standing). Three hours lecture. Theoretical and empirical examination of labor market processes and policy; Wage determination, resource allocation, labor mobility, human capital investment, discrimination and income distribution.

EC 8133. Econometrics I. (3) (Prerequisites: AEC 8143 or consent of instructor). Econometric theory and methods. Topics include the classical linear regression model, maximum likelihood estimation, generalized least squares, and estimation with panel data.

EC 8143. Econometrics II. (3) (Prerequisite: EC 8133). A continuation of EC 8133. Topics include advanced theories of simultaneous equations estimation methods, time series econometrics, and estimation with qualitative and limited dependent variables.

EC 8163. Microeconomics I. (3) (Prerequisite: EC 3123 or EC 8103 or equivalent). Three hours lecture. Survey of demand analysis, production, cost, and supply relationships, analysis of pricing under competitive and noncompetitive conditions, analysis of income distribution with emphasis on imperfect pricing.

EC 8173. Macroeconomics I. (3) (Prerequisites: EC 3113, EC 3123, and one semester of calculus, or consent of instructor). Three hours lecture. Synthesis of short and long run analysis of the macroeconomy with special emphasis on the role of fiscal and monetary policy.

EC 8263. Microeconomics II. (3) (Prerequisite: EC 8163). Three hours lecture. An exposition of general equilibrium theory, the theory of welfare economics and the economics of information.

EC 8273. Macroeconomics II. (3) (Prerequisite: EC 8173 or equivalent). Three hours lecture. Examination of the modern macroeconomic synthesis. Studies in dynamic economic growth, rational expectations, monetarism, disequilibrium analysis, and open market economies.
EC 8313. Regional Economic Analysis. (3) (Prerequisite: EC 4313/6313 and EC 8133 or equivalent or consent of instructor). Three hours lecture. Theories and tools includes economic base, recursive and simultaneous equation econometric models, input-output analysis, and mixed models.

EC 8323. Economic Analysis of Developing Nations. (3) (Prerequisites: 9 hours in economics, including EC 6303 or consent of instructor). Three hours lecture. In-depth analysis of economic issues of developing nations and emerging markets; emphasis on public policies to promote economic growth and transition.

EC 8423. Public Finance. (3) (Prerequisites: EC 2113, EC 2123 and graduate standing). Three hours lecture. Economics of public sector in capitalist system. Emphasizes government budget influences on distribution, resource allocation, stability, growth; stresses taxation, expenditure, budgeting, public choice and debt management.

EC 8522. Seminar in the History of Economic Thought. (2) (Prerequisite: Graduate standing or consent of the instructor). The evolution of economic ideas from Ancient Greece to present. Emphasis is placed on the role of heterodoxy and the rise of new paradigms.


EC 8990. Special Topics in Economics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under this number within two academic years).

EC 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

Department of ELECTRICAL and COMPUTER ENGINEERING

Office: 216 Simrall Electrical Engineering Building

Professors Bennett, Donohoe, Grzybowski, Hagler, Harden (Head), King, Mazzola, Molen, Moorhead, Picone, Trotter, Winton, and Younan; Associate Professors L. Bruce, Fowler, Reese, and Schulz; Assistant Professors J. Bruce, Chu, Davis, Follett, Ginn, Hu, Koshka, Lazarou and Topsakal

EC 1002. Introduction to Electrical & Computer Engineering. (2) (Prerequisite: Credit or registration in MA 1713). One hour lecture. Three hours lecture. Three hours laboratory. What is means to be an engineer, engineering ethics, engineering modeling, the design process, areas of ECE, communication skills, ECE computer account, MATLAB, the Internet.

EC 2990. Special Topics in Electrical or Computer Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title in two academic years).

EC 3144. Circuit Analysis I. (4) (Prerequisites: Credit or registration in ECE 1002, MA 3113, and PH 2223). Three hours lecture. Three hours laboratory. Definitions and fundamental laws of electrical engineering, DC circuit analysis, network theorems, circuit elements, transient analysis, sinusoidal steady-state analysis for single and poly-phase circuits.

EC 3153. Circuit Analysis II. (3) (Prerequisites: Grade of C or better in ECE 3144. Credit or registration in MA 2743). Three hours lecture. Transient response of circuits with energy storage devices; magnetically coupled circuits; resonance in parallel and series RLC circuits; two-port circuits, Laplace transforms, system analysis.

EC 3163. Signals and Systems. (3) (Prerequisite: Grade of C or better in ECE 3153). Three hours lecture. Modeling of analog and discrete-time signals and systems, time domain analysis. Fourier series, continuous and discrete-time Fourier transforms and applications, sampling, z-transform, state space variables.

EC 3183. Electrical Engineering Systems. (3) (For non-Electrical Engineering majors). (Prerequisite: MA 2743). Three hours lecture. Definitions and laws relating to electrical quantities; circuit element descriptions; development of techniques in network analysis; semiconductor devices; integration of devices into digital networks.

EC 3243. Electronic Circuits I. (3) (Prerequisites: Grade of C or better in both ECE 3144 and ECE 3714, and credit or registration in ECE 3153). Three hours lecture. Introduction to circuit design using semiconductor devices; diode circuits, operating modes and characteristics of transistor amplifiers, transistor-level logic design for IC technologies.

EC 3254. Electronic Circuits II. (4) (Prerequisite: Grade of C or better in ECE 3243). Three hours lecture. Three hours laboratory. Linear transistor circuit design to include: differential pairs, op-amp circuits, frequency profiling, feedback, stability, and power electronics. Accompanying lab is of structured self-paced form.

EC 3281. Electronics Laboratory. (1) (For non-Electrical Engineering majors). (Prerequisite: Credit or registration in ECE 3283). Laboratory procedures in electronic circuits and measurements.

EC 3283. Electronics. (3) (For non-Electrical Engineering majors). (Prerequisites: Grade of C or better in either ECE 3144 or ECE 3183). Three hours lecture. Fundamentals of active devices, linear amplifiers, digital logic, digital devices, and microprocessors.

EC 3313. Electromagnetics I. (3) (Prerequisite: MA 3253 and PH 2223). Three hours lecture. Introduction to engineering electromagnetics with applications. Vector analysis, static and time-varying electromagnetic fields, wave propagation, and transmission lines.

EC 3322. Electromagnetics II. (3) (Prerequisite: Grade of C or better in ECE 3313). Three hours lecture. Waveguides and cavity resonators, fiber optics, antennas, electromagnetic compatibility, analytical and numerical solution techniques in electromagnetics.

EC 3413. Introduction to Electronic Circuits. (3) (Prerequisites: Credit or registration in ECE 3413 and credit or registration in MA 2743). Three hours lecture. Fundamentals of electric circuits and network analysis. Transient analysis and frequency response of networks. Introduction to operational amplifiers. AC power.

EC 3414. Fundamentals of Energy Systems. (4) (Prerequisite: Grade of C or better in both ECE 3144 and 3313). Three hours lecture. Three hours laboratory. Operation circuit models and applications of diodes and field-effect and bipolar junction transistors. Electronic instrumentation. Foundations of electrical communications systems.

EC 3424. Intermediate Electronic Circuits. (4) (Prerequisites: Grade of C or better in ECE 3413 and credit or registration in MA 2533). Three hours lecture. Three hours laboratory. Operation circuit models and applications of diodes and field-effect and bipolar junction transistors. Electronic instrumentation. Foundations of electrical communications systems.


EC 3714. Digital Devices and Logic Design. (4) (Prerequisite: Credit or registration in CSE 1213, CSE 1233, or CSE 1284). Three hours lecture. Three hours laboratory. Binary code, Boolean, algebra, combinational logic design, flip-flops, counters, synchronous sequential logic, programmable logic devices, MSI logic devices, and microprocessors.

EC 3724. Microprocessors. (4) (Prerequisites: Grade of C or better in both CSE 1384 and ECE 3714). Three hours lecture. Three hours laboratory. Architecture of microprocessor-based systems. Study of microprocessor operation, assembly language, arithmetic operations, and interfacing.

EC 3732. Software Tools for Electrical Engineers. (2) (Prerequisites: Grade of C or better in CSE 1233 or equivalent C/C++ programming course, grade of C or better in ECE 3714). One hour lecture. Three hours laboratory. A survey or topics utilizing UNIX-based platforms. Topics include C++, Perl, and various UNIX tools.

EC 4000. Directed Individual Study. Hours and credits to be arranged.

EC 4223/6223. Error Correcting Digital Codes. (3) (Prerequisite: Senior or Graduate standing). Three hours lecture. A survey, in depth, of current error correcting coding techniques for providing digital data transmission with protection from random and burst noise sources. Many practical and currently used techniques are discussed in detail and some hands on experience is provided.

EC 4243/6243. Introduction to Physical Electronics. (3) (Prerequisite: Grade of C or better in ECE 3243). Three hours lecture. Introduction to quantum theory, solid state physics. Physical principles of pn junctions, bipolar transistors, field effect transistors. Applications include electrooptics, integrated circuits, gaseous electronics.

EC 4263/6263. Principles of VLSI Design. (3) (Prerequisites: Grade of C or better in both ECE 3724 and ECE 4243). Two hours lecture. Three hour laboratory. Classic and dynamic CMOS circuit design using state-of-the-art CAD tools, with emphasis on digital system cells and architecture.

EC 4273/6273. Microelectronics Device Design. (3) (Prerequisite: Grade of C or better in ECE 3243). Three hours lecture. Theory of semiconductors in equilibrium and non-equilibrium, advanced theory of p-n junctions, bipolar junction transistor and advanced theory and operation of field dependent devices.
ECE 8023. Switching Theory II. (3) (Prerequisite: ECE 8013). Three hours lecture. The study of self-timed circuit design techniques; emphasis on elimination of timing considerations from digital circuit design to improve reliability, desirability and speed.

ECE 8053. Introduction to Computer Arithmetic. (3) (Prerequisite: ECE 4263/6263). Three hours lecture. Fixed point number systems; algorithms and associated logic level implementations for fixed point addition, subtraction, multiplication, and division; floating-point formats and operation.

ECE 8063. Parallel Computing Architectures I. (3) (Prerequisite: ECE 4713/6713, CSE 4113/6113). Three hours lecture. Study of hardware structures relevant to concurrent computing; evaluation and design methods associated with memory, pipelining, and multiple processors.

ECE 8073. Parallel Computing Architectures II. (3) (Prerequisite: ECE 8063 and/or consent of instructor). Three hours lecture. Study of communication structures and routing methods that are central to concurrent computing, multiple computers, and data flow machines.

ECE 8113. Linear Systems Analysis I. (3) Three hours lecture. Laplace transformation; systems concepts; Fourier transformation; physical realizability; distributed-parameter systems; time-varying parameter systems; sampling data systems.


ECE 8253. Solid State Electronics III. (3) (Prerequisite: ECE 4263/6263). Three hours lecture. Electrical theory of semi-conductors based on wave functions; mechanical and thermodynamical foundations.

ECE 8273. VLSI Systems I. (3) (Prerequisite: ECE 4263/6263). Three hours lecture. VLSI design extended into controller concepts, self-timed logic; system design with CAD tools, parameterized block generators, silicon compilers; projects submitted to commercial silicon foundries.

ECE 8313. Electromagnetic Theory. (3) (Prerequisite: ECE 3254). Three hours lecture. Static boundary value problems, conformal transformation; Schwarz-Christoffel transformation; harmonics; applications of Maxwell’s equations to plane waves in dielectrics and conductors; antennas; and radiation. (Same as PH 8313).

ECE 8373. Adaptive Signal Processing. (3) (Prerequisites: ECE 4773/6773 or consent of instructor). Three hours lecture. Linear combiners, theory of adaptation with stationary signals, algorithms and structures. Applications included.

ECE 8401. Current Topics in Remote Sensing. (1) (Prerequisite: Credit or registration in ECE 4423/6423 or PSS 4483/6483 or ABE 4483/6483). One hour lecture. Review of current literature dealing with the technical issues of remote sensing technologies.

ECE 8413. Digital Spectral Analysis. (3) (Prerequisite: ECE 3163 or consent of instructor). Three hours lecture. Spectral estimation problem, classical methods, parametric modeling, statistical estimation, sinusoidal estimation, and high order spectra. Time series applications.

ECE 8423. Adaptive Signal Processing. (3) (Prerequisite: ECE 3163 or consent of instructor). Three hours lecture. Adaptive filtering, theoretical foundation, algorithms, structures, and implementations. Applications are included.

ECE 8433. Statistical Signal Processing. (3) (Prerequisite: MA 4533/6533 or consent of instructor). Three hours lecture. Detection theory and design, statistical decisions, Bayes, and Neyman-Pearson detection, asymptotic performance, signal processing applications.

ECE 8443. Pattern Recognition. (3) (Prerequisite: MA 4533/6533 or consent of instructor). Three hours lecture. Classification, description, and structure of pattern recognition, patterns and feature extractions, engineering approaches including statistical and syntactic, and signal processing applications.

ECE 8453. Introduction to Wavelets. (3) (Prerequisite: ECE 3163 or consent of instructor). Three hours lecture. Wavelet-expansion systems, discrete wavelet transform, multiresolution analysis, time-frequency analysis, filter banks and the discrete wavelet design, wavelet-based applications.

ECE 8463. Fundamentals of Speech Recognition. (3) (Prerequisite: ECE 4413/6413 or consent of instructor). Three hours lecture. Acoustic Phenomena; Linear Prediction; Feature Extraction; Dynamic Programming and Time-Warping; Hidden Markov Models; Statistical Language Modeling; Decision Trees; Introduction to Natural Language Processing; Implementation Issues.

ECE 8473. Digital Image Processing. (3) (Prerequisites: CSE 1233, CSE 1284 or equivalent, ECE 4413/6413). Three hours lecture. A study of digital image processing principles, concepts, and algorithms; mathematical models; image perception; image sampling and quantization; transforms, image coding.

ECE 8483. Image and Video Coding. (3) (Prerequisite: ECE 8473 or consent of instructor). Three hours lecture. Intraframe predictive coding, intraframe transform coding, still-image coding standards, motion compensation, video-coding standards, image transmission and error control.

ECE 8523. Wafer Scale Integration. (3) (Prerequisites: Graduate standing and consent of instructor). Three hours lecture. The study of wafer scale integration, a technology that enables the fabrication of monolithic chips as large as a full silicon slice; yield analysis and optimization.

ECE 8613. Advanced Power Systems Analysis. (3) (Prerequisite: ECE 4613/6613 or equivalent). Three hours lecture. Application of symmetrical components to the analysis of power systems; impedances of transmission lines; unsymmetrical faults; representation of transformers and rotating machines; stability and control.

ECE 8623. Stability and Control of Power Systems. (3) (Prerequisite: Consent of instructor). Three hours lecture. Transient and dynamic stability; effects of excitation on stability; control of system in steady state (AGC); economic dispatch.

ECE 8643. Power System Planning. (3) (Prerequisite: Consent of the instructor). Three hours lecture. Load forecasting, generation system reliability and cost analysis, transmission system reliability analysis.

ECE 8653. Advanced Energy Conversion. (3) (Prerequisite: ECE 3414). Three hours lecture. Development of Analytical Expressions for 3 synchronous and induction machines; d-q axis transformation, transformer analysis. Description and analysis of ac-ac and dc-ac power conversion devices.

ECE 8663. High Voltage Engineering. (3) (Prerequisite: ECE 3313). Three hours lecture. Emission, mobility, breakdown, corona, arcs impulse propagation, measurement, analysis, dielectric materials, design laboratory demonstration.


ECE 8693. Power Systems Seminar. (3) (Prerequisite: Consent of instructor). Three hours lecture. Current research and development topics in power system planning and operation.

ECE 8803. Random Signals and Signs. (3) (Prerequisite: IE 4613 or MA 4523 or equivalent). Three hours lecture. Probability and random processes, auto- and cross-correlation, energy and power spectral densities, mean-square calculus, ergodicity. Response of linear systems to random signals, and Markov chains.

ECE 8813. Information Theory. (3) (Prerequisite: ECE 8803 or consent of instructor). Three hours lecture. Entropy, the asymptotic equipartition property, entropy rate, data compression, channel capacity, differential entropy, the Gaussian channel, rate distortion theory.

ECE 8913. Advanced Feedback Control Systems. (3) (Prerequisite: ECE 4913/6913). Three hours lecture. Review of linear feedback systems; root locus; signal flow diagrams; stability criterion; distributed parameter systems; self-adaptive control systems.

ECE 8923. Non-Linear Control Systems. (3) (Prerequisite: ECE 4913/6913 or equivalent). Three hours lecture. A study of techniques available to analyze non-linear system and a study of associated synthesis procedures.

ECE 8933. Random Processes in Automatic Control. (3) (Prerequisite: ECE 4913/6913 or equivalent). Three hours lecture. Principles and application of statistical design; random processes in automatic control; time invariant systems.

ECE 8943. Theory of Optimal Control. (3) Three hours lecture. State variable description of systems; maximum principle of Pontryagin, optimization of linear systems with quadratic performance measures; time optimal and fuel optimal systems.

ECE 8953. Sampled Data Control Systems. (3) (Prerequisite: ECE 4913/6913). Three hours lecture. Basic theory of sampling; Z-transformation theory and analysis; modified Z-transform; design principles.

ECE 8963. Digital Control Systems. (3) (Prerequisites: ECE 4913/6913 and ECE 4923/6923 or consent of instructor). Three hours lecture. Z-Transform theory and analysis; modified x-transform; design principles; digital state observers; introduction to optimal control, introduction to computer-aided digital control system design and analysis.

ECE 8990. Special Topics in Electrical or Computer Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ECE 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.
EDUCATIONAL LEADERSHIP

Office: 100 Industrial Education Building
Program Coordinator: Jerry G. Mathews
(For departmental information, see INSTRUCTIONAL SYSTEMS, LEADERSHIP, and WORKFORCE DEVELOPMENT.)

EDA 8163. Public School Finance. (3) Three hours lecture. Legal and other factors governing financial policies and practices in public schools; sources of revenue; budgeting; disbursement of funds; school plant; records; insurance.

EDA 8190. Workshop in Educational Administration and Supervision. (1-3) This course is for practicing school administrators who need courses of varying length, format, and focus in areas not covered by the regular curriculum.

EDA 8223. Seminar in Administration. (3) (Prerequisite: Administrative experience or graduate standing). Three hours lecture. Specialized study of selected problems in school administration; research.

EDA 8273. Educational Administration and Supervision. (3) (Prerequisite: Advanced graduate standing). Three hours lecture. Fundamentals of leading and managing at the central office executive level, e.g., assistant superintendent. Emphasis on policy development, curriculum and instruction, planning, operations, and public relations.

EDA 8283. Educational Leadership. (3) (Prerequisite: EDA 8113). Three hours lecture. Nature of educational leadership. The roles of leadership in staff and program development, diffusion of innovations, and the uses of power in making educational decisions.

EDA 8293. Professional Development of Educational Personnel. (3) (Prerequisite: EDA 8143). Three hours lecture. Collaborative approaches to processes of individual and group professional development for instructional and non-instructional personnel; ensuring, supporting, enhancing best practices for teaching, learning, school improvement.

EDA 8323. Educational Facilities Design. (3) Three hours lecture. Studies design issues in learning environments/facilities, examines contemporary design models, their impact on learning and uses this information in the design process.

EDA 8353. Applications of Theory to Educational Administration. (3) Three hours lecture. The nature of theory; types of educational administrative theories; uses of organizational and administrative theory in administrative problem solving; applications of general systems theories in education.

EDA 8383. Ethical Decision Making in Educational Administration. (3) (Prerequisites: EDA 8283 or HED 8123). Three hours lecture. Case studies are used to analyze educational decisions. Multiple decision models and ethical concepts are applied to problems and moral dilemmas.

EDA 8890. Special Topics in Educational Leadership. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

Department of CURRICULUM and INSTRUCTION

310 Allen Hall
Professors Grace, Hare, McGrath, Minchew, Person, Verhoek-Miller; Associate Professors: Burroughs, Coats, Hamil, Jayroe, Swofford, and Xu; Assistant Professors: Brenner, Brocato, Campbell, Franz, Hopper, Kurz, Pope, Prince, Thompson and Tompkins

ELEMENTARY EDUCATION

EDE 2990. Special Topics in Elementary Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Course limited to two offerings under one title within two academic years).


EDE 3223. Middle Level Education. (3) (Prerequisite: Admission to teacher education. Co-require: RDG 3413 and 3423). Three hours lecture. Understanding the learning needs of young adolescents (grades 4-8); study of appropriate teaching strategies, engaging learning environments, and assessments for young adolescents.

EDE 3233. Teaching Children’s Literature at the Elementary and Middle Levels. (3) (Prerequisite: Admission to teacher education). Three hours lecture. Introduction, selection, presentation, and utilization of a variety of children’s literature.

EDE 3343. Teaching Adolescent Literature. (3) (Prerequisite: Admission to teacher education). Three hours lecture. A study of the types of literature read by older children and adolescents with emphasis upon the criteria for the choice of good books and knowledge of available books and teaching materials. Admission to Teacher Education required.

EDE 3443. Creative Arts for Elementary and Middle Levels. (3) (Prerequisite: Admission to teacher education). Three hours lecture. An exploration of musical and artistic elements utilizing a variety of multicultural music, dance, drama, and aesthetic visuals. (Same as MU 3123).

EDE 4000. Directed Individual Study. Hours and credits to be arranged.

EDE 4113. Teaching Elementary and Middle Level Science. (3) (Co-require: EDE 4143, RDG 4133, and EDE 4123; admission to Teacher Education). Two hours lecture. Two hours laboratory. Field-based. Selection, organization and presentation of natural science content for elementary and middle school students; assessment of student learning and general effectiveness of instruction.

EDE 4123. Teaching Elementary and Middle Level Mathematics. (3) (Co-require: EDE 4113, RDG 4133, and EDE 4143; admission to Teacher Education). Two hours lecture. Two hours laboratory. Field-based. The content and process of mathematics instruction for elementary and middle grades children; teaching principles, mathematical tools, and assessment of student progress.

EDE 4143. Teaching Elementary and Middle Level Social Studies. (3) (Co-require: EDE 4113, EDE 4123, and RDG 4133). Two hours lecture. Two hours laboratory. Field-based. Selection, organization and presentation of social studies content for K-8 students; assessment of student learning and effectiveness of instruction.

EDE 4883. Managing the Elementary and Middle Level Classroom. (3) (Prerequisite: Admission to Teacher Education, completion of all professional development courses, and concurrent enrollment in EDE 4886). Three hours lecture. Developing and managing an appropriate learning environment for elementary and middle level students.

EDE 4886-4896. Elementary and Middle Level Teaching Internship. (6-6) (Prerequisite: Completion of all professional education courses. Co-require: EDE 4883). Two six hour internships. A supervised observation and teaching experience in an elementary and/or middle level classroom.

EDE 4990/6990. Special Topics in Elementary Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Course limited to two offerings under one title within two academic years).

EDE 7000. Directed Individual Study. Hours and credits to be arranged.

EDE 8000. Thesis Research/Thesis. Hours and credits to be arranged.


EDE 8423. Elementary School Methods. (3) Three hours lecture. Seminar-type course in synthesis of methods and techniques applicable to elementary teaching; readings; reports; research.

EDE 8433. The Elementary School Curriculum. (3) Three hours lecture. Principles of curriculum construction as they apply to the elementary school program.

EDE 8443. Seminar in Elementary Education. (3) Three hours lecture. A study of current issues in elementary education. Designed for elementary and school administration majors.

EDE 8463. Readings and Research in Children’s Literature. (3) Three hours lecture. Research involving the characteristics of quality literature for children, investigation of illustrators, illustrations and role of children’s literature in the school.

EDE 8473 The Elementary Social Studies Curriculum. (3) Three hours lecture. Seminar-type course to include research; trends, methods; provision for individual differences; multi-level materials.


EDE 8493. Teaching Biological Science in the Elementary Schools. (3) Three hours lecture. Continuation of EDE 8483 with emphasis in training teachers to develop concepts in the biological sciences in inductive methods.

EDE 8513. Curriculum and Program Developments in Early Childhood Education. (3) Three hours lecture. The recent and most promising developments in curriculum for preschool through primary aged children.
EDF 8393. History of Education in the United States. (3) Three hours lecture. A history of the growth and development of education in the United States from earliest Colonial times to the present, including recent movements and trends.

EDF 8900. Special Topics in Educational Foundation. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Course limited to two offerings under one title within two academic years)

EDF 9313. Philosophy of Education. (3) Three hours lecture. An examination of educational beliefs and their justification.

EDF 9353. Interdisciplinary Seminar in Education. (3) Three hours lecture. A problem course considering accomplishments and needs in professional education as viewed from the interdisciplinary approach.

EDF 9373. Educational Research Design. (Prerequisites: EDF 8363 and EPY 8214 or equivalents; consent of instructor). Three hours lecture. A study of various designs of research and preparation of research proposals. Fall, Spring, Summer terms.

EDF 9443. Single-Subject Research Designs for Education. (3) Three hours lecture. A detailed examination of single-subject research designs and their associated research methods including data collection and data evaluation techniques. Spring, Summer terms.

EDF 9453. Introduction to Qualitative Research in Education. (Prerequisites: EDF 8363 or EDF 9463). Three hours lecture. Introduction to qualitative research, including theoretical considerations and applied methods, techniques, and analysis of field based educational research.

EDF 9463. Qualitative Data Collection in Education. (Prerequisite: EDF 9453). Three hours lecture. An in-depth examination of interviewing and observation as two primary qualitative data sources in educational research.

EDF 9473. Qualitative Data Analysis and Presentation in Education. (3) (Prerequisite: EDF 9463). Three hours lecture. Examination, application, and assessment of a range of approaches to analysis and presentation in the design of qualitative research studies in educational settings.

EDUCATIONAL LEADERSHIP

EDL 8113. Contexts of Educational Leadership. (3) Three hours lecture. Exploration of the educational leader’s responses to historical, philosophical, sociocultural, democratic and educational contexts affecting leadership; school culture and climate; change processes for school improvement.

EDL 8123. Principles of Educational Leadership. (Prerequisite: EDL 8113). Three hours lecture. Applying democratic processes to school governance and leadership decision; consensus building; empowerment; vision; mission; and school improvement.

EDL 8143. Educational Leaders as Instructional Supervisors. (3) Three hours lecture. Applying interpersonal and clinical skills, techniques and approaches in the observation, supervision, and empowerment of teachers and in the facilitation of teaching and learning environments.

EDL 8163. Educational Budgeting and Resource Allocation. (3) Three hours lecture. Administrative leadership for organization, management, allocation or resources to enhance and support teaching and learning; four modules: budgeting, facilities, personnel, student and family services.

EDL 8173. Legal and Ethical Perspectives of Leadership in Schools. (3) Three hours lecture. Examination of legal and ethical issues in educational leadership. Analysis of impact of laws and legal decisions on policy formation and decision implementation in education.

EDL 8193. Educational Environments. (3) (Prerequisites: EDL 8201 and EDL 8202). Three hours lecture. Capstone course of Master’s/Specialist AA Certification program. Theories, roles, functions of leadership in educational environments; organizational structures; community and board relationships; policy; strategic planning.

EDL 8213. Internship I: Observation and Field Applications. (3) (Prerequisites: EDL 8113, EDL 8123 and EPY 8223). Interns experience designated observation, authentic application, and mentorship activities at educational sites under joint supervision of university and school-based leaders.

EDL 8223. Internship II: Administrative Applications. (3) (Prerequisites: EDL 8163, EDL 8173, EPY 9263, and EDL 8213). Interns observe and apply techniques of administrative leadership in authentic educational situations.

Office: 100 Industrial Education Building
Major Advisor: Anthony A. Olinzock
Program Coordinator: Jerry G. Mathews

(For departmental information, see INSTRUCTIONAL SYSTEMS, LEADERSHIP, and WORKFORCE DEVELOPMENT.)
ations under joint supervision of university and school-based staff at school sites.

EDL 8233. Internship III: Instructional Applications. (3) (Prerequisites: EDL 8223, EDL 8413, EDL 8193, EDL 8213, EDL 8223 or approval of the instructor). Focus on instructional leadership experiences; designated culminating internship activities at school sites; joint supervision by university staff and school- and/or district-based leadership.

EDL 8990. Special Topics in Educational Leadership. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Course limited to two offerings under one title within two academic years.)

SECONDARY EDUCATION

Office: 314 Allen Hall
(For departmental information, see CURRICULUM and INSTRUCTION.)

EDS 2990. Special Topics in Secondary Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Course limited to two offerings under one title within two academic years)


EDS 3633. Secondary Mathematics Education. (3) (Prerequisite: Admission to Teacher Education. Co-requisites: EDF 4243 and RDG 3513). Three hours lecture. Examine the concepts and tools used to teach mathematics in the secondary classroom, connections between algebra and geometry concepts, and national and state mathematics standards.


EDS 3653. Secondary Science Education. (3) (Prerequisite: Admission to Teacher Education. Co-requisites: EDF 4243 and RDG 3513). Three hours lecture. Fundamentals of science education including the National Science Education Standards and NSTA recommendations required for teaching science in grades 7-12.

EDS 3673. Secondary Language Arts Education. (3) (Prerequisite: Admission to Teach Education, EDS 3411, EDF 3333 and EPY 3143. Co-requisites: EDF 4243, EDX 3213 and RDG 3513.) Three hours lecture. Essential knowledge, skills, and attitudes necessary for the successful teaching of the language arts.

EDS 4000. Directed Individual Study. Hours and credits to be arranged.


EDS 4643/6643. Methods of Teaching Social Studies. (3) (Prerequisites: Admission to Teacher Education, EDF 4243, RDG 3513, and EDS 3643 Co-requisite: EPY 3253). Three hours lecture. Field-based. An examination of teaching methods and instructional materials and media appropriate for use in middle and secondary social studies classrooms.

EDS 4653/6653. Methods of Teaching Science. (3) (Co-requisite: EPY 3253). Three hours lecture. Field-based. Students will gain insight into the methods of teaching science in grades 7-12, including selection, organization, preenrollment and assessment by National Science Education Standards.


EDS 4873. Seminar in Managing the Secondary Classroom. (3) (Prerequisites: Admission to Teacher Education. Co-requisites: EDS 4886 and EDS 4896.) Three hours lecture. A seminar that addresses classroom management issues, theories and practices.

EDS 4886/4896. Teaching Internship in Secondary Education. (6.6) (Both courses to be taken concurrently). (Prerequisites: Admission to Teacher Education and senior standing). Supervised observation and directed teaching in respective field of endorsement.

EDS 4990/6990. Special Topics in Secondary Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years)

EDS 7000. Directed Individual Study. Hours and credits to be arranged.

EDS 8000. Thesis Research/Thesis. Hours and credits to be arranged.

EDS 8103. Advanced Methodologies in Middle and Secondary Education. (3) (Prerequisite: TKT 1273 or equivalent). Three hours lecture. Using technology as instructional tools, evaluate software, consider ethical issues; design technology-based classrooms, mini-grants, and lesson modules aligned with curriculum standards.

EDS 8243. Advance Planning and Managing of Learning. (3) Three hours lecture. An advanced study of variables contributing to efficiency and competency in planning for teacher-learner activities and the creation and maintenance of positive learning environments.

EDS 8613. Middle and Secondary School Curriculum. (3) Three hours lecture. Principles of curriculum construction as they apply to the middle and secondary school and the various subject areas. Fall term.

EDS 8633. Problems of Secondary Education. (3) (Prerequisite: Master’s degree or consent of instructor). Three hours lecture. Study of critical problems in secondary education. Spring term.

EDS 8643. Directed Reading in Secondary Education. (3) Intensive supervised readings in the field of secondary education.

EDS 8713. Curriculum Adjustments. (3) Three hours lecture. Adjusting the school curriculum to meet individual pupil differences.

EDS 8883. Dimensions of Learning I. (3) (Prerequisite: admission to MATS program. EDS 8243, EPY 3613, and EDS 6633 or EDS 6653 or EDS 6673). Three hours clinical instruction. Supervised observation and directed teaching in respective field of endorsement.

EDS 8893. Dimensions of Learning II. (3) (Prerequisite: admission to MATS program. EDS 8243, EPY 3613, and EDS 6633 or EDS 6653 or EDS 6673). Three hours clinical instruction. Supervised observation and directed teaching in respective field of endorsement.

EDS 8990. Special Topics in Secondary Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years). Three hours lecture. Supervised readings in the field of secondary education under the supervision of a senior staff member. (Same as EDE 9413)

EDS 9633. Practicum in College Teaching of Secondary Education. (Prerequisite: admission to the Teaching Internship program. EDS 8243, EPY 3613, and EDS 6633 or EDS 6653 or EDS 6673). Three hours clinical instruction. Supervised observation and directed teaching in respective field of endorsement.

EDS 9900. Dissertation Research/Dissertation. Hours and credits to be arranged.

EDS 9413. Practicum in College Teaching. (3) Three hours practicum. Teaching of at least one course in education, under the supervision of a senior staff member. (Same as EDE 9413)

EDS 9635. Practicum in College Teaching of Secondary Education. (3) Teaching of at least one course in education under the supervision of a senior staff member. Supervision of student teachers.

SPECIAL EDUCATION

Office: 508 Allen Hall
Professors Arnault, Coffey, Devlin, Eldred and Obringer
(For departmental information, see COUNSELING, EDUCATIONAL PSYCHOLOGY and SPECIAL EDUCATION.)

EDX 2990. Special Topics in Special Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years.)

EDX 3203. Introduction to Learning Disabilities. (3) Three hours lecture. Introduces students to the nature of learning disabilities. (Prerequisite: PSY 2013 and PSY 3173). Three hours lecture. An overview of the theoretical approaches in their teaching.

EDX 3233. Contingency Management with Exceptional Children (3) Three hours lecture. Competency-Based Instructional Sequence and field experience. A study of the components of contingency management with emphasis on application in the field with exceptional children.
EDX 4000. Directed Individual Study. Hours and credits to be arranged.

EDX 4113/6113. Diagnostic-Prescriptive Methods and Materials for Early Childhood Disabled. (3) Admission to Teacher Education required. Three hours of lecture and laboratory work including assessment and individualized programming utilizing methods and materials for EMR and LD preschool and primary level children.

EDX 4123/6123. Diagnostic-Prescriptive Methods and Materials for Elementary Age Disabled. (3) Admission to Teacher Education required. Three hours of lecture and laboratory work including assessment and individualized programming utilizing methods and materials for EMR and LD elementary school-age children.

EDX 4133/6133. Diagnostic-Prescriptive Methods and Materials for Secondary Age Disabled. (3) Admission to Teacher Education required. Three hours of lecture and laboratory work including assessment and individualized programming utilizing methods and materials for EMR and LD secondary school-age children.

EDX 4353/6353. Assistive Technology in Special Education. (3) Admission to Teacher Education required. Three hours lecture. Application of adaptive technology with microcomputers in the education of students with special needs.

EDX 4413/6413. Working with Parents of Exceptional Children. (3) Admission to Teacher Education required. Three hours lecture. A study of the development, goals, and objectives of organized parent educational groups. A study of problems of parents of children who have disabilities.

EDX 4423. Teaching the Disadvantaged Child. (3) The study of the disadvantaged child in terms of theories, cultures, and techniques of teaching and exploration of curricular innovations.

EDX 4503/6503. Teaching the Severely and Profoundly Impaired Child. (3) Admission to Teacher Education required. Two hours lecture. One hour practicum. A survey of operational models and techniques to be implemented with the Severely/Profoundly Impaired; include curriculum, methods, and administrative educational adjustments.

EDX 4603/6603. Children and Youth with Physical/Multiple Disabilities. (3) Admission to Teacher Education required. Three hours lecture. Educational implications and adaptations of procedures in schools, homes, hospitals and special schools for children with orthopedic and/or neurological impairments.

EDX 4613/6613. Teaching Children and Youth with Physical/Multiple Disabilities. (3) Admission to Teacher Education required. Three hours lecture. Methods and materials applicable to teaching children and youth with physical or multiple conditions which are the results of neurological or orthopedic impairments.

EDX 4623/6623. Curricular and Mobility Adaptations for Physical/Multiple Disabilities. (3) Admission to Teacher Education required. Three hours lecture. The study of motor functions including range of motion, gait training, and other environmental adjustments that can be implemented by classroom teachers.

EDX 4887/4898. Teaching Internship in Special Education. (7.8) (Both courses to be taken concurrently). (Prerequisites: Admission to Teacher Education and senior standing). Supervised observation and directed teaching in special education. In addition, there is a professional seminar dealing with current issues in special education.

EDX 4953/6953. Introduction to Sign Language. (3) Development of basic sign language skills, study of special needs of deaf persons, and understanding of use of interpreters. (Same as COE 4363/6363).

EDX 4990/6990. Special Topics in Special Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Course limited to two offerings under one title within two academic years).

EDX 7000. Directed Individual Study. Hours and credits to be arranged.

EDX 8000. Thesis Research/Thesis. Hours and credits to be arranged.

EDX 8103. Advanced Contingency Management. (3) Three hours lecture. This course is designed to utilize the principles and procedures of contingency management and applied behavioral analysis research to design, implement, and evaluate behaviorally oriented programs.

EDX 8123. Organization and Supervision of Special Education. (3) Three hours lecture. Organizational theory of special education. Leadership behavior and role of special education supervisor; grant writing.

EDX 8133. Readings and Research in Exceptional Education. (3) Three hours lecture. Emphasis on current literature in all areas of exceptionality. Understanding and interpretation of psychological diagnosis. Individual and group research.

EDX 8143. Early Education for the Disabled. (3) Three hours lecture. Rationale; characteristics; educational approaches; exemplary programs; research in the field.

EDX 8153. Language Development-Assessment and Remediation. (3) Two hours lecture and two hours practicum. Administration and interpretation of the Illinois Test of Psycholinguistic Abilities and other selected instruments of language development. Remediation techniques will also be discussed as they relate to the assessment techniques.

EDX 8163. Teaching Strategies for the Gifted. (3) (Prerequisite: Consent of instructor). Teaching approaches, development of special problems, selection of materials, and remediation of problems related to learning.

EDX 8173. Special Education in the Regular Classroom. (3) Three hours lecture. Provides a greater understanding of the handicapped child who may be in the regular classroom and suggests methods and techniques for teaching the handicapped student in the regular classroom.

EDX 8183. Seminar in Learning Disabilities. (3) (Prerequisite: EDX 3203 or equivalent). Three hours lecture. An advanced course dealing with the condition of learning disabilities. Current research dealing with causes, treatments, and prevention strategies will be studied.

EDX 8203. Practicum: Diagnosis of Special Education Populations. (3) (Prerequisite: Approval of instructor). Hours and credits to be arranged. Practicum experience utilizing a multi-disciplinary team approach to the diagnosis and educational planning for students suspected of being mildly, moderately, and multiply impaired.

EDX 8213. Practicum: Remediation of Special Education Populations. (3) One hour seminar, three hours practicum. Selection, utilization, and evaluation of specialized remedial materials and techniques with special education populations.

EDX 8223. Supervision: Diagnosis of the Educationally Handicapped Practicum. (3) Two hours lecture, two hours practicum. Provide guided responsibility for conducting diagnostic staffings, supervising testings, and coordinating case study interpretations between staff, home and school.

EDX 8303. Seminar in Mental Retardation. (3) (Prerequisite: EDX 8103). Three hours lecture. An advanced course dealing with the condition of mental retardation. Educational implication and research involving those classified as mentally retarded.

EDX 8333. Placement Services and Techniques. (3) Three hours lecture. Academic and job placement as a means of promoting the development and adjustment of students at all levels of education. (Same as COE 8333).

EDX 8393. Seminar in Education for the Emotionally Disabled. (3) (Prerequisite: EDX 8403). One hour lecture, recreation, simulation, and field trips. A comprehensive study of contributing factors in emotional disturbance and the educational technology of the treatment of emotionally handicapped children.

EDX 8403. Teaching the Emotionally Disabled. (3) Three hours lecture and practicum. The curriculum, methods, and principles of working with the emotionally handicapped.

EDX 8413. Personal, Social, and Work Adjustment Counseling. (3) Two hours lecture. Two hours laboratory. Personal, social, work adjustment counseling and employability skills training for disabled persons and others with special needs. Includes individual, group, and situational techniques. (Same as COE 8413 and TKT 8413.)

EDX 8780. Internship in Special Education. (3-6) Three hours practicum. Supervised observation, participation, and teaching of exceptional children in classrooms and resource rooms. Supervised experiences in community departments, supervisory positions.

EDX 8990. Special Topics in Special Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ENGINEERING GRAPHICS

Office: 260 McCain Engineering Building
Instructor Bostick

EG 1142. Engineering Graphics. (2) Two hours lecture. One hour demonstration. Presentation of sketching techniques, lettering and computer aided drafting with traditional engineering drawing topics, including orthographic projection, engineering documentation, auxiliary views, and working drawings.

EG 1143. Graphic Communication. (3) One hour lecture. Five hours laboratory. Orthographic projection, including mental visualizing, point, line, plane identities, first and second auxiliaries, computer assisted design and drafting using personal computers.

EG 1411. AutoCAD. (1) (Prerequisite: Knowledge of projection graphics). Three hours laboratory. Practical application solutions to engineering
graphic problems using a specific computer graphics software package, Auto CAD.

EG 1143. Technology Graphics. (3) (Prerequisite: EG 1143.) Two hours lecture. Four hours laboratory. Visualization analysis using descriptive geometry principles applying specifically to technology. Computer aided drafting/design in industrial technology. Reading/drafting working drawings in technology fields.

EG 1513. Architectural Graphics. (3) One hour lecture. Five hours laboratory. Survey of various drawing systems. Practical exercises in orthographic multiview projection, isometric, oblique and perspective drawing systems, with emphasis on lettering, reflections and cast shadows.

EG 2513. Construction Drawing. (3) (Prerequisite: EG 1143 or EG 1513.) One hour lecture. Five hours laboratory. Survey of building and construction industries; materials and types of construction; specifications; use of architectural graphic standards and minimum construction requirements; construction details; drawings; lettering.

EG 2900. Special Topics in Engineering Graphics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EG 4000. Directed Individual Study. Hours and credits to be arranged.

EG 4990/6990. Special Topics in Engineering Graphics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EG 7000. Directed Individual Study. Hours and credits to be arranged.

EG 8990. Special Topics in Engineering Graphics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ENGINEERING MECHANICS

Office: 330 Walker Engineering
Professors Cinnella, Daniewicz, Edwards, Hortemeier, Koenig, Newman, Jr., Rais-Rohani, Vizzini;
Associate Professors Bridges, Janus, Luck, Newman III, D. Thompson;
Assistant Professors Lacy, C. Olsen, G. Olsen, Sullivan; Instructor Hannigan

EM 2413. Engineering Mechanics I. (3) (Prerequisites: Grade of C or better in MA 1723 and PH 2213.) Three hours lecture. Concepts of forces, moments and other vector quantities; analysis of force systems; conditions of equilibrium; friction; centroids and moments of inertia.

EM 2433. Engineering Mechanics II. (3) (Prerequisites: Grade of C or better in EM 2413 and MA 2733.) Three hours lecture. Kinematics of particles and rigid bodies, kinetics of particles and rigid bodies using force-mass-acceleration, energy, momentum methods.

EM 2990. Special Topics in Engineering Mechanics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EM 3213. Mechanics of Materials. (3) (Prerequisite: Grade of C or better in EM 2413 and MA 2733.) Three hours lecture. Free body diagrams, equilibrium of simple structures; shear and bending moment diagrams; analysis of stress and strain; deflections of beams.

EM 3313. Fluid Mechanics. (3) (Prerequisite: Grade of C or better in MA 2733 and grade of C or better in EM 2433.) Three hours lecture. Fluid statics; analysis of fluid motion using the continuity, momentum and energy relationships; introduction to viscous flows.

EM 3413. Vibrations. (3) (Prerequisites: Grade of C or better in EM 2433 and MA 3253.) Three hours lecture. Fundamentals of free vibration, energy methods; forced and damped vibration, single degree of freedom; two degrees of freedom.

EM 4123/6123. An Introduction to the Finite Element Method. (3) (Prerequisite: Consent of instructor.) Three hours lecture. Introduction to the finite element theory and formulation; use of existing computer programs, with applications to the area of mechanics.

EM 4133/6133. Mechanics of Composite Materials. (3) (Prerequisites: EM 3213 and MA 3253.) Three hours lecture. Stress, strain, constitutive relations for anisotropic material, lamina properties, laminate properties, composite beams and plates.

EM 4143/6143. Engineering Design Optimization. (3) (Prerequisite: Consent of instructor.) Three hours lecture. Introduction to optimality cri-

teria and optimization techniques for solving constrained or unconstrained optimization problems. Sensitivity analysis and approximation. Computer application in optimization. Introduction in MDO. (Same as AFE 4553/6553 and IE 4743/6743).

EM 4213/6213. Advanced Mechanics of Materials. (3) (Prerequisite: EM 3213.) Three hours lecture. Stress, strain, stress-strain relationships, strain energy, failure theories, curved beams, unsymmetrical bending, shear center, torsion of noncircular sections, energy principles, Castigliano’s theorems, elasto-plastic behavior.

EM 4990/6990. Special Topics in Engineering Mechanics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EM 7000. Directed Individual Study. Hours and credits to be arranged.

EM 8000. Thesis Research/Thesis. Hours and credits to be arranged.

EM 8113. Theory of Continuous Media. (3) (Prerequisite: MA 3353 or consent of the instructor.) Three hours lecture. An introduction to the general theory of continuous media and its application to the theories of elasticity and fluid mechanics.

EM 8203. Applied Elasticity. (3) Three hours lecture. Analysis of stress and strain; stress-strain relations; bending and torsion of beams; stress functions; strain energy.

EM 8223. Elastic Stability. (3) Three hours lecture. Bending and buckling of beams and columns; numerical methods; minimum of the total potential; bending and buckling of plates.

EM 8313. Advanced Dynamics. (3) (Prerequisites: EM 2433 and MA 3253.) Three hours lecture. Fundamental considerations, Hamilton’s principle, Lagrange’s equations, rigid body dynamics.

EM 8323. Advanced Vibrations. (3) (Prerequisite: EM 3413.) Three hours lecture. Oscillatory systems, matrix formulation by Lagrange’s equations, natural modes of discrete and continuous systems, approximate methods, modal analysis.

EM 8990. Special Topics in Engineering Mechanics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

Department of ENGLISH

Office: 316 Lee Hall
Professors Crevey, Hargrove, Lyons, Myers, Patteson, Polk and Raymond (Head); Associate Professors Bentley, Little, Marsh, Murray, and Wolf; Assistant Professors Anderson, Dodds, Hagenston, Hanshaw, Johnson, O’Donnell, O’Gorman, Torbert, Vice, and West; Instructors Bogard, Bailey, McCool, Price, Spurlock, Stiles and Whitten

NOTE: Entering freshmen may enter honors or special sections of first-semester composition depending on standard and other tests. Students with ACT scores in English from 15 to 18 take EN 0103, from 19 to 28 take EN 1103, and of 29 and above take EN 1163 or EN 1103H (honors). International students of non-English background will be placed in composition sections appropriate to their needs as determined by TOEFL scores.

EN 0003. Developmental English. (3) Emphasizes the use of standard American English. Offered only to students required to enroll in developmental studies; prerequisite to any English courses applicable to requirements.

EN 1003. Basic English. (3) (Prerequisite: A score of 15 to 18 on the English section of the ACT). Three hours lecture. A study of grammar and mechanics as basic to composition, with emphasis on the sentence and the paragraph. Does not count toward any degree.

EN 1103. English Composition I. (3) (Prerequisite: A score of 19 or above on the English section of the ACT or EN 1003). Three hours lecture. A study of logical and rhetorical principles and organizational strategies that contribute to effective writing. 1103H. Honors section open through invitation only. The analytical study and frequent practice of interdisciplinary writing coupled with the analytical study of major literary genres - fiction, poetry, and drama.

EN 1113. English Composition II. (3) (Prerequisite: EN 1103, 1163, or 1183). Three hours lecture. An expanded study of and practice in stylistics, logic, and research as contributions to analytical writing. 1113H. Honors section open through invitation only. Continuation of EN 1103H.

EN 1163. Accelerated Composition I. (3) (Prerequisite: A score of 29 or above on the English section of the ACT or consent of the instructor). Three hours lecture. An expanded study of and practice in stylistics, logic, and re-
search as contributions to expository writing, designed for students who exhibit command of basic rhetorical principles.

EN 1173. Accelerated Composition II. (3) (Prerequisite: EN 1163 or consent of the instructor). Three hours lecture. An expanded study of and practice in stylistics, logic, and research as contributions to analytical writing, with emphasis on extensive study of diverse rhetorical models.

EN 2203. Introduction to Literature. (3) (Prerequisite: Completion of freshman composition). (Not open to English majors or honors students who complete EN 1183 or 1193). Three hours lecture. The critical and appreciative study of masterpieces in various genres chosen from English and world literature.

EN 2213. English Literature. (3) (Prerequisite: Completion of freshman composition). Three hours lecture. A survey of English literature from the beginning to the Romantic Period.

EN 2223. English Literature. (3) (Prerequisite: Completion of freshman composition). Three hours lecture. A Survey of English Literature from the Composition Period to the present.

EN 2243. American Literature. (3) (Prerequisite: Completion of freshman composition). Three hours lecture. A survey of American literature from the beginning to Whitman to the present.

EN 2253. American Literature. (3) (Prerequisite: Completion of freshman composition). Three hours lecture. A survey of American Literature from Whitman to the present.

EN 2273. World Literature. (3) (Prerequisite: Completion of freshman composition). Three hours lecture. Selected writings of Greece, Rome, and Medieval European translation.

EN 2283. World Literature. (3) (Prerequisite: Completion of freshman composition). Three hours lecture. Selected writings of the non-English-speaking world from the Renaissance through the Twentieth Century.

EN 2434. Literature and Film. (4) (Prerequisite: Completion of English composition requirements). Three hours lecture. One laboratory. Introduction to literary and cinematic techniques, methods of analysis, and structures.

EN 2443. Introduction to Science Fiction. (3) (Prerequisite: Completion of English requirements of the student’s major field). Three hours lecture. A study of major science fiction writers of the past two centuries, with emphasis on human experience in a technological society.

EN 2453. The Icelandic Sagas. (3) (Prerequisite: Completion of freshman composition). Three hours lecture. A survey, in English, of the sagas and their relationship to history, mythology, and other medieval literatures. (Same as FL 2453).

EN 2990. Special Topics in English. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EN 3223. Writing for Architects. (3) (Prerequisite: Completion of freshman composition; junior standing). Three hours lecture. Development of writing ability by reading, analyzing thematic architectural material, and by writing. Lecture; group discussions of grammar, rhetoric, stylistics, etc.

EN 3303. Creative Writing. (3) (Prerequisite: Completion of freshman composition). Three hours lecture. Basic techniques in writing fiction and poetry; meter and rhyme, metaphor and image, plot, characterization, dramatic detail.

EN 3363. American Literary History. (3) (Prerequisite: 3 hours of literature or consent of the instructor; students taking EN 3363 cannot earn credit toward an English major for EN 2243 or 2253). Three hours lecture. Major writers, genres, periods, and trends in American literature with particular emphasis on critical techniques and resources useful to students of literature.

EN 3414. Advanced Composition. (4) (Prerequisite: Twelve hours of English). Four hours lecture. An advanced expository writing course and general introduction to research methods and materials in language and literature.

EN 3423. Descriptive English Grammar. (3) (Prerequisite: Twelve hours of English). Three hour lecture. Advanced course in English grammar.

EN 3513. Women and Literature: Selected Topics. (3) (Prerequisites: Completion of freshman composition). Three hours lecture. A study of literary works by or about women. Texts are selected according to theme, genre, and/or historical period. (Same as WS 3513).

EN 4000. Directed Individual Study. Hours and credits to be arranged.

EN 4223/6223. Principles of Legal Writing. (3) (Prerequisites: Junior standing and completion of English requirements). Three hours lecture. Introduction to prose of the legal profession, emphasizing rhetorical strategy and style. Advanced composition, including work with contracts, letters, regulations, memoranda of law, and briefs.

EN 4303/6303. Craft of Poetry. (3) (Prerequisite: EN 3303 or consent of instructor). Three hours lecture. The craft and practice of writing poetry.

EN 4313/6313. Craft of Fiction. (3) (Prerequisite: EN 3303 or consent of instructor). Three hours lecture. The craft and practice of writing fiction.

EN 4323/6323. Literary Criticism from Plato to the Present. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. A survey of literary criticism from Plato to the present.

EN 4333/6333. Literature of the South. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. A critical survey of Southern writers past and present.

EN 4343/6343. African American Literature. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. A study of African American literature, especially that of the Twentieth Century.

EN 4353/6353. 20th Century Critical Theory. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. A study of major twentieth-century strategies of interpretation, including psychoanalysis, Marxism, structuralism, feminism, deconstruction.

EN 4403/6403. Introduction to Linguistics. (3) (Prerequisite: Twelve hours of English). Three hours lecture. The descriptive and historical study of language; linguistic analysis and comparisons; language classification; language in its social and cultural setting. (Same as AN 4403/6403)

EN 4413/6413. History of the English Language. (3) (Prerequisite: Twelve hours of English). Three hours lecture. The origin and development of the English language, structural and phonetic changes; conventions of modern usage.

EN 4433/6433. Approaches to TESOL. (3) (Prerequisite: EN 4403 or EN 3423 or consent of instructor). Three hours lecture. Methodology of Teaching English as a Second Language, with emphasis upon theory of second language acquisition, teaching techniques, and evaluation of relevant textbooks.

EN 4443/6443. English Syntax. (3) Three hours lecture. Grammatical analysis of English with emphasis on pedagogical applications to teaching English as a foreign/second language.

EN 4463/6463. Studies in Second Language Acquisition. (3) (Prerequisite: EN 4403/6403 or consent of instructor). Three hours lecture. A survey of the major theories of language acquisition, concentrating on accounts of second language acquisition.

EN 4503/6503. Shakespeare. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Shakespeare’s plays through 1599.

EN 4513/6513. Shakespeare. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Shakespeare’s plays from 1600.

EN 4523/6523. Chaucer. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Studies in the major works of Chaucer. Readings in Middle English.

EN 4533/6533. Milton. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. The principal writings of Milton, including all of PARADISE LOST and PARADISE REGAINED, and some of the chief prose works.

EN 4623/6623. Language and Culture. (3) (Prerequisite: EN 4403/6403 or consent of instructor). Three hours lecture. Examination of language as a part of culture, a source of knowledge about other aspects of culture, and a social behavior. (Same as AN 4623/6623 and SO 4633/6633).

EN 4633/6633. Sociolinguistics. (3) (Prerequisites: EN 4403 or consent of instructor). Three hours lecture. Examination of relationship between language and society, and how, when, and why people in speech communities use language varieties. (Same as AN 4633/6633 and SO 4633/6633).

EN 4643/6643. The Eighteenth-Century British Novel. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. A study of major eighteenth-century British novelists.

EN 4653/6653. The Nineteenth-Century British Novel. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. A study of the major nineteenth-century British novelists.

EN 4663/6663. The Twentieth-Century British and Irish Novel. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. A study of the major twentieth-century British novelists.

EN 4703/6703. English Literature of the Sixteenth Century. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. A study of Renaissance literature in England exclusive of Shakespeare’s plays.

EN 4713/6713. English Literature of the Seventeenth Century. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Seventeenth-century literature exclusive of Shakespeare’s plays.
EN 4723/6723. The Restoration and Swift. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. British poetry, prose, and drama, 1660-1700, and Swift.

EN 4733/6733. Eighteenth-Century Literature. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. British poetry, prose, and drama of the Eighteenth Century excluding Swift.

EN 4803/6803. Types of Twentieth-Century Drama. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. The development of modern American, British, and Continental drama since Ibsen.

EN 4813/6813. The Twentieth-Century World Novel. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Major world novelists of the Twentieth Century, excluding British, Irish, and American.

EN 4923/6923. Twentieth-Century Poetry. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Chief American and British poets; their verse technique and their contribution to poetic art.

EN 4863/6863. The Romantic Poets and Prose Writers. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. An intensive study of the major Romantic poets—Wordsworth, Shelley, Keats, Byron, Coleridge—along with some of the non-fiction prose of the period.

EN 4883/6883. Victorian Poets and Prose Writers. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Intensive study of Tennyson, Browning, Arnold, Swinburne, and other Victorian poets, along with some of the non-fiction prose of the period.

EN 4903/6903. American Literature: 1800-1860. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Studies in Irving, Cooper, Poe, Hawthorne, the Transcendentalists, and Southern Humorists. This course cannot be taken before EN 2243.

EN 4913/6913. American Literature: 1860-1900. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Studies in Twain, Whitman, Dickinson, James, Crane, and others. This course cannot be taken before EN 2253.

EN 4923/6923. Twentieth-Century American Novel. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. A study of the American novel since Dreiser.

EN 4933/6933. Survey of Contemporary Literature. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Significant trends in European and American literature since the outbreak of World War II.

EN 4943/6943. Form and Theory of Fiction. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Theoretical aspects of fictional technique, genre, style; readings include novels, short stories, and writings about the craft of fiction. Recommended complement to creative writing courses.

EN 4953/6953. Form and Theory of Poetry. (3) (Prerequisite: Completion of English requirements in the student’s major). Three hours lecture. Poetic theory; formal conventions, techniques, and innovations in the tradition of English and American poetry. Recommended complement to creative writing courses.

EN 4990/6990. Special Topics in English. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EN 6013. Internship in Compositional Theory and the Teaching of College Writing. (3) (Prerequisite: Acceptance as a teaching assistant in the Department of English). Three hours lecture. Compositional theory in relation to teaching and evaluating traditional modes of writing, coordinated with at least twenty hours per week of supervised professional experience.

EN 7000. Directed Individual Study. Hours and credits to be arranged.

EN 8000. Thesis Research/Thesis. Hours and credits to be arranged.

EN 8103. Graduate Research in English. (3) Three hours lecture. A required introduction to fields of study and to scholarly research and writing in English language and literature.


EN 8513. Studies in English Literature to 1485. (3)
EN 8523. Studies in English Literature 1485-1660. (3)
EN 8533. Studies in English Literature 1660-1832. (3)
EN 8543. Studies in English Literature 1832-1900. (3)
EN 8553. Studies in American Literature to the Civil War. (3)
EN 8563. Studies in American Literature from Civil War-1914. (3)

EN 8573. Studies in Twentieth-Century Literature. (3)
EN 8583. Selected Topics in Language and Literature. (3)

EN 8990. Special Topics in English. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ENVIRONMENTAL SCIENCE

Department of ENTOMOLOGY and PLANT PATHOLOGY

Office: 118 Hand Lab
Professor Oldham

ENS 2102. Introduction to Environmental Science. (2) Two hours lecture. A survey course to acquaint the beginning students with the various issues and disciplinary contributions regarding environmental science.

ENS 4102. Practicum. (2) (Prerequisite: Permission of ES advisor). A directed field experience of an assigned environmental problem and an associated weekly seminar.

EPP 2213. Introduction to Insects. (3) Two hours lecture. Two hours laboratory. Introduction to structure, function, ecology, taxonomy and evolution of the largest and most diverse group of organisms and how they impact humans and their environment.

EPP 2990. Special Topics in Entomology or Plant Pathology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EPP 3113. Introductory Plant Pathology. (3) (Prerequisite: BIO 1203 or consent of instructor). Two hours lecture. Three hours laboratory. Acquiring a general knowledge of the principles of plant pathology through a study of selected plant diseases of economic importance for Mississippi.

EPP 3124. Forest Pest Management. (4) Three hours lecture. Three hours laboratory. Study of the biology, damage, survey techniques, and control of forest diseases and insects. Pest management in southern forests will be emphasized. Fall semester.

EPP 3423. Ornamental and Turfgrass Insects. (3) Two hours lecture. Two hours lab. Study of the life history, damage, economic importance and control strategies of pests on ornamental plants and turfgrass.

EPP 4000. Directed Individual Study. Hours and credits to be arranged.

EPP 4114/6114. Mycology. (4) (Prerequisites: BIO 1203 and BIO 1213). Three hours lecture. Three hours laboratory. Survey of the principal fungal classes. Morphology, cytology, and physiology of fungi, and their relations to natural ecosystems, including saprophytic and parasitic (agriculture) fungi. Spring semester, yearly.

EPP 4152/6152. Advanced Fungal Taxonomy - Fungi Imperfecti. (2) (Prerequisite: Consent of instructor). One hour lecture. Two hours laboratory. Methods and practice in identification of taxon-fungi imperfecti in different ecosystems. Includes conventional macroscopic and microscopic techniques for identification compared with molecular methods.

EPP 4154/6154. General Entomology. (4) Two hours lecture. Four hours laboratory. Fall semester. Biology of insects including morphology, physiology, development, ecology and emphasis on classification of orders and common families.

EPP 4162/6162. Advanced Fungal Taxonomy - Ascomycetes. (2). (Prerequisite: Consent of instructor). One hour lecture. Two hours laboratory. Methods and practice in identification of taxon-ascomycetes in different ecosystems. Includes conventional macroscopic and microscopic techniques for identification compared with molecular methods.
EPP 4163/6163. Plant Disease Management. (3) (Prerequisite: EPP 3113). Two hours lecture. Three hours laboratory. Techniques and fundamentals of plant disease management. Disease dynamics related to management, avoidance, exclusion, eradication of pathogens; principles of plant protection, spraying techniques; biological control. Spring semester.


EPP 4172/6172. Advanced Fungal Taxonomy - Fleshy Basidiomycetes. (2) (Prerequisite: Consent of instructor). One hour lecture. Two hours laboratory. Methods and practice in identification of taxon-basidiomycetes in different ecosystems. Includes conventional macroscopic and microscopic techniques for identification compared with molecular methods.

EPP 4182/6182. Advanced Fungal Taxonomy-Oomycetes and Zygomycetes. (2) (Prerequisite: Consent of instructor). One hour lecture. Two hours laboratory. Distribution and identification of nematicides in different ecosystems. Includes conventional macroscopic and microscopic techniques for identification compared with molecular methods.

EPP 4214/6214. Diseases of Crops. (4) (Prerequisite: EPP 3113 or 3124). Three hours lecture. Two hours laboratory. Fundamentals and practical aspects of identification and control of selected diseases of crop plants grown in the southern U.S. Spring semester.

EPP 4234/6234. Field Crop Insects. (4) (Prerequisite: EPP 2213 or 4154). Three hours lecture. Two hours laboratory. Fall semester. Recognition, biology, distribution, damage, economic importance and methods of control of insects of agronomic and horticultural crops.

EPP 4244/6244. Aquatic Entomology. (4) (Prerequisite: EPP 4154 or instructors approval). Three hours lecture. Two hours laboratory. Study of basic biological and ecological principles important to aquatic insects and related arthropods, including life histories, evolutionary adaptations, community and species and identification.

EPP 4263/6263. Principles of Insect Pest Management. (3) Two hours lecture. Two hours laboratory. Discussion of pest management concepts, insect control methods, sampling, and pest management systems. Laboratory involves sampling, calibration, and other exercises related to pest management.

EPP 4335/6335. Anatomy and Physiology of Insects. (5) (Prerequisite: EPP 4154). Four hours lecture. Three hours laboratory. Spring semester. Introduction to the basic principles of structure and function of insect organ systems from a comparative and evolutionary viewpoint. (Same as PHY 6335).

EPP 4523/6523. Turfgrass Diseases. (3) (Prerequisite: EPP 3113 or 3124). Two hours lecture. Three hours laboratory. Study of the life cycle, damage, economic importance and control strategies of disease turfgrasses.

EPP 4543/6543. Toxicology and Insecticide Chemistry. (3) (Prerequisite: EPP 4154). Two hours lecture. Two hours laboratory. Spring semester. Chemistry, toxicity and mode of action of major groups of insecticides. Laboratory; bioassay methods, insecticide interactions, calculations.

EPP 4990/6990. Special Topics in Entomology or Plant Pathology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EPP 7000. Directed Individual Study. Hours and credits to be arranged.

EPP 7020. Advanced Research and Independent Study Topics. (1-5). Advanced studies and research in the subdivisions of Entomology and Plant Pathology. Students/Faculty member study contracts are required.

EPP 8000. Thesis Research. Hours and credits to be arranged.

EDUCATIONAL PSYCHOLOGY

EPY 2513. Human Growth and Development. (3) Three hours lecture. Psychological principles in the study of the child from birth to puberty; acquisition of motor skills; advance in perception; language, reasoning, and social behavior.

EPY 2990. Special Topics in Educational Psychology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EPY 3143. Human Development and Learning Strategies in Education. (3) (Prerequisites: PSY 1013 and admission to Teacher Education or consent of department head). Three hours lecture. A study of developmental perspectives of learning with emphasis on teaching.

EPY 3253. Evaluating Learning. (3) (Prerequisite: Admission to Teacher Education). Three hours lecture. A study of instructional evaluation for the purpose of assessing individual pupil progress and general effectiveness of instruction.

EPY 3503. Principles of Educational Psychology. (3) Three hours lecture. Application of psychological principles to the educational process; topics covered include learning, humanism, motivation, cognitive development, creativity, intelligence, exceptionality, classroom management, measurement, and evaluation.

EPY 3513. Writing in the Behavioral Sciences. (3) (Prerequisite: EN 1103 and EN 1113; junior standing; EPY majors must enroll concurrently in EPY 3503). Three hours lecture. An introduction to writing skills in the behavioral sciences.
DESCRIPTION of COURSES

EPY 3543. Psychology of Adolescence. (3) Three hours lecture. Physical, intellectual, emotional, and social growth processes from late childhood toward early adulthood; pubertal problems; mental hygiene of adolescence; family and peer relationships.

EPY 3553. Giftedness/Creativity. (3) Three hours lecture. An introduction to giftedness and creativity emphasizing uniqueness of gifted/creative individuals; a survey of creative problem-solving approaches.

EPY 4000. Directed Individual Study. Hours and credits to be arranged.


EPY 4053/6053. Psychology and Education of the Mentally Retarded. (3) Three hours lecture. Definitions, etiology, evaluation, development, and learning strategies of the mentally retarded; the role of family, community, and school in programming for the mentally retarded.

EPY 4073/6073. Personality Adjustment in Educational and Related Settings. (3) Three hours lecture. Personality development with special attention to motivation, culture, and interpersonal relations; personality problems in educational settings; corrective techniques.

EPY 4113/6113. Behavioral and Cognitive Behavioral Interventions. (3) The study of behavioral and cognitive-behavioral assessments and change procedures with special emphasis on non-school settings. This course cannot be used for special education certification.

EPY 4214/6214. Educational and Psychological Statistics. (4) Three hours lecture and three hours laboratory. A course in statistics for education and educational psychology majors. Analysis, description of and inference from various types of data.

EPY 4313/6313. Measurement and Evaluation. (3) Three hours lecture. Measurement and evaluation of learning activities and achievement of elementary school pupils and high school students; standardized tests; test construction; statistical techniques.

EPY 4513. Introduction to Research in Educational Psychology. (3) Three hours lecture. (Prerequisites: EPY 4214 and 3503). An introduction to conducting educational research focusing on planning and designing research for applied education settings.

EPY 4610/6610. Seminar in Educational Psychology. (1-6) (Prerequisite: 9 hours in Psychology and consent of instructor). Credit and title to be arranged. One to six lectures. Examination of specific topics of interest to faculty and students.

EPY 4990/6990. Special Topics in Educational Psychology. (1-5) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EPY 7000. Directed Individual Study. Hours and credits to be arranged.

EPY 8000. Thesis Research/Thesis. Hours and credits to be arranged.

EPY 8214. Advanced Educational and Psychological Statistics. (4) (Prerequisite: EPY 4214/6214 or its equivalent.) Three hours lecture and three hours laboratory. A survey of advanced statistical methods with emphasis upon the design and analysis of research problems in education and psychology.

EPY 8223. Psychological Foundations of Education. (3) Three hours lecture. The role of psychology in a changing context of organized education; the learner, content, structure, and management of the learning situation; studies of persistent problems.


EPY 8263. Psychological Testing in Educational and Related Settings. (3) Three hours lecture. Principles and techniques involved in selecting, administering, scoring and interpreting tests of personality, interest, vocational aptitude, achievement, and intelligence.

EPY 8273. Neuropsychology. (3) (Prerequisite: Consent of instructor). Three hours lecture. Study of brain-behavior relationships with emphasis on neuroscience. Overview of assessment techniques, rehabilitation planning, and research contributions.

EPY 8293. Cognitive Development. (3) Three hours lecture. The study of cognitive/intellectual development including the theories derived from the work of information-processing psychologists and Jean Piaget.

EPY 8493. Child Behavior and Personality Assessment. (3) (Prerequisites: EPY 8263 and consent of instructor). Three hours lecture. Selection, administration, scoring, and interpretation of behavior and personality instruments.


EPY 8533. Practicum in Teaching Educational Psychology. (3) (Prerequisite: EPY 8223). One hour lecture. Two hours practicum. Establishing objectives; selecting and organizing learning experiences; guiding and evaluating learning; supervised practicum in teaching educational psychology.


EPY 8703. School Psychology. (3) Two hours lecture, two hours field experience. A course covering the history, current objectives, organization and administration of school psychology combined with appropriate field experience.

EPY 8723. Individual Assessment for Educational and Related Settings. (3) (Prerequisite: EPY 6073 and EPY 8263 or equivalent). Two hours lecture, two hours practicum. Training in administering individual psychometric instruments; verbal and nonverbal linguistic techniques; interpretation of scores, writing psychometric reports.


EPY 8773. Assessment and Interventions for Academic Skills Deficits. (3) Three hours lecture. Study of theories, techniques, and procedures that have been shown to prevent and remedy academic skills deficits.

EPY 8780. Internship in School Psychology. (3 or 6) (Prerequisite: Consent of instructor). Supervised professional experience in an appropriate setting. Three hundred clock hours required for three semester hours credit.

EPY 8794. Supervised Experiences in School Psychology: Consultation. (4) (Prerequisites: EPY 9713, EPY 8763, and consent of instructor). Supervised consultation and intervention experiences in educational settings utilizing psychological principles and techniques in teaching/learning problems. Three hundred plus hours of supervised consultation experience.

EPY 8890. Supervised Experiences in School Psychology: Clinical Settings. (1-6) (Prerequisite: Consent of instructor). Supervised school psychology experiences in clinical settings utilizing psychological principles and techniques in teaching/learning problems.

EPY 8913. Psychology of Creative Imagination. (3) (Prerequisite: EPY 8523). A study of creative intellectual functioning and advances in thought on imagination imagery as they apply to measurement, nurture, development and related dimensions.

EPY 8933. Integrated Psycho-Educational Assessment. (3) (Prerequisites: EDF 9493, EPY 8723, consent of instructor). Two hours lecture, two hours practicum. Integration of assessment, interpretation, and report writing skills for intellectual, adaptive, personality, and academic instruments.

EPY 8990. Special Topics in Educational Psychology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

EPY 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

EPY 9213. Advanced Analysis in Educational Research. (3) (Prerequisites: EPY 6214 and EPY 8214, or equivalent course work). Three hours lecture. An examination of quantitative problem-solving methods, with special emphasis on modern techniques for investigating multivariable research problems in education.

EPY 9313. Education Evaluation Methods. (3) Three hours lecture. (Prerequisites: EPY 8214; EDF 9373 or equivalent course work). Introduction to evaluation contract development procedures, and planning and management of program evaluation in education and related settings.

EPY 9263. Applied Research Seminar. (3) (Prerequisites: EPY 6214, EDF 8363, and EDF 9373). Three hours lecture. Study of advances in thought on research approaches and doing research in educational psychology.

EPY 9703. Contemporary, Legal, Ethical, and Professional Issues in School and Educational Psychology. (3) (Prerequisite: consent of instructor). Three hours lecture. Psychology as a profession: Foundations of practice, roles and functions, professional issues and standards with emphasis on legal and ethical means in psychology.

EPY 9713. Advanced Psychological Consulting: Theory and Practice. (3) (Prerequisite: Consent of the instructor). Two hours lecture. Two hours practicum. Systematic investigation and application of psychological consultation in schools/human service settings. Consultation as applied to individuals and organizational structures. Study of research contributions.
ENGLISH as a SECOND LANGUAGE

Office: ESL Center, 46 Morgan St.

Instructor Watkins (Interim Manager); Lecturers Culbertson, Goettig, McMinn, Stamps and Whitten

EXPERIENTIAL LEARNING

Office: 608 Allen Hall

EXL 0190. Experiential Learning. (0) (Prerequisite: Permission of Department). Non-classroom learning experience arranged through agreement of student and department; written approval required. Registration provides equivalent of full time enrollment status but no academic credit. This course will not contribute to a student’s academic standing or earn credit toward graduation. Coordinated through Academic Affairs.

EXL 3100. Career Center Professional Practice Internship I. (0) (Prerequisite: 60 hours, 2.75 GPA and permission of Career Center). Career-related work experience arranged through mutual agreement of the student and employer with confirmation by the Career Center. This course will not contribute to a student’s academic standing or earn credit toward graduation. Coordinated by the Career Center.

EXL 3200. Career Center Professional Practice Internship II. (0) (Prerequisite: Exl 3100, 2.75 GPA and permission of Career Center). Career-related work experience arranged through mutual agreement of the student and employer with confirmation by the Career Center. This course will not contribute to a student’s academic standing or earn credit toward graduation. Coordinated by the Career Center.

FINANCE

Office: 326 McCool Hall

FIN 2003. Personal Money Management. (3) Three hours lecture. The individual’s acquisition and management of an optimal personal income and expenditure pattern over a lifetime to best meet his/her financial objectives.

FIN 2990. Special Topics in Finance. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FIN 3113. Financial Systems. (3) (Prerequisites: EC 2113, EC 2123 or AEC 2713 and junior standing). Three hours lecture. Study of interest rates, basic security valuation, money and capital markets, financial institutions and the objectives financial institutions play in the financial markets.

FIN 3123. Financial Management. (3) (Prerequisites: EC 2123, ACC 2023, and BQA 2113 and junior standing). Three hours lecture. Study of objectives, tools, methods, and problems of financial management; financial analysis, planning, control, sources/uses of funds, capital budgeting decisions and working capital.

FIN 3723. Financial Markets and Institutions. (3) (Prerequisite: FIN 3113 or equivalent.) Three hours lecture. Study of the functions of financial markets. Major topics include interest rates, their role in securities markets and financial institutions, and interest rate risk.

FIN 4000. Directed Individual Study. Hours and credits to be arranged.

FIN 4011. Finance Internship Seminar. (1) (Prerequisite: Approval of Department). Examination of topics related to developing a successful career in finance during work semester.

FIN 4021. Finance Career Planning Seminar. (1) (Prerequisite: approval of Department). Exploration and examination of issues relating to successful careers in finance. Open only to students who have not completed a work semester.

FIN 4123/6123. Financial and Commodities Futures Marketing. (3) (Prerequisite: Junior standing). Three hours lecture. Discussion of the purposes, limitations, mechanics, analysis and application of financial and commodity futures market in pricing and hedging opportunities. (Same as AEC 4123/6123).

FIN 4223. Intermediate Financial Management. (3) (Prerequisite: FIN 3123). Three hours lecture. Building on foundational concepts, this course provides a more in-depth coverage of financial analysis, valuation principles, the financial environment, capital budgeting and capital structure.

FIN 4233. Working Capital Management. (3) (Prerequisite: FIN 3123.) Three hours lecture. Analysis of selected problems in the short-term financial management of the firm, including cash management, investment opportunities, financing requirements, budgeting and planning.

FIN 4243. Senior Seminar in Finance. (3) (Prerequisites: FIN 3723 and FIN 4223). Three hours seminar. Comprehensive case study to bring out the problems involved in organizing, financing, and managing various types of business enterprises.

FIN 4423. Investments. (3) (Prerequisite: FIN 3123). Three hours lecture. Survey of various financial instruments and their characteristics, investor choice, and an introduction to the basics of security analysis, portfolio management, and speculative markets.

FIN 4433. Security Analysis and Portfolio Management. (3) (Prerequisites: FIN 4423.) Three hours lecture. Analysis of individual investments, creation and management of investment portfolios to achieve specific investor goals, and evaluation of portfolio performance.

FIN 4723. Bank Management. (3) (Prerequisites: FIN 3113 and FIN 3723.) Three hours lecture. Study of banking environment, functional areas of banking, and tools and techniques required to effectively manage a bank in a highly competitive, dynamic environment.

FIN 4733. Advanced Bank Management. (3) (Prerequisites: ACC 3203, FIN 4423, and FIN 4723.) Three hours seminar. Applications of financial management techniques to bank management decisions through experiential learning opportunities. Computer-based analysis, simulations, and written and oral presentations.

FIN 4923/6923. International Financial Management. (3) (Prerequisite: FIN 3123 or consent of instructor). Three hours lecture. A study of the theory and actual behavior of international financial management, foreign financial markets, exchange rate risk management, and foreign direct investments.

FIN 4990/6990. Special Topics in Finance. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FIN 7000. Directed Individual Study. Hours and credits to be arranged.

FIN 8000. Thesis Research/Thesis. Hours and credits to be arranged.

FIN 8052. Survey of Finance. (2) (Prerequisite: Graduate standing; ACC 2101, and BQA 8033, and EC 9043, equivalent or concurrent enrollment) Two hours lecture. Survey of financial management, analysis, planning, controls, sources/uses of funds, capital budgeting, and working capital with word processing, spreadsheet and database applications.
FIN 8112. Capital Acquisition and Allocation. (2) (Prerequisite: FIN 8052 or equivalent). Two hours lecture. Integration of risk and return concepts, capital structure, the capital acquisition process and capital budgeting into one framework.

FIN 8122. Corporate Liquidity Analysis. (2) (Prerequisite: FIN 8052 or equivalent). Two hours lecture. The role working capital plays in the viability of the firm and the financial management tools used to analyze and manage the firm’s liquidity position.

FIN 8223. Case Problems in Corporate Finance. (3) (Prerequisites: FIN 8112 and FIN 8122 or equivalent). Three hours seminar. Analyses of financial management cases involving working capital, financial analysis, valuation concepts, risk and return, capital budgeting, cost of capital, and financial planning.

FIN 8233. Advanced Financial Management. (3) (Prerequisites: FIN 8112 and FIN 8122 or the equivalent). Three hours lecture. A study of the theory and application of valuation, risk return analysis, capital budgeting decisions, and capital structure. Analysis of how these decisions affect firm value.

FIN 8313. Financial Management of Projects. (3) (Prerequisite: FIN 3123 or equivalent). Three hours lecture. Focuses on the financial aspects of project management. Topics include capital budgeting, risk assessment, cash flow forecasting, value estimation and identification and valuation of options embedded in the project.

FIN 8423. Portfolio Management. (3) (Prerequisites: FIN 8112 and FIN 8122 or the equivalent). Three hours lecture. The application of contemporary investment theory for decision-making purposes in portfolio management, and the formulation of portfolio policies for different types of investors.

FIN 8723. Financial Institutions Management. (3) (Prerequisites: FIN 8112 and FIN 8122, or equivalent). Three hours seminar. Cases and readings on the requirements and potential challenges of managing financial institutions in a competitive and rapidly changing environment. Computer simulations.

FIN 8733. Financial Markets, Rates and Flows. (3) (Prerequisites: FIN 8112 and FIN 8122 or equivalent). Three hours lecture. An analysis of money and capital market instruments; a study of interest rates and financial flows; the effect of public policy on credit conditions.

FIN 8990. Special Topics in Finance. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FIN 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

FIN 9233. Seminar in Corporate Finance. (3) (Prerequisites: FIN 8233 or the equivalent.) Doctoral seminar. Analysis and discussion of the literature dealing with topics in corporate finance. Also, students prepare and present research projects.

FIN 9433. Seminar in Portfolio Theory. (3) (Prerequisites: FIN 8423 or equivalent.) Doctoral seminar. Analysis and discussion of the literature dealing with topics in portfolio theory and management. Also, students prepare and present research projects.

FIN 9733. Seminar in Financial Markets and Institutions. (3) (Prerequisites: FIN 8733 or equivalent.) Doctoral seminar. Analysis and discussion of the literature dealing with topics in financial markets and institutions. Students prepare and present research projects.

Department of FOREIGN LANGUAGES

Office: 300 Lee Hall
Professors Emplaincourt (Head), A. Lopez, Wolverton;
Associate Professors Jordan and Robbins-Herring;
Assistant Professors Krol, Kunz, Harland, Lestrade and Rice;
Instructors Little, and Vozzo

A year’s study of the same foreign language in high school will normally be considered the equivalent of one semester’s work at MSU for the purpose of determining appropriate placement; no credit hours are earned for MSU courses bypassed in this manner. Students with two or more years of the same foreign language in high school are encouraged to take the Computerized Placement Tests (CPT) in French, German, and Spanish, and the Placement Tests (PT) Japanese, Latin, and Russian administered by the Department, enabling them to earn up to 8 non-transferable MSU credit hours; the tests are free of charge and the credits earned are entered on the student’s transcript upon recommendation of the Head of Foreign Languages Department. These tests can be taken during MSU Senior Invitational and MSU Spring Discovery by high school seniors; during summer orientations by entering freshman, and during the add/drop period of fall and spring semesters by beginning freshman. Foreign students may not register for credit in elementary and intermediate courses of their native language. All inquiries should be addressed to the Department Head.

FL 2453. The Icelandic Sagas. (3) (Prerequisite: Completion of freshman composition). Three hours lecture. A survey, in English, of the sagas and their relationship to history, mythology, and other medieval literatures. (Same as EN 2453).

FL 2990. Special Topics in Foreign Language. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FL 4000. Directed Individual Study. Hours and credits to be arranged.

FL 4123/6123. Scandinavian Mythology. (3) (Prerequisite: Junior standing or consent of the instructor). Three hours lecture. A survey of the myths and legends of Scandinavia in English translation. (Same as REL 4123/6123).

FL 4143/6143. Classical Mythology. (3) Three hours lecture. Myths and legends of Greece and Rome and their use in literature and the arts through the ages. (Same as REL 4143/6143)

FL 4623/6623. The Vikings. (3) (Prerequisite: FIN 8112 or FIN 8122 or equivalent). Three hours lecture. The role working capital plays in the viability of the firm and the financial management tools used to analyze and manage the firm’s liquidity position.

FL 4703/6703. French Drama of the 20th Century. (3) (Prerequisite: FIN 3523 or consent of instructor). Three hours lecture. Reading of works of French cultural heritage.


FL 1123. French II. (3) (Prerequisite: FLF 1113 or equivalent). Two hours lecture. Two recitations. Conversational French. Reading of graded text.

FL 2133. French III. (3) (Prerequisite: FIN 4303 or equivalent). Three hours lecture. Rapid review of French grammar; oral-aural practice; reading of intermediate texts. Honors section available through invitation.

FL 2143. French IV. (3) (Prerequisite: FLF 2133 or equivalent). Three hours lecture. Oral-aural practice; reading of intermediate texts. Honors section available through invitation.

FRENCH


FLF 1123. French II. (3) (Prerequisite: FLF 1113 or equivalent). Two hours lecture. Two recitations. Conversational French. Reading of graded text.

FLF 2133. French III. (3) (Prerequisite: FLF 2125 or equivalent). Three hours lecture. Rapid review of French grammar; oral-aural practice; reading of intermediate texts. Honors section available through invitation.

FLF 2143. French IV. (3) (Prerequisite: FLF 2133 or equivalent). Three hours lecture. Oral-aural practice; reading of intermediate texts. Honors section available through invitation.

FLF 2990. Special Topics in French. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLF 3114. Advanced French. (4) (Prerequisite: FLF 2143, FLF 2125 or equivalent or consent of instructor). Three hours lecture and laboratory. Required of all majors. Advanced instruction in all aspects of modern French.

FLF 3124. Advanced French. (4) (Prerequisite: FLF 2143, FLF 2125 or equivalent or consent of instructor). Three hours lecture and laboratory. Required of all majors. A continuation of FLF 3114.

FLF 3143. French Civilization. (3) (Prerequisite: FLF 2143, FLF 2125 or equivalent or consent of instructor). Three hours lecture. Illustrated survey of French cultural heritage.

FLF 3313. Business French I. (3) (Prerequisite: FLF 2143, FLF 2125 or equivalent or consent of instructor). Three hours lecture. The French language as used in business practices and marketing; emphasis on acquisition and application of French commercial terminology in import/export correspondence.

FLF 3323. Business French II. (3) (Prerequisite: FLF 2143, FLF 2125 or equivalent or consent of instructor). Three hours lecture. The French language as used in exchange controls, the Bourse, the banks; acquisition of French business terminology for written and oral expression.

FLF 3523. Survey of French Literature. (3) (Prerequisite: FLF 2143 or FLF 2125 or equivalent or consent of instructor). Three hours lecture. Requisite of all majors. A survey of French literature from the 18th century to the present.

FLF 4000. Directed Individual Study. Hours and credits to be arranged.

FLF 4073/6073. French Drama of the 20th Century. (3) (Prerequisite: FLF 3523 or consent of instructor). Three hours lecture. Reading of works of outstanding writers and discussion of literary currents of the century.

FLF 4093/6093. French Novel and Short Story of the 19th Century. (3) (Prerequisite: FLF 3523 or consent of instructor). Three hours lecture. Reading of selected masterpieces. Discussion of literary currents and personalities of the century.

FLG 4103/6103. French Novel and Short Story of the 20th Century. (3) (Prerequisite: FLG 3523 or consent of instructor). Three hours lecture. Reading and critical evaluation of modern French novels and short stories of various literary schools.

FLG 4143/6143. French Classicism. (3) (Prerequisite: FLG 3513). Three hours lecture. Reading and discussion of selected texts in the novel, drama, and criticism of the 17th century.

FLG 4153/6153. French Classicism. (3) (Prerequisite: FLG 3513 or consent of instructor). Three hours lecture. A continuation of FLG 4143/6143.

FLG 4213/6213. Historical Grammar. (3) (Prerequisites: FLG 3114 and 3124 or consent of instructor). A history of the French language from the Strasbourg Oaths to Montaigne.

FLG 4990/6990. Special Topics in French. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLG 7000. Directed Individual Study. Hours and credits to be arranged.

FLG 8000. Thesis Research/Thesis. Hours and credits to be arranged.

FLG 8073. Seminar in French Drama of the 20th Century. (3) (Prerequisite: Graduate standing).

FLG 8093. Seminar in the French Novel of the 19th Century. (3) (Prerequisite: Graduate standing).

FLG 8103. Seminar in the French Novel of the 20th Century. (3) (Prerequisite: Graduate standing).

FLG 8113. Seminar in French Classical and Neo-Classical Comedy. (3) (Prerequisite: Graduate standing).

FLG 8123. Seminar in the French Novel and Short Story of the Renaissance and Classical Period. (3) (Prerequisite: Graduate standing).

FLG 8213. Old French. (3) (Prerequisite: Graduate standing). A philological study of the development of Old Parisian French from Vulgar Latin.

FLG 8223. Seminar in French Classical and Neo-Classical Tragedy. (3) (Prerequisite: Graduate standing).

FLG 8990. Special Topics in French. (1-9) (Prerequisite: Graduate standing). Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GERMAN

FLG 1113. German I. (3) Two hours lecture. Two recitations. An introduction to conversational German.

FLG 1123. German II. (3) (Prerequisite: FLG 1113). Two hours lecture. Two recitations. Conversational German. Reading of graded texts.

FLG 2133. German III. (3) (Prerequisite: FLG 1123). Three hours lecture. Rapid review of German grammar; oral-aural practice; reading of intermediate texts.

FLG 2143. German IV. (3) (Prerequisite: FLG 2133). Three hours lecture. Oral-aural practice; reading of intermediate texts.

FLG 2990. Special Topics in German. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLG 3114. Advanced German. (4) (Prerequisite: FLG 2143 or consent of instructor). Three hours lecture and laboratory. Required of all majors. Advanced instruction in all aspects of modern German.

FLG 3124. Advanced German. (4) (Prerequisite: FLG 2143 or consent of instructor). Three hours lecture and laboratory. Required of all majors. A continuation of FLG 3114.

FLG 3143. German Civilization. (3) (Prerequisite: FLG 2143 or equivalent). Three hours lecture. A survey of German culture and life today.

FLG 3313. Business German I. (3) (Prerequisites: FLG 2143). Three hours lecture. The German language as used in business; emphasis on acquisition and application of German commercial terminology on import/export correspondence.

FLG 3323. Business German II. (3) (Prerequisite: FLG 2143). Three hours lecture. The German language as used in the German stock market, trade, and exchange controls; acquisition and application of written and oral German business terminology.

FLG 4000. Directed Individual Study. Hours and credits to be arranged.

FLG 4163/6163. History of the German Language. (3) (Prerequisite: FLG 3124). Three hours lecture. The relationship of High German to the parent Indo-European and to the remaining Germanic dialects; linguistic development from the earliest times to the present.

FLG 4463/6463. German Drama of the 20th Century. (3) (Prerequisite: FLG 3523). Three hours lecture. Reading of works of outstanding writers and discussion of literary currents of the century.

FLG 4990/6990. Special Topics in German. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLG 7000. Directed Individual Study. Hours and credits to be arranged.

FLG 8463. Seminar in German Drama of the 20th Century. (3) (Prerequisite: Graduate standing).

FLG 8990. Special Topics in German. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GREEK


FLH 1123. Elementary Ancient Greek II. (3) Three hours lecture. A continuation of FLH 1113.

FLH 2990. Special Topics in Greek. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLH 4990/6990. Special Topics in Greek. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLH 8990. Special Topics in Greek. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

JAPANESE


FLJ 1123. Japanese II. (3) (Prerequisite: FLJ 1113 or equivalent). Two hours lecture. Two recitations. An introduction to conversational Japanese.


FLJ 2143. Japanese IV. (3) (Prerequisite: FLJ 2133 or equivalent). Three hours lecture. Oral-aural practice; reading and discussion of intermediate texts.

FLJ 4000. Directed Individual Study. Hours and credits to be arranged.

FLJ 4990/6990. Special Topics in Japanese. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

LATIN


FLL 1123. Latin II. (3) (Prerequisite: FLL 1113 or equivalent). Three hours lecture. Grammar; elementary reading.

FLL 2133. Latin III. (3) (Prerequisite: FLL 1123 or equivalent). Three hours lecture. Review of Latin grammar; reading of intermediate texts.

FLL 2143. Latin IV. (3) (Prerequisite: 2133 or equivalent). Three hours lecture. Reading of intermediate texts.
FLL 2990. Special Topics in Latin. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLL 4000. Directed Individual Study. (Prerequisite: Junior standing). Hours and credits to be arranged.

FLL 4990/6990. Special Topics in Latin. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLL 7000. Directed Individual Study. Hours and credits to be arranged.

FLL 8990. Special Topics in Latin. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

RUSSIAN


FLR 1123. Russian II. (3) (Prerequisite: FLR 1113). Two hours lecture. Two recitations. Conversational Russian. Reading of graded texts.


FLR 2990. Special Topics in Russian. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLR 4000. Directed Individual Study. Hours and credits to be arranged.

FLR 4990/6990. Special Topics in Russian. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLR 8890. Special Topics in Russian. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

SPANISH


FLS 1123. Spanish II. (3) (Prerequisite: FLS 1113 or equivalent). Two hours lecture. Two recitations. Conversational Spanish. Reading of graded texts.

FLS 2133. Spanish III. (3) (Prerequisite: FLS 1123 or equivalent). Three hours lecture. Rapid review of Spanish grammar; oral-aural practice; reading of intermediate texts. Honors section available through invitation.

FLS 2143. Spanish IV. (3) (Prerequisite: FLS 2133 or equivalent). Three hours lecture. Oral-aural practice; reading of intermediate texts. Honors section available through invitation.

FLS 2990. Special Topics in Spanish. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLS 4000. Directed Individual Study. Hours and credits to be arranged.

FLS 4990/6990. Special Topics in Spanish. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FLS 7000. Directed Individual Study. Hours and credits to be arranged.

FLS 8800. Thesis Research/Thesis. Hours and credits to be arranged.

FLS 8223. Seminar in the Picarresque Novel. (3) (Prerequisite: Graduate standing).

FLS 8253. Seminar in the Novel of the 19th Century. (3) (Prerequisite: Graduate standing).

FLS 8263. Seminar in the Novel of the 20th Century. (3) (Prerequisite: Graduate standing).

FLS 8283. The Contemporary Spanish-American Novel and Short Story. (3) (Prerequisite: Graduate standing). Three hours lecture. A study of major contemporary Spanish-American novels and short stories.

FLS 8323. Seminar in the Drama of the Golden Age. (3) (Prerequisite: Graduate standing).

FLS 8333. Seminar in the Drama of the 19th Century. (3) (Prerequisite: Graduate standing).

FLS 8343. Seminar in the Drama of the 20th Century. (3) (Prerequisite: Graduate standing).

FLS 8443. Modernismo. (3) (Prerequisite: Graduate standing). Three hours lecture. A study of the most relevant modernists and their works (1888-1916).

FLS 8513. Spanish Literature of the Middle Ages. (3) (Prerequisite: FLS 8663). Three hours lecture. A study of Spanish literary masterpieces and movements from Poema del Cid to the 16th Century.
**Department of FOOD SCIENCE, NUTRITION and HEALTH PROMOTION**

Office: 107 Herzer Building
Professors Mikel (Head), Althen, Haque, Hood, Hunt, Marshall, Silva and White; Associate Professors: Byrd and Clary; Assistant Professor Chen, Coggins, Fountain and Schilling

**FNH 1103. Introduction to Food Science, Nutrition and Health Promotion.** (3) Three hours lecture. An introductory course that relates the importance of food science, nutrition, and health promotion to the community. Consideration of current trends in these fields.

**FNH 2112. Food Products Evaluation.** (2) One hour lecture. Two hours laboratory. Sensory examination of food products; common defects, causes, and remedies. Basic methods of evaluation of different types of foods.

**FNH 2203. Science of Food Preparation.** (3) One hour lecture. Four hours laboratory. A study of foods and the principles underlying handling and preparation of food products to maintain the highest standard of quality. (Same as HS 2203).

**FNH 2233. Meal Management.** (3) One hour lecture. Four hours laboratory. Planning, preparing, and serving meals; emphasis on management of time, energy, and money in relation to feeding the family. (Same as HS 2233).

**FNH 2283. Child Health and Nutrition.** (3) Three hours lecture. Nutrition requirements during pregnancy and lactation, and of infants and young children; birth defects from metabolic errors; related health of young children. (Same as HS 2283).

**FNH 2293. Individual and Family Nutrition.** (3) Three hours lecture. Fundamental principles of human nutrition and the practical application of this knowledge in the selection of adequate diets. (Same as HS 2293).

**FNH 2990. Special Topics in Food Science and Technology.** (1-9) Credit and title to be arranged. This course is offered developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**FNH 3003. Nutrition Field Experience.** (3) (Prerequisite: Consent of Instructor). Supervised work experience for nutrition students in an approved situation.

**FNH 3111. Food Science, Nutrition and Health Promotion Seminar.** (1) One hour lecture. Preparation and presentation on specially assigned current topics in Food Science.

**FNH 3113. Wine Appreciation.** (3) Three hours lecture. Principles of wine identification, evaluation and service with emphasis on the wines of Europe and the United States.

**FNH 3142. Meats Judging I.** (2) Spring semester. Four hours laboratory. Grading and judging meat carcasses and cuts, study of packing house operation. (Same as ADS 3142).

**FNH 3263. Research Methods in Food and Nutrition.** (3) (Prerequisites: ST 2113, HS 2293). Two hours lecture. Two hours laboratory. Introduction to food and nutrition research methods, application of computer and related technologies in nutrition research through design and development of a research project.

**FNH 3274. Quantity Food Production and Service.** (4) (Prerequisite: HS 2233 or consent of instructor). One hour lecture. Eight hours laboratory. Principles and methods of preparation and service of food in quantity.

**FNH 3283. The Food Service System.** (3) Three hours lecture. Introduction to the food service system concept, functional subsystems, and management of financial and human resources.

**FNH 3701. Nutrition Professional Development.** (1) (Prerequisite: Junior standing and consent of instructor). Preparation for nutrition field experience, dietetic internship, and careers.

**FNH 4000. Directed Individual Study.** Hours and credits to be arranged.

**FNH 4114/6114. Analysis of Food Products.** (4) (Prerequisites: CH 2503). Three hours lecture. Three hours laboratory. Chemistry and technology of food products processing and physical and chemical methods of analyzing foods and biological products.

**FNH 4123/6123. Fermented Foods Processing.** (3) (Prerequisites: BIO 3304). Two hours lecture. Three hours laboratory. Fundamental concepts of microbial cultures used in various fermented foods, with emphasis on the manufacture of cheese, cultured dairy products and other foods.

**FNH 4143/6143. Dairy Foods Processing.** (3) Two hours lecture. Two hours laboratory. Basic concepts of processing: freezing, and concentrating milk and milk products. Emphasis on fluid milk products, frozen dairy desserts, and dried products.

**FNH 4153/6153. Food Plant Management.** (3) (Prerequisite: Senior standing or consent of instructor). Two hours lecture. One hour laboratory. A study of problems associated with the general management of food processing plants.

**FNH 4164/6164. Quality Assurance of Food Products.** (4) (Prerequisites: BIO 3304). Two hours lecture. Four hours laboratory. Principles, methods, and techniques involved in evaluating essential parameters for commercial, state and federal control of food products.

**FNH 4173/6173. Food Packaging.** (3) (Prerequisite: Consent of instructor). Three hours lecture. Objectives and requirements of packaging; composition, characteristics, chemical and physical properties, selection and adaptation of packaging materials and packages.

**FNH 4213. Nutrition Public Policy and Promotion.** (3) (Prerequisite: HS 2293). Three hours lecture. Addresses the role of the public and private sectors in identifying and addressing the nutritional needs of various population groups.

**FNH 4233/6233. Medical Nutrition Therapy.** (3) (Prerequisites: BCH 3613, HS 4253 and/or HS 4293, and BIO 2014 or consent of instructors). Two hours lecture. Two hours laboratory. Treatment of human diseases through nutrient modification. (Same as NTR 6233)

**FNH 4241/6241. Applied Food Chemistry.** (1) (Prerequisite: BCH 3613 and prior credit for/or current enrollment in FNH 4243/6243). Two hour lab. Basic laboratory experiments to provide understanding of the function and interactions of chemical components in food.

**FNH 4243/6243. Composition and Chemical Reactions of Foods.** (3) Spring semester. (Prerequisites: CH 1053 and CH 2503 or equivalent). Three hours lecture. Nature and chemical behavior of food constituents including proteins, lipids, carbohydrates, minerals, water, enzymes and pigments, properties of food systems as related to commercial preparation. (Same as ADS 4243/6243).

**FNH 4253/6253. Human Nutrition I.** (3) (Prerequisites: BIO 2014 and CH 2503 or equivalent). Three hours lecture. Advanced human nutrition: digestion, metabolism, function, requirements, and recommendations for carbohydrates, proteins and lipids. (Same as NTR 4253/6253).

**FNH 4273/6273. Nutritional Assessment.** (3) (Prerequisites: BCH 3613 and HS 4223 or equivalent). Two hours lecture. Two hours laboratory. Selection, utilization, interpretation, and evaluation of anthropometric, laboratory, clinical and dietary methods available for the assessment of nutritional status.

**FNH 4274/6274. Advanced Food Service Management.** (4) (Prerequisites: HS 3274, HS 4283). One hour lecture. Eight hours laboratory. Practical experience in the management of quantity food production for specialty dinners and catering, including purchasing and cost accounting.


**FNH 4293/6293. Human Nutrition II.** (3) (Prerequisites: BIO 4253/6253 or consent of instructor). Three hours lecture. Advanced human nutrition and metabolism with emphasis on the functions, requirements, and recommendations of the regulatory nutrients (vitamins and minerals) and water. (Same as NTR 4293/6293).

**FNH 4314/6314. Meats Processing.** (4) Spring semester. Three hours lecture. Two hours laboratory. Survey of the meat industry with emphasis on slaughtering, cutting, curing, cooling, care, storage and manufacturing meats and meat products. (Same as ADS 4314/6314).

**FNH 4333/6333. Food Law.** (3) (Prerequisite: consent of instructor). Two hours lecture. Two hours laboratory. Role of law, mandatory and optional food regulations exercised by state, federal, and international agencies on food quality, safety, wholesomeness, nutrition and security.

**FNH 4353/6353. Nutrition Throughout the Life Cycle.** (3) (Prerequisite: BIO 4253/6253 or consent of instructor). Three hours lecture. Study of interrelationships of physiological, biochemical and sociological factors and nutrient needs of individuals and groups during the life cycle; infancy through the later years. (Same as NTR 6353 and HS 4353/6353).
F NH 4373/6373 Career Success Skills in FNH. (3) Three hours lecture. Refinement of skills utilized in the delivery of food, nutrition, and health promotion career responsibilities. Emphasizes use of technology in development of activities for diverse settings.

FNH 4393/6393. Prevention and Control of Disease. (3) Three hours lecture. An examination of how food science, nutrition, and health promotion relate to chronic diseases. Prevention, control, and detection are examined.

FNH 4414/6414. Microbiology of Foods. (4) (Prerequisite: BIO 3404). Two hours lecture. Four hours laboratory. Isolation and classification of the microorganisms associated with spoilage of commercial and domestic preserved foods. (Same as BIO 4414/6414).

FNH 4513/6513. Poultry Processing. (3) Two hours lecture. Two hours laboratory. Operation and study of modern processing equipment; grading poultry and eggs; killing, dressing, eviscerating, and packaging poultry; studying methods of retail and wholesale marketing. (Same as PO 4513/6513).

FNH 4563. Food Products Evaluation. (3) Basic principles and applications in food product measurements, including physical (viscosity, texture), chemical (ph, acidity), microbiological (bacteria, yeast), and sensory methods will be discussed. (This course is designed for certification programs and not for students enrolled in degree programs at MSU).

FNH 4573/6573. Food Engineering Fundamentals. (3) (Prerequisites: MA 1713, PH 1123, or consent of instructor.) Three hours lecture. Fundamentals of engineering as applied to food and agricultural products. Emphasis on units and dimensions, thermodynamics, mass and energy balances, fluid flow and heat transfer.

FNH 4583/6583. Food Preservation Technology. (3) Two hours lecture. Two hours laboratory. Basics and unit operations on thermal processing, refrigeration/freezing, concentration/dehydration, fermentation, preservatives, baking, low thermal processes, modified atmospheres, wastewater, and shelf-life will be discussed. (Same as PSS 4583/6583).

FNH 4593/6593. New Food Product Development. (3) (Prerequisite: Senior Level Standing). Two hours lecture. Two hours laboratory. New product development, original idea through preliminary appraisal, economic and technological feasibility studies, laboratory developments, organoleptical and consumer testing, and revisions to final decision making.

FNH 4613/6613. Seafood Processing. (3) Two hours lecture. Two hours laboratory. A study of basis food science and technology principles directed toward seafood and aquaculture food harvesting, processing, marketing, and regulations.

FNH 4990/6990. Special Topics in Food Science and Technology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FNH 7000. Directed Individual Study. Hours and credits to be arranged.


FNH 8111-8141. Food Science Seminar. (1) One hour lecture. Preparation and presentation of reports on specially assigned current topics in Food Science.

FNH 8113. Advanced Food Microbiology. (3) (Prerequisite: FNH/BIO 4414/6614). Three hours lecture. Advanced concepts in food microbiology emphasizing food quality and safety.

FNH 8143. Advanced Food Chemistry. (3) (Prerequisites: FNH 4243/6243). Three hours lecture. Designed for students to recognize and appreciate the various colloidal phenomena encountered in foods, and to develop a knowledge of techniques employed in their investigation.

FNH 8163. Flavor and Food Acceptance. (3) (Prerequisite: CH 2503). Three hours lecture. Sensory responses with emphasis on smell, taste, tact and appearance as related to foods. Techniques of panel and physicochemical methods of testing.

FNH 8193. Problems in Health Education. (3) Three hours lecture. Includes current information relating to various health problems in our society. Stresses methods of prevention and wellness at different levels of curriculum organization.

FNH 8233. Maternal, Infant, and Child Nutrition. (3) Three hours lecture. Nutritional needs during reproduction and growth; problems in nourishing women during the reproductive period, infants, and children; indices of growth and development. (Same as NTR 8233).

FNH 8243. Community Nutrition. (3) (Prerequisite: FNH 3213 or consent of instructor). Three hours lecture. Nutrition services and problems in the community. Supervised experience in methods for determining and implementing action programs in nutrition education. (Same as NTR 8243).

FNH 8253. Nutrition and Food Science Research Techniques. (3) Spring semester. One hour lecture. Six hours laboratory. Application of various instruments and techniques for assay of food and biological material. (Same as NTR 8253).

FNH 8261. Dietetic Internship Seminar. (1) (Prerequisite: Admission into the Dietetic Internship/Graduate Studies Program). One hour lecture. Selection of current topics in foods, nutrition or dietetics and in-depth review of current literature for critical analysis presentation.

FNH 8273. Dietetic Internship Capstone. (2) (Prerequisite: Admission into the Dietetic Internship/Graduate Studies Program). Three hours lecture. Theoretical aspects of dietetics gained through the study of resources, technology, professional standards, and other factors that influence entry-level practice.

FNH 8286. Supervised Practice Experience. (6) (Prerequisite: Admission into the Dietetic Internship/Graduate Studies Program). Supervised practice experiences in clinical, community, and food service systems settings. May be repeated for credit.

FNH 8423. Meat Science. (3) Summer semester. (Prerequisites: CH 4513/6513 or equivalent and BIO 3304 or equivalent). Three hours lecture. Basic study of the value of meat and how this information is applied to the evaluation, processing and preservation of meat, meat products and meat by-products. (Same as ADS 8423)


FNH 8523. Health Promotion Techniques. (3) Three hours lecture. Examination of techniques utilized in delivery of health promotion interventions. Emphasizes use of technology in development of activities suitable for diverse audiences and settings.

FNH 8543. Health Education for Diverse Populations. (3) Three hours lecture. This course is designed to help students identify and develop programs to overcome the health disparities that exist in diverse populations.


FNH 8572. Advanced Food Technology. (2) (Prerequisites: FNH 6583 and/or consent of instructor). Two hours lecture. Introduction and discussion of recent developments in Food Science and Technology including aseptic processing, microwave technology, food irradiation, separation techniques, and modified atmosphere packaging.

FNH 8613. Design and Administration of Health Promotion Programs. (3) Three hours lecture. Principles of health promotion planning models applicable to school, community, and work site programs. Investigation of existing programs and current literature.

FNH 8623. Seminar in School Health. (3) Three hours seminar. Examination of the role of the health educator in the Coordinated School Health Program. Review of current curricular approaches and issues in school health.


FNH 8983. Ingredient Technology. (3) Three hours lecture. A specialized study of the major food ingredients including functionality, applications, formulations, and legal considerations for formulated products.

FNH 8990. Special Topics in Food Science and Technology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FNH 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

Department of FORESTRY

Office: 105 Thompson Hall


FO 1101. Forest Resources Survey. (1) One hour lecture. Survey of the professional resource manager’s role and career opportunities in providing forest-based goods and services. Not open to Forest Resources majors with senior standing.
FO 2111. Dendrology Laboratory. (1) (Co-requisite: FO 2112). Four hours laboratory. Field exercises to promote the recognition and identification of trees and other woody plants.

FO 2112. Dendrology. (2) (Prerequisite: BIO 1203; Co-requisite: FO 2111). Two hours lecture. Introduction to the identification and systematic classification of trees and other woody plants.

FO 2213. Forest Measurements. (3) (Prerequisite: ST 2113 or equivalent). Three hours lecture. Principles of measurement for standing and felled trees. Inventory and sampling theory for forested lands.

FO 2990. Special Topics in Forestry. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FO 3012. Introduction to Forest Communities. (2) (Prerequisites: PSS 3303, FO 2112, FO 2111). Field exercises to gain practical knowledge of soil-geology-ecology interrelationships through trips to various physiographic regions.

FO 3015. Forest Description and Analysis. (5) (Prerequisites: ST 2113, FO 2213). Field and laboratory exercises to gain practical experience with forest and land measurement techniques and equipment. Mapping inventory, and analysis of forested tracts.

FO 3101. Computer Application for Forest Resources Laboratory. (1) (Co-requisite: BI 1202). Two hours laboratory. Practice and demonstration of general and professional software packages used in upper level courses and professional settings in Forest Resources.

FO 3102. Computer Applications for Forest Resources. (2) (Prerequisite: Three hours of courses in the College of Forest Resources or consent of instructor. Co-requisite: FO 3101). Two hours lecture. Application of microcomputer concepts in forest resources with emphasis in Forestry, and general and professional software packages in professional settings.

FO 3113. Forest Recreation Management. (3) Three hours lecture. Studies of the management of forest resources for outdoor recreation.

FO 3123. Forest Ecology and the Global Environment. (3) (Prerequisite: Three hours of courses in the College of Forest Resources or consent of instructor. Co-requisite: FO 3101). Three hours lecture. Introduction to the basic biology, issues, and policy-science interface involving air pollution, deforestation, and other current forest environmental concerns.

FO 3201. Forest Fire Laboratory. (1) (Co-requisite: FO 3202). Four hours laboratory on alternate weeks. Field applications and demonstrations of fire control and management techniques that complement theory learned in FO 3202.

FO 3202. Forest Fire. (2) (Co-requisite: FO 3201). Two hours lecture. Forest fire control and use. Aspects of fire effects, prevention, detection, suppression and the use of prescribed burning in fire management.

FO 4000. Directed Individual Study. Hours and credit to be arranged.

FO 4113/6113. Forest Resource Economics. (3) (Prerequisites: AEC 2713 or equivalent). Three hours lecture. Basic principles of forest resource valuation; economics applied to production, conversion, marketing and consumption of forest products and benefits.

FO 4121/6121. Principles of Silviculture Laboratory. (1) (Co-requisite: FO 4123/6123). Four hours laboratory. investigative field and laboratory exercises used to complement concepts presented in FO 4123/6123, develop interpretive abilities, and improve reporting skills.

FO 4123/6123. Principles of Silviculture. (3) (Prerequisite: FO 3012; Co-requisite: FO 4121/6121). Three hours lecture. Natural principles governing establishment, development, and functioning of forest ecosystems. Includes ecology, genetics, physiology, tree growth, reproduction, site, stand dynamics, energetics, hydrology, nutrition, and succession.

FO 4123/6123. Forest Biometrics. (3) (Prerequisite: FO 3102,FO 3101, and FO 3015). Three hours lecture. Applications of mensurational and statistical principles and techniques in determination of forest growth and yield. Advanced topics of forest resource inventory.

FO 4221/6221. Practice of Silviculture Laboratory. (1) (Prerequisite: FO 4123/6123 or WF 4223; Co-requisite: FO 4223/6223). Four hours laboratory. Application of silviculture practices and operations under given forest land management objectives.

FO 4223/6223. Practice of Silviculture. (3) (Prerequisites: FO 4221/6221, FO 4123/6123 or WF 4123/6223, and WF 4223; Co-requisite: FO 4221/6221). Three hours lecture. Manipulation to obtain desired reproduction and to attain optimum development under given forest land management objectives.

FO 4231/6231. Forest Operations and Harvesting Laboratory. (1) (Co-requisite: FO 3015). Four hours laboratory. Investigative field and laboratory exercises used to complement concepts presented in FO 4233/6233.

FO 4233/6233. Forest Operations and Harvesting. (3) (Prerequisites: FO 3015, FO 4231/6231). Three hours lecture. Study of practical, managerial, and logistic considerations associated with harvesting and other forest operations, as well as their social, environmental, and legal influences.

FO 4243/6243. Tree Genetics and Reforestation. (3) (Prerequisites: BIO 1203 and Junior standing). Three hours lecture. Biological, genetic, and physiological principles of tree reproduction. Applications to forest management and reforestation, including tree improvement, cloning, seed technology, nursery management and plantation establishment.

FO 4253/6253. Timber Procurement. (3) (Prerequisites: FO 4231/6231, FO 4253/6233). Lectures and field exercises dealing with the problems of timber procurement to include planning for harvest, methods of handling and transport, legal, and safety considerations.

FO 4313/6313. Spatial Technologies in Natural Resources Management. (3) (Prerequisite: FO 3015 or GR 2313 or consent of instructor). Three hours lecture. Three hours laboratory. Fundamentals of scale, area, height, and stand volume determinations from aerial imagery; planimetric and topographic mapping; image interpretation; GIS and GPS; applications to natural resources.

FO 4323/6323. Forest Resource Management. (3) (Prerequisites: FO 4213/6213, FO 4113/6113, FO 4233/6233, FO 4231/6231, FO 4223/6223). Three hours lecture. Three hours laboratory. Application of quantitative decision-making techniques to stand-level and forest-wide management problems. Topics include land classification, forest production, optimal rotation analysis, and harvest scheduling.

FO 4343/6343. Forest Administration and Organization. (3) Three hours lecture. Hierarchy and land structuring of forest organizations. Legal aspects of administering forest land holdings.

FO 4353/6353. Forestry Law. (3) (Prerequisite: Junior standing or consent of instructor). Three hours lecture. Current topics relating to natural resources policy which affect management decisions and practices in the public and private sectors of natural resource use.

FO 4423/6423. Professional Practice. (3) (Prerequisite: FO 4323/6323). Three hours lecture. Four hours laboratory. Forest resource data collection and analysis. Development of forest resource alternatives and recommendations for a specific forest property.

FO 4443/6443. International Forest Resources and Trade. (3) (Prerequisite: Consent of Instructor). Three hours lecture. A study of the world’s wood consumption, marketing arrangements, community forestry, and forestry in economic development.

FO 4451/6451. Remote Sensing Applications Laboratory. (1) (Co-requisite: FO 4452/6452). Three hours laboratory. Applications to interpretation of remote sensing data. Emphasis is on computer applications for image analysis.

FO 4452/6452. Remote Sensing Applications. (2) (Co-requisite FO 4451/6451; Prerequisite: A basic image interpretation or remote sensing course or consent of instructor). Two hours lecture. Introduction to remote sensing with emphasis on analysis and applications of digital image data in inventory, monitoring, and management of renewable natural resources.

FO 4463/6463. Forest Hydrology and Watershed Management. (3) (Prerequisite: PSS 3303. Credit or enrollment in FO 4223/6223, FO 4221/6221, or consent of instructor). Synthesis of fundamental properties and processes of forest soils, hydrology, and water resources at site-specific, ecosystem, and landscape scales.


FO 4472/6472. GIS for Natural Resource Management. (2) (Co-requisite: FO 4471/6471; Prerequisite: Junior standing). Two hours lecture. Introduction to geographic information systems (GIS) with emphasis on collection, encoding, storage, retrieval, and analysis of spatial data for use in management of natural resources.

FO 4483/6483. Forest Soils. (3) (Prerequisite: PSS 3303, FO 4123/6123, FO 4211/6211, or consent of instructor). Three hours lecture. Synthesize current information on fundamental properties and processes of forest soils with emphasis on applications to silviculture, soil conservation, and sustainable management of forested ecosystems.

FO 4631/6631. Tree Form and Function Laboratory. (1) (Prerequisites: Introductory statistics such as ST 2113 or FO 4213, graduate standing or consent of instructor). Three hours laboratory. Introduction to tree physiology measurement techniques and instrumentation, data analysis and interpretation.
FO 4633/6633. Tree Form and Function. (3) (Prerequisite: BIO 1203). (Co-requisite for 6633: FO 6631). Three hours lecture. Physiology growth, and development of forest trees. Topics include carbohydrate source-sink relations, tree hydraulic architecture, forest canopy-atmosphere gas exchange.

FO 4990/6990. Special Topics in Forestry. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FO 7000. Directed Individual Study. Hours and credits to be arranged.

FO 8000. Thesis Research/Thesis. Hours and credits to be arranged.

FO 8111. Graduate Seminar. (1) Review of and discussion of current forestry issues. Presentation of student reports.

FO 8123. Tree Seed. (3) (Prerequisite: BIO 4203/6203 or consent of instructor). Two hours lecture. Three hours laboratory. Principles and practices of tree seed production, methods, and factors involved in harvesting, processing, storing, and testing of tree seed.

FO 8133. Forest Ecophysiology. (3) (Prerequisite: FO 4432/6432, BIO 4214/6214, or Consent of Instructor). Three hours lecture. Fall semester. An exploration of environment-plant interactions, and physiological mechanisms for injury from, and resistance to, environmental stress, with emphasis on forest communities.

FO 8143. Advanced Forest Economics. (3) Three hours lecture. Application of current theory and techniques of economics to forestry. Emphasis is on the use of quantitative tools to improve decision-making in forest resource management.

FO 8153. Quantitative Forest Ecology. (3) (Prerequisites: MA 1723 and ST 8114 or consent of instructor). Three hours lecture. Analytical models, fitting model coefficients to data, life tables, spatial patterns, interspecific competition, and species diversity.

FO 8163. Nonmarket Forest Values. (3) Three hours lecture. (Prerequisite: FO 4113 or equivalent or Consent of Instructor). The course will deal with the valuation of nonmarket, non-timber outputs or amenities derived from the forest.

FO 8173. Advanced Spatial Management. (3) (Prerequisite: an introductory course in remote sensing and/or geographical information systems or consent of instructor). Three hours lecture. Group discussion and application of integrated remote sensing, image analysis and GIS software tools for assessment of natural resources.

FO 8211. Graduate Seminar. (1) Review of and discussion of current forestry issues. Presentation of student research.

FO 8213. Advanced Silviculture. (3) (Prerequisite: FO 4223 or consent of instructor). Three hours lecture. (Prerequisite: FO 4113 or equivalent or Consent of Instructor). The course will deal with the valuation of nonmarket, non-timber outputs or amenities derived from the forest.

FO 8223. Seminar in Forest and Wildland Resources and Use. (3) Three hours. Biological and social bases for forest and wildland use; conservation and management through applications of science and public policy.

FO 8233. Advanced Forest Inventory. (3) Three hours lecture. Design and analysis of forest resource inventories. Growth functions, yield tables, measures of site quality and stocking, and advanced sampling topics.

FO 8243. Advanced Forest Resource Management and Planning. (3) (Prerequisite: FO 8143). Three hours lecture. Emphasis is on the assessment of multiple-use alternatives. Data needs, resource trade-offs, and economic and policy implications are discussed.

FO 8293. Master of Forestry Professional Paper. (3) For Master of Forestry students only. Demonstration of ability to compile, synthesize, and evaluate information, and to effectively communicate analyses and conclusions.

FO 8313. Spatial Statistics for Natural Resources. (3) (Prerequisite: ST 4313/6313 and introductory GIS course, or consent of instructor). Three hours lecture. Concepts and methods of spatial statistics as applied to natural resource monitoring and management.

FO 8990. Special Topics in Forestry. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FO 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

Department of FOREST PRODUCTS

Office: Forest Products Department

Professors Leighley (Head), Amburgey, Barnes, Borazjani, Ingram, Kim, Nicholas, Schultz, Seale, Sellers and Steele;
Associate Professors Diehl, Hunter, Shmulsky and Zhang;
Assistant Professor Shi

FP 1103. Wood Technology and Products. (3) Three hours lecture. A survey of wood structures, properties and products, including reconstituted wood products, chemicals from wood and wood preservation.

FP 2990. Special Topics in Forest Products. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FP 3012. Introduction to Forest Industries. (2) 40 hours per weeks for two weeks of laboratory (industry tours). Guided introduction to forest products industries and processes.

FP 4000. Directed Individual Study. Hours and credits to be arranged.

FP 4013/6013. Wood Anatomy. (3) (Prerequisite: FP 1103 or consent of instructor). Two hours lecture. Three hours laboratory. Anatomy of commercial timber species; elements of botanical microtechnique, fundamentals of microscopy, and fundamental properties: gross and minute structural characteristics of wood leading to identification.

FP 4023/6023. Wood Chemistry. (3) (Prerequisite: CH 1053 and CH 1055, or CH 2233 and CH 2211). Three hours lecture. Introduction to the distribution, chemical structure, reactions and uses of the chemical components of wood including cellulose, hemicellulose, lignin, and extractives.

FP 4113/6113. Adhesives and Finishes for Wood. (3) (Prerequisite: CH 1053, FP 1103, or consent of instructor). Two hours lecture. Three hours laboratory. Theory and technology of adhesion; adhesive types, application equipment, fundamentals of coating technology; wood finishes; finishing systems; evaluation of glued, finished products; market volumes.


FP 4143/6143. Composite Wood Products. (3) (Prerequisite: FP 4113 or consent of instructor). Two hours lecture. Three hours laboratory. Study of physical and chemical parameters affecting reconstituted wood products; laboratory investigation of processing methods; industrial standards and quality control; markets.

FP 4213/6213. Wood Deterioration and Preservation. (3) (Prerequisite: Consent of instructor). Two hours lecture. Three hours laboratory. Thermal, biological, and mechanical agents of wood products deterioration; biological control; design considerations; wood preservatives, preservation systems; treatability; preservative effectiveness; standards, pollution control.

FP 4223/6223. Furniture Production I. (3) (Prerequisite: FP 1103 or consent of instructor). Two hours lecture. Three hours laboratory. The theory of furniture production; materials for furniture; manufacturing machines and their functions; wood machining and sanding; finishing; industrial processes; marketing.

FP 4233/6233. Furniture Production II. (3) (Prerequisite: FP 1103 or consent of instructor). Two hours lecture. Three hours laboratory. General principles of upholstered furniture design; frame construction and analysis; material selection; fasteners; joint construction; and testing standards.

FP 4253/6253. Quantitative Methods in Forest Products and Furniture. (3) (Prerequisite: MA 1613 or MA 1713, BIS 1012 or concurrent). Three hours lecture. Application of economic principles to the production and marketing of forest products; production theory of single and multiproduct firms; computer applications.

FP 4313/6313. Environmental Principles. (3) (Prerequisites: FP 3012 or consent of instructor). Three hours lecture. Environmental regulations pertaining to Forest Products industries. Handling and transport of hazardous compounds. Sources of environmental problems, fate in the environmental, and common control technologies.

FP 4323/6323. Physical Properties of Wood. (3) (Prerequisite: FP 1103, MA 1613, PH 1113, or consent of instructor). Two hours lecture. Three hours laboratory. Equation derivation; dimensional behavior; psychometry; thermal properties; electricity; moisture movement; case studies/problems.

FP 4353/6353. Forest Products Marketing. (3) (Prerequisites: FP 3012 and junior standing). Marketing and practices used by forest products and furniture producing companies as related to differentiated vs non-differentiated products by consumers.
FP 4413. Professional Practice. (3) (Prerequisite: Senior standing). Three hours independent study. Seniors will be exposed to all FP faculty members and required to prepare both written and oral reports on a variety of FP topics.

FP 4423/6423. Mechanical Properties of Wood. (3) (Prerequisite: FP 1103, MA 1613, PH 1113, or consent of instructor). Two hours lecture. Three hours laboratory. Strength and elasticity of wood and wood composites; variation in properties as function of structure, moisture, temperature and time; derivation of working stresses; structural design.

FP 4990/6990. Special Topics in Forest Products. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FP 7000. Directed Individual Study. Hours and credits to be arranged.

FP 8000. Thesis Research/Thesis. Hours and credits to be arranged.

FP 8111. Research Seminar. (1) Review of current research work in wood science and technology; the scientific method; philosophy of research.

FP 8113. Advanced Wood Physics. (3) (Prerequisite: Consent of instructor). Two hours lecture. Three hours laboratory. Wood-fluid relationships; interfacial properties of wood; thermal and electrical properties of wood; current topics in wood physics.

FP 8123. Advanced Lignocellulosic Chemistry. (3) (Prerequisite: Consent of instructor). Three hours lecture. Carbohydrate chemistry, chemistry of cellulose and cellulosics, hemicellulose, lignins, extractives, and bark; pulping and bleaching chemistry; analysis of lignocellulosic materials; degradation of lignocellulosics; biomass products.

FP 8133. Environmental Issues in Forest Products. (3) (Prerequisite: Consent of instructor). Three hours lecture. Environmental impact, regulations, management of wood treatment by-products and chemical wastes; biodegradation microorganisms; bioremediation; biomass residues; soil, sediment, water, air contaminations; current clean-up technologies.

FP 8143. Ultrastructure of Wood. (3) (Prerequisites: Course in basic wood anatomy and identification, comparable to FP 4014/6014). Two hours lecture. Three hours laboratory. The study of the formation, anatomy, structure and chemical properties of wood and wood fibers with an introduction to microscopic and spectroscopic methods of investigation.

FP 8213. Advanced Wood Mechanics. (3) (Prerequisite: Consent of instructor). Two hours lecture. Three hours laboratory. Study of elastic and viscoelastic behavior of wood composites; fracture in wood; stress analysis; current topics in wood mechanics.

FP 8990. Special Topics in Forest Products. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

FP 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

GENERAL AGRICULTURE

GA 1111. Survey of Agriculture. (1) One hour lecture. A study of the over-all function, historical beginnings, organization and operation of the agricultural industry in the United States and the world.

GA 2990. Special Topics in General Agriculture. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GENERAL BUSINESS

GB 2990. Special Topics in General Business. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GB 3011. Academic Peer Advising I. (1) (Prerequisites: Junior standing and consent of instructor, for Business majors only). One hour lecture. Study of the role, benefits, objectives, and practice of academic peer advising.

GB 3021. Academic Peer Advising II. (1) (Prerequisites: GB 3011 and consent of Instructor, for Business majors only). One hour lab. Laboratory application of academic peer advising.

GB 3031. Academic Peer Advising III. (1) (Prerequisites: GB 3011, GB 3021, and consent of Instructor, for Business majors only). One hour lab. Laboratory application of academic peer advising.

GB 4853. Business Policy. (3) (Prerequisite: Graduating senior). Three hours lecture. Administrative process under conditions of uncertainty. Emphasis on integrating knowledge acquired in the functional areas of business administration in formulating administrative policies.

GB 4990/6990. Special Topics in General Business. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GB 8990. Special Topics in General Business. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GENERAL ENGINEERING

Office: 250 McCain Engineering Building
Professors King, D. Reese and K. Schulz
Instructors Brocato, Green, Nelson, Powe and Rimel

GE 2990. Special Topics in General Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GE 3011. Engineering Entrepreneurship Seminar. (1) Two hours seminar. Current topics in engineering entrepreneurship to enable students to better understand the role of the entrepreneur in creating start-up companies and leading young existing companies.

GE 3513. Technical Writing. (3) (Prerequisites: Completion of English composition requirements; junior standing). Three hours lecture. Instruction and practice in technical writing for scientific and engineering fields, emphasizing analysis and development of correspondence, progress and research reports, instruction, and proposals.

GE 4990/6990. Special Topics in General Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GE 8990. Special Topics in General Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GE 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

GENETICS

(For the interdisciplinary graduate programs in Genetics, consult College of Agriculture and Life Sciences section of this catalog and the Graduate Bulletin.)

GNS 2990. Special Topics in Genetics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GNS 3103. Genetics I. (3) (Prerequisites: MA 1313 and BIO 1504 or BIO 1203). (Same as PO 3103 and BIO 3103).

GNS 4133/6133. Human Genetics. (3) (Prerequisite: BIO 1504 or consent of instructor). Three hours lecture. Principles of Mendelian and molecular genetics as applied to humans. Description and causes of human genetic diseases and other anomalies such as autosomal dominant conditions and sex linked recessive conditions.

GNS 4804/6804. Molecular Biology Methods. (4) (Prerequisite: Coregistration in BCH 4613/6613). Two hours lecture. Four hours laboratory. A comprehensive course to teach the student the modern methods of biochemistry including molecular biology. (Same as BCH 4804/6804).

GNS 4990/6990. Special Topics in Genetics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GNS 6123. Animal Breeding. (3) Fall semester. (Prerequisite: PO 3103). Three hours lecture. The basis for genetic improvement of livestock, including the study of variation, heritable characteristics, mating systems and methods of estimating breeding values. (Same as ADS 4123/6123).

GNS 6713. Molecular Biology. (3) (Prerequisite: Coregistration in BCH 4613/6613). Three hours lecture. A study of basic molecular processes such as
synthesis of DNA, RNA, and protein in both prokaryotic and eukaryotic cells. Offered fall semester. (Same as BCH 4713/6713).

GG 7000. Directed Individual Study. Hours and credits to be arranged.

GG 8000. Thesis Research/Thesis. Hours and credits to be arranged.

GG 8453. Statistical Genetics. (3) (Same as ADS 8453).

GG 8643. Molecular Genetics. (3) (Prerequisites: PO 3103 or BIO 3103 and Coregistration in BCH 4613/6613). Three hours lecture. Study of the gene and its expression with emphasis on structure and function in higher organisms. (Same as BCH 8643 and PHY 8643).

GNS 8990. Special Topics in Genetics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

Department of GEO SCIENCES

Office: 109 Hilburn Hall

Professors Binkley, Mylroie, Schmitz and Wax; Associate Professors Brown, Dewey, and Lynch; Assistant Professors Choi, Cooke, Dyer, Grady, Kirkland, Mack and Rodgers; Instructors Cartwright, Gillham, Haby, Haney, Harris, Miller, J. Mylroie, Sherman-Morris, Ruffin, Verno and Wallace

GG 1111. Earth Sciences I Laboratory. (1) Two hours laboratory. Laboratory for GG 1113, but may be scheduled without GG 1113. Includes study of earth materials, maps, and aerial photographs. Planned primarily as a science elective for the non-geology major.

GG 1113. Survey of Earth Sciences I. (3) Three hours lecture. Study of the Earth in space, the materials of which the Earth is composed, and the processes affecting change on the Earth. Planned primarily as a science elective for the non-geology major.

GG 1121. Earth Sciences II Laboratory. (1) Two hours laboratory. Laboratory for GG 1123, but may be scheduled without GG 1123. Includes study of fossils, geologic maps, and geologic cross sections. Planned primarily as a science elective for the non-geology major.

GG 1123. Survey of Earth Sciences II. (3) (Prerequisite: GG 1113 or equivalent). Three hours lecture. Origin and development of the Earth through geologic time. Planned primarily as a science elective for the non-geology major.

GG 1133. Planetary Geology. (3) Three hours lecture. Process oriented examination of the planets and their satellites with emphasis on the “Earth-like” planets and moons.

GG 2990. Special Topics in Geology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GG 3133. Introduction to Environmental Geology. (3) (Prerequisite: GG 1113). Three hours lecture. Consideration of those aspects of earth science concerned with problems arising from intensive use of earth by modern society.

GG 3603. Introduction to Oceanography. (3) (Prerequisite: GG 1113). Three hours lecture. A survey of the basic principles and applications of science to the study of the marine environment.

GG 3613. Water Resources. (3) (Prerequisite: GG 1113 or equivalent or consent of instructor). Three hours lecture. Introduction to the location, use, recovery and environmental problems of surface and subsurface waters.

GG 4000. Directed Individual Study. (Prerequisite: Junior standing). Hours and credits to be arranged.

GG 4033/6033. Resources and the Environment. (3) (Prerequisite: Consent of instructor). Three hours lecture. Formation and development of natural resources involving the basic evolution, planning, and design of a typical lignite coal mine, including environmental monitoring and reclamation.

GG 4063/6063. Development of Fossil Fuel Resources. (3) (Prerequisite: Consent of instructor). Three hours lecture. Formation, deposition, and extraction of fossil fuel resources. Petroleum and coal will be the main fossil fuels examined.

GG 4113/6113. Micropaleontology. (3) (Prerequisite: GG 1123 or equivalent). Three hours lecture. A study of microscopic fossils. May be taken with GG 4201.

GG 4114/6114. Mineralogy. (4) (Prerequisites: GG 1113 and CH 1223, or consent of instructor). Three hours lecture. Three hours laboratory. The physical and chemical properties of minerals; crystallography; origin, distribution, association, uses, and identification of minerals.

GG 4123/6123. Petrology. (3) (Prerequisite: GG 4114 or equivalent). Two hours lecture. Three hours laboratory. The origin, occurrence, and classification of the major rock types.

GG 4133/6133. Principles of Paleoeology. (3) (Prerequisite: GG 1123 or equivalent or consent of instructor). Three hours lecture. A study of paleoecology with special emphasis on marine paleoecology. May be taken with GG 4201.

GG 4153/6153. Engineering Geology. (3) (Prerequisite: GG 1113 or equivalent). Two hours lecture. Two hours laboratory. Application of geologic principles to location and construction of engineering structures; engineering properties of geologic materials; engineering application of equipment used by geologists.

GG 4201/6201. Practicum in Paleontology. (1) (Prerequisites: GG 1123 or equivalent). One hour lecture. Two hours laboratory. Laboratory for GG 4203, but may instead be taken with GG 4113 or GG 4133. A practicum in morphology of fossils, biostatigraphy, and paleoecology.

GG 4203/6203. Principles of Paleobiology. (3) (Prerequisites: GG 1123 or equivalent). Three hours lecture. Three hours laboratory. An introductory study of topics in paleobiology. May be taken with GG 4201.

GG 4233/6233. Applied Geophysics. (3) (Prerequisite: Consent of instructor). Three hours lecture. A survey of the basic principles and applications of geophysics with major emphasis on petroleum exploration.

GG 4304/6304. Principles of Sedimentary Deposits I. (4) (Prerequisite: GG 4114/6114 or consent of instructor). Three hours lecture. Three hours laboratory. Treatment of sediment and sedimentary rock. Emphasis on texture, fluid processes, deposition, structure, and diagenesis; stratigraphic analysis; and application to subsurface flow systems.

GG 4333/6333. Geowriting. (3) Three hours lecture. Weekly library research on controversial topics in geology presented in class as written professional papers.

GG 4403/6403. Gulf Coast Stratigraphy. (3) (Prerequisite: GG 4304/6304 or consent of instructor). Three hours lecture or field trips. Systematic study of the stratigraphy of the Gulf Coast; actual field experience substituted for class work, when conditions permit.

GG 4413/6413. Structural Geology. (3) (Prerequisites: GG 4123 or consent of instructor). Two hours lecture. Two hours laboratory. Application of the principles of mechanics to the forces deforming the rocks of the Earth’s crust; emphasis on structures in sedimentary rocks.

GG 4433/6433. Subsurface Methods. (3) (Prerequisite: GG 4443 and GG 4413, or equivalent). One hour lecture. Four hours laboratory. The study of subsurface geologic methods including contouring, sampling study, various types of logging, and the interpretation of subsurface data.

GG 4443/6443. Principles of Sedimentary Deposits II. (3) (Prerequisite: GG 4204). Three hours lecture. Application of principles from GG 4304. Introduces facies associations produced in depositional environments, systems, and systems tracts, tectonics and sedimentation, basin classification, and sequence analysis.

GG 4503/6503. Geomorphology. (3) (Prerequisite: Consent of instructor). Three hours lecture. The origin and characteristics of land forms based on a consideration of geologic processes, stages of development, and geologic structure.

GG 4523/6523. Coastal Environments. (3) (Prerequisite: GG 1113 or consent of instructor). Three hours lecture. An introduction to world coastal environments, with emphasis upon major shoreline-shaping processes, geographical variation in coastal landforms, human impacts, and environmental concerns.

GG 4613/6613. Physical Hydrogeology. (3) (Prerequisite: GG 3613 or consent of instructor). Three hours lecture. Advanced study of the interrelationship of ground water and its geologic environment with emphasis on occurrence, distribution, and movement.

GG 4623/6623. Chemical Hydrogeology. (3) (Prerequisite: CE 3523, CE 8563, or GG 4613/6613 or consent of instructor). Three hours lecture. Advanced study of groundwater and its environment with emphasis on the chemical interaction of water with porous solids and the transport of chemical constituents.

GG 4990/6990. Special Topics in Geology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GG 7000. Directed Individual Study. Hours and credit to be arranged.

GG 8000. Thesis Research/Thesis. Hours and credits to be arranged.
GG 8113. Geology I: Processes and Products. (3) (Prerequisite: Consent of instructor). Three hours video and online. Principles of physical geology with emphasis on earth materials and processes, rock and mineral identification, and landscape development. Primarily for K-12 science teachers.

GG 8123. Geology II: Earth, Time and Life. (3) (Prerequisite: GG 8113 or consent of instructor.) Three hours video and online. Principles of historical geology with emphasis on geological time, earth history, fossils, evolution, and extinction. Primarily for K-12 science teachers.

GG 8203. Ocean Science. (3) (Prerequisite: GG 8113 or consent of instructor). Three hours video and online. Comprehensive examination of the ocean world, focusing on the topography, physics, chemistry, and circulation of the oceans. Primarily for K-12 science teachers.

GG 8223. Advanced Paleontology. (3) (Prerequisite: GG 4203 or equivalent). Two hours lecture. Two hours laboratory and field trips. Deals with topics in advanced paleontology.

GG 8233. Environmental Geoscience. (3) (Prerequisite: GG 8113 or consent of instructor). Three hours video and online. Study of current environmental problems associated with the earth science realms: atmosphere, biosphere, hydrosphere, and lithosphere. Primarily for K-12 science teachers.

GG 8333. Planetary Science. (3) (Prerequisite: GG 8113 or consent of instructor). Three hours video and online. Examination of mineral matter and geological processes of the moon, the planets, asteroids, comets and meteorites. Primarily for K-12 science teachers.

GG 8443. Advanced Structural Geology. (3) (Prerequisite: Major in geology including GG 4413 or equivalent). Three hours lecture. A study of major tectonic units and the forces involved in their formation.

GG 8561. Geoscience Seminar. (1) (Prerequisite: Graduate standing). Review of current geoscience literature; preparation and presentation of formal papers.

GG 8572. Geologic Literature. (2) (Prerequisite: Major in geology). A reading course with emphasis on library research.

GG 8613. Hydrology. (3) (Prerequisite: GG 8113 or consent of instructor). Three hours video and online. Investigation of the occurrence, distribution, movement, and chemistry of earth’s waters. Emphasis on geological controls of surface and groundwater. Primarily for K-12 science teachers.


GG 8990. Special Topics in Geology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GEOGRAPHY

(For departmental information, see GEOSCIENCES, GG.)

GR 1114. Elements of Physical Geography. (4) Three hours lecture. Two hours laboratory. Systematic study of the elements of the environmental process that form and characterize the earth’s natural landscapes. May be taken as a science elective.

GR 1123. Introduction to World Geography. (3) Three hours lecture. A survey of the world’s regions, with emphasis upon locational aspects, physical and cultural diversity, and environmental issues.

GR 1603. Introduction to Meteorology. (3) (Prerequisite: GR 1114, GG 1113, or equivalent). Three hours lecture. Descriptive study of weather with the objective of gaining appreciation of the variety of atmospheric phenomena. Explanation of daily weather events, their causes and impacts.

GR 2013. Cultural Geography. (3) Three hours lecture. Study of human occupation of the Earth, treating geographic aspects of population, settlement, origin and diffusion of cultural traits, resource utilizing systems, and political factors.

GR 2313. Maps and Remote Sensing. (3) Two hours lecture. Two hours laboratory. Fundamental principles of cartography and remote sensing, including types and applications. Attention is given to interpretation of surface features, environmental problem solving, and environmental planning.

GR 2990. Special Topics in Geosciences. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GR 3113. Conservation of Natural Resources. (3) Three hours lecture. Consideration of the current problems associated with the conservation of forests, waters, minerals, and wild life in the United States and the world.

GR 3303. Survey of Geospatial Technologies. (3) (Prerequisite: GR 2313 or consent of instructor.) Three hours lecture. Geographic Information Systems, Remote Sensing and Global Positioning Systems applied to earth systems and science. Includes field excursions for hands-on experience with current technologies.

GR 3311. Geospatial Applications. (1) (Prerequisite: GR 2313 or consent of instructor). One hour lecture. Extensive investigation of the primary geospatial computer packages. Course will focus on the utilization and application of these computer packages related to current geospatial technologies.

GR 3313. Introduction to Geodatabases. (3) (Prerequisite: GR 2313 or consent of instructor). Three hours lecture. Examination of geodatabase structures utilized in Geographic Information Systems. Implementations of GIS components through spatial programming using Visual Basic applications designed for geospatial data.

GR 4000 Directed Individual Study. Hours and credit to be arranged.

GR 4103/6103. Geography of Tourism. (3) (Prerequisites: GR 1123 or equivalent). Three hours lecture. Study of the spatial aspects of recreation and tourism, with emphasis upon social, economic, and environmental impacts.

GR 4123/6123. Urban Geography. (3) Three hours lecture. Historic trends in distribution and growth of urban settlements, urban location theory; economic bases, functions, and structure of cities and metropolitan areas; urban problems; planning.

GR 4203/6203. Geography of North America. (3) Three hours lecture. A regional survey of the United States and Canada with emphasis upon place names, physical landscapes, historical settlement patterns, cultural regions, and environmental issues.

GR 4213/6213. Geography of Latin America. (3) Three hours lecture. A regional survey of Latin America with emphasis upon placenames, physical environments, cultural landscapes and their evolution, and environmental issues.

GR 4223/6223. Geography of Europe. (3) Three hours lecture. A regional survey of Europe with emphasis upon placenames, physical environments, cultural landscapes, geopolitical evolution, end environment issues.

GR 4233/6233. Geography of Asia. (3) Three hours lecture. A regional survey of Asia with emphasis upon placenames, physical geography, cultural diversity and cultural landscapes, geopolitical conflicts, and environmental issues.

GR 4243/6243. Geography of Russia and the Former Soviet Republics. (3) Three hours lecture. A regional survey of the former Soviet Union republics with emphasis upon placenames, physical environments, ethnic diversity, geopolitical evolution, and environmental issues.

GR 4253/6253. Geography of Africa. (3) Three hours lecture. A regional survey of the African continent with emphasis upon placenames, physical geography, cultural diversity and cultural landscapes, geopolitical changes, and environmental issues.

GR 4263/6263. Geography of the South. (3) Three hours lecture. A regional survey of the South with emphasis upon physical and cultural landscapes, settlement patterns, ethnic diversity, tourism development, and environmental issues.

GR 4303/6303. Principles of GIS. (3) (Prerequisite: Junior or graduate standing, or consent of instructor). Two hours lecture. Two hours laboratory. Spatial analysis and topological relationships of geographic data using Geographic Information Systems, with emphasis on GIS theory.

GR 4313/6313. Advanced GIS. (3) (Prerequisite: GR 4303/6303 or consent of instructor). Two hours lecture. Two hours laboratory. Vector-based file structure and GIS queries using spatial and geodatabase attributes. Descriptive and prescriptive modeling in the raster domain including regression and linear weighted modeling.

GR 4323/6323. Cartographic Sciences. (3) (Prerequisite: Junior or graduate standing or consent of instructor). Two hours lecture. Two hours laboratory. Principles of cartographic theory and map design. Types of maps, map projections, proportional symbols, use of color, mapping and statistics, interactive maps, and map animation.

GR 4333/6333. Remote Sensing of the Physical Environment. (3) (Prerequisite: GR 3303, GR 3311 or consent of instructor.) Two hours lecture. Two hours laboratory. Examines remote sensing methods applicable to large area analyses of watershed-level drainage systems, urban landscape, landscape vegetation metrics, physical landscape structural components, and atmospheric features.

GR 4402/6402. Weather Analysis I. (2) (Prerequisite: GR 1603 or equivalent). One hour lecture. Two hours laboratory. Introduction to real-time weather information such as Difax charts, satellite and radar imagery, and text data. Emphasis placed on Nowcasting.
GR 4412/6412. Weather Analysis II. (2) (Prerequisite: GR 4402/6402). One hour lecture. Two hours laboratory. Continuation of Weather Analysis I. Advanced analysis of current weather data in Nowcasting.

GR 4422/6422. Weather Forecasting I. (2) (Prerequisite: GR 4412/6412). One hour lecture. Two hours laboratory. Introduction to the process of creating and disseminating weather forecasts. Use of current weather data in creating daily forecasts for the local area.

GR 4432/6432. Weather Forecasting II. (2) (Prerequisite: GR 4422/6422). One hour lecture. Two hours laboratory. Continuation of Weather Forecasting I. Emphasis placed on disseminating both oral and written forecasts for the local area.

GR 4443. Weather Prediction I. (3) (Prerequisite: GR 1603 of consent of instructor). Three hours video and online. Examination of the complexity of weather forecasting. Emphasis on numerical weather prediction, computer models, and mesoscale analysis.

GR 4453. Weather Prediction II. (3) (Prerequisite: GR 4443 or consent of instructor). Three hours video and online. Continuation of GR 4443. Case studies of weather events are used to develop independent weather forecasts. Emphasis on special weather events.

GR 4502/6502. Practicum in Broadcast Meteorology I. (2) (Prerequisite: GR 1603 or equivalent). One hour lecture. Two hours laboratory. Introduction to developing a weather story with emphasis on producing weather graphics for television, chroma key mechanics, and weathercast communication.

GR 4512/6512. Practicum in Broadcast Meteorology II. (2) (Prerequisite: GR 4502/6502). One hour lecture. Two hours laboratory. Continuation of Practicum in Broadcast Meteorology I with emphasis on weather graphics produced by two weathercast performance, image and communication. Supported by lab practice.

GR 4522/6522. Practicum in Broadcast Meteorology III. (2) (Prerequisite: GR 4512/6512). One hour lecture. Two hours laboratory. Emphasis placed on advanced weathercasting, including field reporting, severe weather, and building graphics. Students are assigned actual television weather shows, with performance emphasis in the lab.

GR 4532/6532. Practicum in Broadcast Meteorology IV. (2) (Prerequisite: GR 4522/6522). One hour lecture. Two hours laboratory. Emphasis on the weathercasting job market in television. Students create actual television weather shows, and focus on producing a resume tape during the semester.

GR 4603/6603. Climatology. (3) (Prerequisite: GR 1114 or GR 1123, or equivalent). Three hours lecture. Study of the elements and controls of weather and climate. Focus will be placed upon Severe Local Storms.

GR 4613/6613. Applied Climatology. (3) (Prerequisites: GR 1603 or equivalent). Two hours lecture. Two hours laboratory. Problem solving in today’s world in topics such as bioclimatology, agricultural climatology and land use climatology.

GR 4623/6623. Physical Meteorology. (3) (Prerequisite: GR 1603). An investigation of cloud physics/precipitation processes and solar/terrestrial radiation, including atmospheric dynamics, atmospheric electricity, optics, and instrumentation.

GR 4633/6633. Statistical Climatology. (3) (Prerequisites: GR 1603 or GG 1113 or equivalent and MA 1313 or MA 1713). Two hours lecture. Two hours laboratory. Survey of the types of statistical weather data available. Manipulation of the data on various temporal and spatial scales.

GR 4649/6640. Meteorological Internship. (1-6) (Prerequisite: Consent of instructor). Hours and credits to be arranged. Internship with television station, private company or government agency under supervision of instructor.

GR 4663. Satellite Meteorology. (3) (Prerequisite: GR 4603 or consent of instructor). Three hours video and online. Study of the history, operations, and applications of satellites in weather analysis. Theory of meteorological measurements in determinations of atmospheric structure.

GR 4673. Radar Meteorology. (3) (Prerequisite: GR 4603 or consent of instructor). Three hours video and online. Detailed analysis of the use of Doppler radar in weather operations. Emphasis on Doppler velocity measurements, clear-air return, and severe storm identification and warning.

GR 4923/6923. Severe Weather. (3) (Prerequisites: GR 4913/6913 or equivalent.) Three hours lecture. Descriptive study of severe and unusual weather across the earth. Explanation of variations in severe weather in both spatial and temporal scales.

GR 4713/6713. Synoptic Meteorology I. (3) (Prerequisites: GR 1603 or equivalent.) Two hours lecture. Two hours laboratory. Fundamental principles of weather forecasting. Physical processes in the atmosphere, atmospheric circulation systems, air mass analysis, frontogenesis and frontolysis.

GR 4733/6733. Synoptic Meteorology. (3) (Prerequisite: GR 1603 and MA 1713). Three hours lecture. Principles and derivation of meteorological theory. Emphasis on energy exchanges, atmospheric moisture, physical processes of atmospheric motion, air masses and fronts, and cyclogenesis.

GR 4753/6753. Satellite and Radar Meteorology. (3) (Prerequisite: GR 1603). Three hours lecture. Study of the history, the operations, and the applications of satellites and radar in weather analysis. Theory of meteorological measurements in determinations of atmospheric structure.

GR 4813/6813. Natural Hazards and Processes. (3) (Prerequisites: GR 1114 or equivalent.) Three hours lecture. A study of natural phenomena in geology, oceanography and astronomy as applied to meteorology. Detailed study of earthquakes, volcanoes, ocean movements, and solar activity.

GR 4823/6823. Dynamic Meteorology I. (3) (Prerequisite: GR 4733/6733). Three hours lecture. In-depth examination of the theoretical methods for determining atmospheric stability and the tools necessary to interrogate the vertical profile of the atmosphere.

GR 4913/6913. Thermodynamic Meteorology. (3) (Prerequisite: GR 4723/6723 or equivalent). Three hours lecture. Examination of the meteorological stability within the earth’s atmosphere. Focus on analysis of the various stability indices related to predicting severe weather.

GR 4933/6933. Dynamic Meteorology II. (3) (Prerequisites: GR 4823/6823 and MA 2733). Three hours lecture. Quantitative analysis and consideration of atmospheric circulation including jet streams, mid-latitude cyclones, vorticity and atmospheric kinetics.

GR 4963/6963. Mesoscale Meteorology. (3) (Prerequisite: GR 4913/6913). Three hours lecture. Descriptive and physical understanding of Mesoscale processes and their relevance to the synoptic environment. A strong focus will be placed upon Severe Local Storms.

GR 4990/6990. Special Topics in Geosciences. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

GR 7000. Directed Individual Study. Hours and credit to be arranged.

GR 8000. Thesis Research/Thesis. Hours and credit to be arranged.

GR 8113. Meteorology I: Observations. (3) (Prerequisite: Consent of instructor). Three hours video and online. Principles of meteorology with emphasis on elements, controls, and forecasting of atmospheric phenomena. Concentration on daily weather observations and the movement of weather systems. Primarily for K-12 science teachers.

GR 8123. Meteorology II: Precipitation and Storms. (3) (Prerequisite: GR 8113 or consent of instructor). Three hours video and online. Continuation of Meteorology I. Emphasis on the forecasting of daily weather events and on severe weather. Primarily for K-12 science teachers.

GR 8303. Geodatabase Systems. (3) (Prerequisite: Consent of instructor). Two hours lecture. Two hours laboratory. Examination of database structures utilized in geospatial information systems. Design and use of geospatial databases through spatial programming in development and implementation of spatial models.

GR 8313. Advanced Cultural Geography. (3) (Prerequisite: Consent of instructor). Three hours lecture. Study and analysis of population distribution, densities, and movements; rural and urban settlement patterns and features; principles of cultural geography.

GR 8323. Geography for Teachers. (3) (Prerequisite: GR 1123 or equivalent). Three hours lecture. Systematic overview of geography designed for in-service teachers. Organized around the National Geography Standards, class lectures are augmented by lessons presented by K-12 teachers.

GR 8400. Field Methods in Geosciences. (1-3) (Prerequisite: Consent of Instructor). Hours and credits to be arranged. May be taken twice. Provides field experience in the geosciences through planned and supervised outdoor projects and field trips.

GR 8542. Geographic Literature. (2) (Prerequisite: Major or minor in geography). A reading course with emphasis on library research.

GR 8553. Research Methods in Geoscience. (3) (Prerequisite: Consent of instructor). Three hours seminar and forum. Defining research problems, formulating hypotheses, collecting data, using analytical techniques, substantiating conclusions for geoscience topics; written and oral presentations of research projects required.

GR 8990. Special Topics in Geosciences. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

DESCRIPTION of COURSES
HIGHER EDUCATION

Advisor: Professor Thomas Hosie

(For departmental information, see COUNSELOR EDUCATION.)

HED 7000. Directed Individual Study. Hours and credit to be arranged.

HED 8113. Administration of Student Personnel Services in Higher Education. (3) Three hours lecture. One hour laboratory. A study of the organization and administration of student personnel services with emphasis on health services, placement, financial aid and student housing.

HED 8123. University and Community College Governance. (3) Three hours lecture. A comprehensive survey of the field of administration of the community college and the university.

HED 8133. University and Community College Instruction. (3) Three hours lecture. A study of teaching methods and techniques, development of course content and instructional aids, and evaluation of student performance in the university and community college.

HED 8143. Seminar in University and Community College Education. (3) Three hours lecture. An in-depth analysis of current problems, strengths and issues confronting community college and university administrators and faculty.

HED 8153. University and Community College Curriculum Development. (3) Three hours lecture. A study of the practices, trends, and issues in university and community college programs of study and curriculum offerings.

HED 8710. Practicum in University and Community College. (1-3) Observation and supervised teaching activities in a university or community college.

HED 8723. Internship in University and Community College Education. (3) Directed off-campus experiences designed to relate ideas and concepts to problems encountered in managing higher education programs.

HED 8990. Special Topics in Higher Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

Department of HISTORY

Office: 214 Allen Hall
Professors Marcus (Head), Grill and Uzziowe;
Associate Professors Damms, Jenkins, and Wu;
Assistant Professors Barbier, Hay, Messer and Phillips


HI 1073. Modern U.S. History. (3) Three hours lecture. A continuation of HI 1063, covering the period from Reconstruction to the present.

HI 1163. World History Before 1500. (3) Three hours lecture. A survey of world history since about 1500 until the present.

HI 1173. World History Since 1500. (3) Three hours lecture. A survey of world history since about 1500 until the present.

HI 1183. Problems in Modern World Civilization. (3) (Prerequisite: Open through invitation only). An honors course for freshmen. Three meetings each week. Readings, discussions, and reports.

HI 1213. Early Western World. (3) Three hours lecture. A survey of western world history from ancient times to about 1600.

HI 1223. Modern Western World. (3) Three hours lecture. A continuation of HI 1213, covering the period from the 17th century to the present.

HI 1313. East Asian Civilizations to 1300. (3) Three hours lecture. A survey of China and Japan and their peoples through a multi-disciplinary approach from pre-history until the thirteenth century.

HI 1323. East Asian Civilizations Since 1300. (3) Three hours lecture. A survey of China and Japan and their peoples through a multi-disciplinary approach from 1300 to the present.

HI 2990. Special Topics in History. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

HI 3333. Mississippi History. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. A survey of Mississippi history examining economic, social, political, geographical, and cultural aspects of the state’s past.

HI 3703. The Western Church: Beginning to Reformation. (3) (Prerequisites: Completion of any 1000-level course in history or philosophy and religion.) Three hours lecture. An examination of the institutions, doctrines, and spirituality of the Western Church and their impact on Western European politics, society, and culture. (Same as REL 3703).

HI 3743. History of England. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. A survey of English history from its origins to the present.

HI 3763. Hitler and Nazi Germany. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. A study of Adolf Hitler’s personality and rise to power; and examination of the theory and practice of National Socialism.

HI 3773. (3) History of the Holocaust. (3) (Prerequisite: Completion of any 1000-level history course or consent of the instructor). Three hours lecture. An examination of the role of perpetrators, victims, and bystanders during the Holocaust.

HI 3813. Modern Latin America. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. An introduction to the modern history of the major Latin American nations and their importance to the United States.

HI 3853. The United States and Latin America. (3) (Prerequisite: Completion of any 1000-level history course.) Three hours lecture. History of foreign policies and diplomatic relations in the nineteenth and twentieth centuries with an emphasis on strategic and security issues.

HI 3893. 20th Century World History. (3) (Prerequisite: completion of any 1000 level history course). Three hours lecture. Study of the world since 1900 concentrating on the themes of imperialism, nationalism, war and industrialization.

HI 3903. Historiography and Historical Method. (3) (Prerequisites: Junior or senior standing). Three hours lecture. The writings and interpretations of leading European and American historians, bibliographical aids, methods of research, preparation of bibliographies, practice in writing a research paper.

HI 4000. Directed Individual Study. Hours and credits to be arranged.

HI 4103/6103. Colonial America. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. Study of the earliest English settlements to 1740. Emphasis on Puritanism, interaction with other people, expansion and formation of societal and political institutions.

HI 4113/6113. U.S. History 1783-1825. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. An advanced course in the history of the United States, 1783-1825, with emphasis on economic, social, political, and constitutional developments.

HI 4123/6123. Jacksonian America 1825-1850. (3) (Prerequisites: Completion of any 1000-level history course). Three hours lecture. America from the beginnings of the Jacksonian movement, its political, economic and social battles, through trans-continental expansion and the Mexican War.

HI 4133/6133. Civil War and Reconstruction 1850-1877. (3) (Prerequisites: Completion of any 1000-level history course). Three hours lecture. Origins of the secessionist movement and the Civil War, the political and military battles of the War, and the struggle to reunify the nation.

HI 4143/6143. Revolutionary America. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. American provinces from 1740 until 1783. Emphasis on maturation, pluralism, role in British empire, religion, Enlightenment, and causes, ideology, and conduct of the Revolution.

HI 4153/6153. U.S. History 1877-1917. (3) (Prerequisites: Completion of any 1000-level history course). Three hours lecture. A survey of political, economic, social, and constitutional developments.

HI 4163/6163. U.S. 1917-1945. (3) (Prerequisites: Completion of any 1000-level history course). Three hours lecture. A study of all major aspects of American government and life through World War II.

HI 4173/6173. U.S. History Since 1945. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. A study of all major aspects of American government and life since the end of World War II.

HI 4183/6183. U.S. Economic History. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. An intensive study of economic change in the United States and its impact on political and social development. (Same as EC 4183/6183).

HI 4193/6193. U.S. Environmental History. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. A survey of the impact of the environment in shaping the American culture, literature, politics, and economy from European colonization to the present.

HI 4203/6203. Diplomatic History of the U.S. (3) (Prerequisites: Completion of any 1000-level history course). Three hours lecture. A study of American foreign policy from the founding of the Republic to the present time.
HI 4213/6213. History of Grand Strategy & International Security. (3) (Prerequisite: Completion of any 1000-level history course). Three hours seminar. A discussion of the historic literature of grand strategy and key events in the history of international relations.

HI 4233/6233. War, Peace, and Society: The American Experience. (3) (Prerequisites: Completion of any 1000-level history course). Three hours lecture. A survey of the military history of the United States from colonial times to the present.

HI 4243/6243. American Life and Thought. (3) Three hours lecture. A survey of the changing lives and ideas of Americans from colonial to modern times. Family life, religion, recreation, dress, communities, social theories, medicine.

HI 4253/6253. Religion in America. (3) (Prerequisite: Completion of any 1000 level history course). Three hours lecture. Surveys history of religion in America, emphasizing interaction with social and political developments. (Same as REL 4253/6253).

HI 4263/6263. America’s Viet Nam War. (3) (Prerequisite: Completion of any 1000 level history course). Three hours lecture. Analysis of the U.S. conduct of Viet Nam War including such as: Cold War context, presidential decision-making, military doctrine, domestic opposition, and legacy.

HI 4273/6273. Women in American History. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. A study of the economic, political, and social activities of women in American history. Emphasis on Southern women.

HI 4283/6283 History of Southern Women. (3) Three hours lecture. The lives and images of women in the South from colonial times to the present. Native-, African-, and European-American women to be studied.

HI 4303/6303. The Old South. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. Development of the Old South from colonization through the slavery controversy and the Civil War.

HI 4313/6313. The New South. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. Southern life from Reconstruction times to the present.

HI 4323/6323. The American West. (3) (Prerequisites: Completion of any 1000-level history course). Three hours lecture. A survey of the western frontier in American history from colonial times to 1900.

HI 4333/6333. Native American History to 1830. (3) (Prerequisite: completion of any 1000-level history course). Three hour lecture. Native American history to 1830, concentrating on the theme of survival and adaptation to changes wrought by contact with Europeans.

HI 4363/6363. African-American History and Culture. (3) (Prerequisite: Completion of any 1000-level history course). African-Americans from their African origins to the present, emphasizing black-white relations in the making of America.


HI 4383/6383. Native American History Since 1830. (3) (Prerequisite: completion of any 1000-level history course). Three hours lecture. Study of American Indian history to the present with emphasis on the loss of Indian autonomy and the struggles to regain it.

HI 4403/6403. The Ancient Near East. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. A study of the origins and development of civilizations in Mesopotamia, Egypt, and Syria-Pales- tine from prehistoric times to the end of the Persian period. (Same as REL 4403/6403).


HI 4563/6563. Viet Nam Between Revolution and War, 1940-1990. (3) (Prerequisite: completion of any 1000-level history course or consent of instructor). Three hours lecture. The drama of modern Viet Nam that defined an entire era of decolonization and Cold War division. Historical roots, competing political visions, and sociocultural changes.

HI 4583/6583. China Since 1800. (3) (Prerequisite: Completion of any 1000-level history course or consent of instructor). Three hours lecture. China’s tumultuous centuries of imperial decline, foreign assault, and nationalist and communist revolutions. Cultural and social transformations and the quest for institutional and economic modernization.

HI 4593/6593. Japan Since 1600. (3) (Prerequisite: Completion of any 1000-level history course or consent of instructor). Three hours lecture. Examines the major political, cultural, economic, military and diplomatic events that have brought Japan from sheltered feudalism to international preemi-

HI 4603/6603. Medieval Civilization. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. An intensive study of medieval institutions and cultural events.

HI 4623/6623. The Vikings. (3) (Prerequisite: Junior standing or consent of the instructor). Three hours lecture. A survey in English of the Vikings and the Viking Age. (Same as FL 4623/6623)

HI 4633/6633. Renaissance and Reformation. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. The Renaissance and its relation to religion, politics, and social life; origins of the Reforma- tion movement and its effect on Europe in early modern times.

HI 4653/6653. The History of Science and Technology. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. Science and technology from Newton to the present, emphasizing the relationship between scientific innovation and technological application.

HI 4673/6673. Europe, 1789-1914. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. A study of the political, economic, and intellectual foundations of nineteenth century society.

HI 4683/6683. Europe: The First World War to Hitler. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. European development from the beginning of the First World War to the beginning of the Second World War.

HI 4693/6693. Europe: The Second World War to the Common Market. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. European development from the beginning of the Second World War to the present time.

HI 4703/6703. England to 1485. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture.

HI 4713/6713. Tudor and Stuart England. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. The development of English institutions during the Tudor and Stuart periods.

HI 4753/6753. History of Russia. (3) (Prerequisite: Completion of any 1000-level history course.) Three hours lecture. The political, social, cultural, and economic development of Russia from Kievan to Soviet times.

HI 4763/6763. History of Modern Germany. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. The history of German institutions in modern times.

HI 4773/6773. History of Modern France. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. The history of French institutions in modern times.

HI 4783/6783. African Civilization to 1880. (3) (Prerequisite: Completion of any 1000-level history course or consent of instructor). Three hours lecture. This is a survey course which traces the major developments in Africa to 1880.

HI 4793/6793. Modern Africa. (3) (Prerequisite: Completion of any 1000-level history course or consent of instructor). Three hours lecture. This course traces Africa’s history from 1880 to the present. It discusses how Africa lost and regained its sovereignty and the dilemma of independence.

HI 4833/6833. Colonial Latin America. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. A survey of Latin American civilization in the colonial era, geographical setting, native cultures, conquest and colonization, Portuguese and Spanish colonial administration, cultural development.

HI 4843/6843. Latin-American Republics. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. Modern Latin-American republics from the wars of independence to the present day, with special attention to Inter-American relations.

HI 4853/6853. Modern Mexico. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. The political, economic, and social development of the Mexican nation from Independence through the age of dictators to the great Revolution and its aftermath.

HI 4903/6903. The Far East. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. A study of the impact of western civilization on China, Japan, and India in the nineteenth and twentieth centuries.

HI 4990/6990. Special Topics in History. (1-9) (Credit and title to be arranged). This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

General
HI 7800. Directed Individual Study. Hours and credits to be arranged.

HI 8000. Thesis Research and Thesis. (3) (Prerequisite: Graduate standing). Three hours lecture. Topical focus to be determined by the faculty member conducting the colloquium. (May be taken for credit more than once).
HI 8923. Historiography and Historical Method. (3) (Prerequisite: Graduate standing). Three hours lecture. The writings and interpretations of leading European and American historians; bibliographical aids in history; methods of research; preparation of bibliographies; practice in writing a research paper.

HI 8990. Special Topics in History. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).


Directed Readings

HI 8103. Readings in Colonial American History. (3)
HI 8113. Readings in U.S. History, 1783-1825. (3)
HI 8123. Readings in Jacksonian America. (3)
HI 8133. Readings in the Civil War and Reconstruction. (3)
HI 8153. Readings in U.S. History, 1877-1917. (3)
HI 8163. Readings in Contemporary United States. (3)
HI 8203. Readings in American Diplomatic History. (3)
HI 8233. Readings in American Military History. (3)
HI 8263. Readings in American Economic Developments. (3)
HI 8273. Readings in Women in American History. (3)
HI 8283. Readings in Women in Southern History. (3)
HI 8303. Readings in the Old South. (3)
HI 8313. Readings in the New South. (3)
HI 8323. Readings in the American West. (3)
HI 8353. Readings in African-American History and Culture. (3)
HI 8733. Readings in Colonial Latin America. (3)
HI 8743. Readings in Latin-American Republics. (3)
HI 8403. Readings in Ancient History. (3)
HI 8423. Readings in Medieval History. (3)
HI 8443. Readings in Renaissance and Reformation. (3)
HI 8503. Readings in European History, 1600-1789. (3)
HI 8523. Readings in European History, 1789-1914. (3)
HI 8533. Readings in European History, 1914-Present. (3)
HI 8613. Readings in English History, 1485-1714. (3)
HI 8623. Readings in English History Since 1714. (3)
HI 8753. Readings in Russian History. (3)
HI 8763. Readings in the Far East. (3)

Seminars

HI 8813. Seminar in U.S. History Before 1877. (3)
HI 8823. Seminar in U.S. History Since 1877. (3)
HI 8833. Seminar in Southern History. (3)
HI 8843. Seminar in Latin American History. (3)
HI 8853. Seminar in European History Before 1789. (3)
HI 8863. Seminar in European History Since 1789. (3)
HI 8883. US Agricultural History, 1500-2000. (3) Three hours seminar. An intensive study of agricultural and rural development in the United States and its impact on social, economic, and political changes.
HI 8913. Seminar in Quantitative Methods for Historical Research. (3) (Prerequisite: Graduate standing).

HI 8933. Colloquium in Colonial and Revolutionary America. (3) A review of the major themes in the history and historiography of North America for the colonial period through the independence of the United States.

HI 8943. Colloquium in U.S. History from 1787-1877. (3) A review of the major themes in the history and historiography of the United States from the ratification of the Constitution to the end of Reconstruction.

HI 8953. Colloquium in U.S. History from 1877-1945. (3) A review of the major themes in the history and historiography of the United States from the end of Reconstruction to the end of the World War II.

HI 8963. Colloquium in U.S. History from 1945-present. (3) A review of the major themes in the history and historiography of the United States from the end of World War II until the present.

School of HUMAN SCIENCES

Office: 128 Lloyd-Ricks; Director: Gary B. Jackson

Professors Pike and Taylor; Associate Professors Cheek, Lokken-Worthy and P. Miller; Lecturers: Bardwell, Boutwell, Caston, Duncan and Kizer

HS 1711. Professional Protocol. (1) One hour lecture. The essentials of professional protocol and accepted standards of social usage.

HS 1523. Visual Design in Dress. (3) Three hours lecture. Application of basic art principles to selection and design of clothing; physical, cultural, social, aesthetic, and psychological aspects of dress.


HS 1701. Survey of Human Sciences. (1) One hour lecture. Introduction to the field of human sciences through a study of its history and the variety of professional careers available.

HS 1802. Professional Seminar I. (2) Two hours lecture. Overview of individual development and the family life cycle with emphasis on professional opportunities in the field.

HS 2203. Science of Food Preparation. (3) One hour lecture. Four hours laboratory. A study of foods and the principles underlying handling and preparation of food products to maintain the highest standard of quality. (Same as FHN 2203).

HS 2233. Meal Management. (3) One hour lecture. Four hours laboratory. Planning, preparing, and serving meals; emphasis on management of time, energy, and money in relation to feeding the family. (Same as FHN 2233).

HS 2283. Child Health and Nutrition. (3) Three hours lecture. Nutrition requirements during pregnancy and lactation, and of infants and young children; birth defects from metabolic errors; related health of young children. (Same as FHN 2283).

HS 2293. Individual and Family Nutrition. (3) Three hours lecture. Fundamental principles of human nutrition and the practical application of this knowledge in the selection of adequate diets. (Same as FHN 2293).


HS 2553. Fashion Merchandising. (3) Three hours lecture. A survey of the entire fashion industry as it relates to fashion merchandising.


HS 2593. Apparel/Sewn Product Analysis and Evaluation. (3) Two hours lecture. Two hours laboratory. Analysis of design and construction entities that affect cost, consumer perception, consumer satisfaction, marketability and profits of various items of apparel/sewn products.

HS 2603. Interior Design Fundamentals. (3) Three hours lecture. Introduce a practical approach to the application of interior design in the built environment. (For non-interior design students) (Same as ID 2603).

HS 2664. Textiles for Interiors. (4) (Prerequisite: CH 1043). Three hours lecture. Two hours laboratory. Testing and evaluation of interior textiles, including upholstery; window, wall, and soft floor coverings; bedding; and bath and tabletop products.

HS 2803. Pre-natal and Infant Development. (3) Two hours lecture. Two hours laboratory. Biological and environmental influences; behavioral and developmental patterns, from the onset of pregnancy to toddlerhood.

HS 2813. Child Development I. (3) (Prerequisite: PSY 1013). Two hours lecture. Two hours laboratory. Developmental characteristics of children with emphasis on the early years; implications for care and guidance. Observation and participation in the Child Development and Family Studies Center.

HS 2990. Special Topics in Human Sciences. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

HS 3000. Field Experience. (1-6) (Prerequisite: Consent of instructor). Supervised field experience for human sciences students; an internship in an approved, option-related situation.

HS 3303. Consumer Economics. (3) (Prerequisite: Junior Standing or consent of instructor). Three hours lecture. Economic principles as applied to consumer situations, and the consumer’s relation to the American and world economy.
HS 3553. Fashion Retailing. (3) (Prerequisites: HS 2553 and either ST 2113 or BQA 2113, or consent of instructor). Three hours lecture. Specific problems, procedures and practices in fashion retailing.

HS 3563. Visual Merchandising. (3) (Prerequisite: HS 2553 or consent of instructor). Two hours lecture. Two hours laboratory. Principles of window and interior display, individual and group participation in designing and executing displays for commercial and educational purposes.

HS 3573. Historic Costume. (3) (Prerequisite: Junior Standing). Two hours lecture. Two hours laboratory. Survey of costume from prehistoric to modern times with emphasis on social, cultural, political, and technological changes impacting fashion, preservation, documentation, and exhibition of artifacts.

HS 3593. Merchandising and Promotion Strategies. (3) (Prerequisite: HS 2553 and junior standing, or consent of instructor). Three hours lecture. A study of fashion presentation techniques and production requirements in the primary, secondary and retail settings.

HS 3623. Space Planning. (3) (Prerequisite: HS 2613). Two hours lecture. Two hours laboratory. Physical and socio-economic aspects of planning residential and non-residential spaces.

HS 3673. Environments for Special Needs. (3) (Prerequisite: HS 2613 or consent of instructor). Three hours lecture. Laws, attitudes, conditions, specifications, and environmental issues affecting private and public spaces. (Same as ID 3673).

HS 3803. Child Care Procedures. (3) (Prerequisites: HS 2813). Two hours lecture. Two hours laboratory. Selection of appropriate equipment and supplies; program planning for nursery school and day care centers, observation and participation in the Child Development Center.

HS 3813. Child Development I. (3) (Prerequisites: HS 2813 and junior standing). Three hours lecture. An intensified exploration of child development theory, research and methodology used in the study of the young child (birth to five). Major emphasis on process of development.

HS 3823. Designing Child Care Programs. (3) (Prerequisites: HS 2813 and junior standing). Two hours lecture. Two hours laboratory. Designing programs for nursery-age children with emphasis on children’s developmental characteristics as related to appropriate learning experiences.

HS 4000. Directed Individual Study in Human Sciences. Hours and credits to be arranged.

HS 4193/6193. Social and Cultural Aspects of Food. (3) Three hours lecture. A study of international, regional and religious history, customs, beliefs and other impacts upon food preparation and consumption.

HS 4313/6313. Family Resource Management. (3) Three hours lecture. Decision-making in the family and operation of the household as affected by family values, philosophies, resources, and socio-economic conditions.

HS 4323/6323. Consumer Issues and Policy. (3) (Prerequisite: HS 3303 or consent of instructor). Three hours lecture. An assessment of policies and programs relating to information, product safety, and channels of appeal for the individual.

HS 4333/6333. Families, Legislation and Public Policy. (3) (Prerequisite: Junior Standing). Three hours lecture. An examination of the impact of legislation and public policy on the well being of the family with emphasis on policy and family change.

HS 4343/6343. Apparel Design II. (3) (Prerequisite: HS 1533 or consent of instructor). One hour lecture. Four hours laboratory. Advanced problems and techniques for clothing construction; creative expression through application of techniques of flat pattern design.

HS 4353/6353. Nutrition Throughout the Life Cycle. (3) (Prerequisite: BIO 4253/6253 or consent of instructor). Three hours lecture. Study of interrelationships of physiological, biochemical and sociological factors and nutrient needs of individuals and groups during the life cycle; infancy through the later years. (Same as NTR 6353 and FNH 4353/6353).

HS 4403/6403. Introduction to Gerontology. (3) Three hours lecture. An introduction to the dynamics of the aging process and strategies for maximizing life satisfaction during aging.

HS 4424/6424. Teaching Methods in Agriculture and Human Sciences. (4) (Prerequisite: Junior standing in CALS major). Three hours lecture. Two hours laboratory. Planning instruction; selecting teaching techniques; developing teaching plans; teaching agricultural/human science topics; using instructional technologies; evaluating learner progress. (Same as AIS 4424).

HS 4440/6440. Workshop in Human Sciences. (1-3). This course addresses current issues in human sciences.

HS 4450/6450. Work Experience in Human Sciences Related Occupations. (3-6) Work experience in two phases of occupational human sciences; development of a program of work, and incorporating the work experience into curricula.

HS 4462. Curriculum in Human Sciences. (2) (Prerequisites: Senior standing and admission to Teacher Education). Two hours lecture. Spring semester. Bases for curriculum planning, exemplar curriculum, and customizing curriculums.

HS 4513/6513. Social-Psychological Aspects of Clothing. (3) (Prerequisite: Three hours course in Sociology or Psychology and Junior standing). Three hours lecture. Exploration of the sociological and psychological aspects of wearing apparel; human’s response to and use of clothing as an aspect of behavior at different life stages.

HS 4533. Merchandise Planning and Buying. (3) (Prerequisites: HS 3553 and HS 3573). Three hours lecture. Capstone course in planning, buying and managing inventory in a fashion retail environment.

HS 4563. Intermediate Textiles. (3) (Prerequisite: HS 2523). Two hours lecture. Two hours laboratory. A basic study of dyes, color applications, finishes and physical testing used in manufacturing textiles.

HS 4583/6583. Entrepreneurship for Human Sciences. (3) Three hours lecture. Exploration of services/products that have potential for home-based businesses with emphasis on business, marketing, and management skills necessary for operation of these businesses.

HS 4683/6683. Current Housing Problems of Families. (3) (Prerequisite: Junior standing). Three hours lecture. Analysis of current housing problems confronting families, their historical development, government policies and remedial measures.

HS 4701. Internship Placement Seminar. (1) (Prerequisite: Junior standing and consent of instructor). One hour lecture. Preparation for an internship in a chosen specialization.

HS 4702. Human Sciences Senior Seminar. (2) (Prerequisite: Senior standing in Human Sciences). Two hours lecture. Examination of current societal issues and trends using an integrative approach. Emphasis on professional development and effectiveness in Human Sciences.

HS 4710/6710. Study Tour. (1-3) Experiential learning through travel in the United States or abroad focusing on specialized areas of study in human sciences.

HS 4733/6733. Computer-Aided Design for Human Sciences. (3) (Prerequisites: CSE 1013 or equivalent). Two hours lecture. Two hours laboratory. Applications of computer-aided design for interior design, fashion merchandising, child development, human sciences education, consumer economics, foods and nutrition.

HS 4750. Internship. (6-) (Prerequisite: Minimum of senior standing, 2.0 and consent of instructor). Individual work experience in an approved setting under supervision of Mississippi State University faculty.

HS 4763. Apparel, Textiles and Merchandising Internship. (3) (Prerequisites: 2.0 GPA and consent of instructor). Individual work experience in an approved apparel, textiles or merchandising related setting under supervision of Mississippi State University faculty.

HS 4803/6803. Art of Parenting. (3) (Prerequisite: Junior standing). Three hours lecture. Study of the child as a part of the family in a dynamic transactional system. Emphasis on economics, stress, practical problems and child services.

HS 4813/6813. Adult Development: The Middle Years. (3) (Prerequisite: Senior standing, 2.0 GPA and consent of instructor). Three hours lecture. Theory and perspectives on adulthood in contemporary society, adjustment to internal and environmental changes, role structures, supportive networks and public policy issues.

HS 4823/6823. Development and Administration of Child Service Programs. (3) (Prerequisite: HS 3813 or concurrent enrollment). Three hours lecture. Planning, administering, and evaluating the organizational structure of a variety of child service programs.

HS 4834. The Hospitalized Child. (4) (Prerequisites: HS 3813 or concurrent enrollment, junior standing and permission of the instructor). Three hours lecture. Two hours laboratory. A pre-practicum development approach to the special needs of the hospitalized infant, child, and adolescent.

HS 4843/6843. Family Promotion. (3) (Prerequisites: SO 1203 and PSY 1013 or HS 4853). Three hours lecture. Interaction within functional families; focus on the family as a system, on diversity and roles, and on effective interactions.

HS 4853/6853. The Family: A Transactional Approach. (3) (Prerequisite: Three hours Sociology or Psychology and Junior Standing). Three hours lecture. The impact of internal and external factors on the development of individual and family relationships throughout the life cycle.

HS 4863/6863. Consumer Aspects of Aging. (3) (Prerequisite: HS 3303 or consent of instructor). Three hours lecture. Analysis of the decisions, issues and research related to the consumer aspects of aging from a global and national perspective.

HS 4886, 4896. Teaching Internship in Vocational Human Sciences. (6-12) (Both courses to be taken concurrently). (Prerequisites: Admission to Teacher Education and senior standing). Supervised observation and directed teaching in respective field of endorsement.
HS 4990/6990. Special Topics in Human Sciences. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

HS 7000. Directed Individual Study in Human Sciences. Hours and credits to be arranged.

HS 8990. Special Topics in Human Sciences. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

INTERNATIONAL BUSINESS

Office: 355-356 McCool Hall
Director: John Lox

IB 1001. Introduction to International Business. (1) (Prerequisite: International Business major). Introduction to International Business prepares the entering class academically and professionally for successful performance.

IB 2990. Special Topics in International Business. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

IB 3900. Internship Work. (1-6) (Prerequisite: approval of the International Business Director). Business topics examined by student during work semester. Evaluations are assigned on satisfactory/unsatisfactory basis.

IB 3913. Principles of International Business. (3) (Prerequisites: Senior standing in business or consent of instructor.) An overview of the major forms of international business: Exports and imports, overseas investments, production and marketing operations, licensing, financing and other international business services.


IB 4990/6990. Special Topics in International Business. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

IB 8913. International Business Environment. (3) (Prerequisites: The equivalent of ACC 2023, EC 2123, FIN 3113, FIN 3123, MGT 4113, and MKT 3013 or consent of instructor). Study of the management problems, strategies, and techniques arising from the international transfer of goods, services, human resources, technology, finance, or ownership.

IB 8990. Special Topics in International Business. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

INTERNIOR DESIGN

Office: 121 Etheredge
Beth Miller, Program Director and Associate Professor;
Margaret Bateman, Associate Professor; Robin Carroll, Instructor;
Amy Crompton, Visiting Assistant Professor

ID 1683. Interior Design Graphics. (3) One hour lecture. Four hours laboratory. Introduction to basic manual drafting and tools/techniques used by interior designers in executing and reading graphic language in two dimensional form.

ID 1694. Interior Design Studio I. (4) (Prerequisite: ID 1683). Two hours lecture. Four hours laboratory. Introduction to the basic principles and element of design using practical and abstract applications in creative problem solving analyzing spatial form and function.

ID 2603. Interior Design Fundamentals. (3) Three hours lecture. Introduce a practical approach to the application of interior design in the built environment. (For non-interior design students) (Same as HS 2603).

ID 2615. Interior Design Studio II. (5) (Prerequisite: ART 1123 and ID 1694). Three hours lecture. Four hours laboratory. Introduction to design theory and its application in the development of criteria for interior environments.

ID 2633. Interior Materials, Treatments and Resources. (3) (Prerequisite: HS 2523 or concurrent enrollment). Three hours lecture. Materials, equipment, services and resources available to the interior designer for meeting clients’ needs.

ID 3563. 3D CAD/Modeling in Interior Design. (3) (Prerequisite: HS 4733 and ID 3614). Two hours lecture. Two hours laboratory. Advanced computer graphic communication in interior design for the development of technical and perspective drawings created in presentation formats using 3D imaging.

ID 3603. Digital Design for Interiors. (3) Three hours lecture. Introduce innovative software application programs for interior design students to create graphic presentations, portfolios and digital illustrations of interior elements.

ID 3611. Portfolio Presentation: Methods and Media. (1) (Prerequisites: HS 2613, ART 1213, ART 1133, EG 1513). One hour lecture. Portfolio presentation techniques for the professional practice of interior design.

ID 3614. Interior Design Studio III. (3) (Prerequisite: ID 2615). Two hours lecture. Four hours laboratory. Integration of the total living environment, through the application of the design elements and technical aspects of the field.

ID 3624. Interior Design Studio IV. (3) (Prerequisite: ID 3614). Two hours lecture. Four hours laboratory. Actual practice in the commercial design field through the execution of commercial design problems.

ID 3633. Interior Design Detailing and Construction Documents. (3) (Prerequisite: HS 4733 and ID 3614). Two hours lecture. Two hours laboratory. Systematic integration of building systems, construction, technology, and materials on interior systems. Detailing of these systems in an extension of the design process.

ID 3643. History of Interiors I. (3) Three hours lecture. A survey of furniture styles, ornament, designers, and accessories associated with period interiors from the early Egyptian period through 1850.

ID 3653. History of Interiors II. (3) (Prerequisite: HS 3643 or consent of instructor). Three hours lecture. Defining advancement/evolution of design philosophies in furniture and interiors of the late 19th and 20th centuries; addressing presentation skills and techniques for interior design professionals.

ID 3663. Color and Lighting for Interiors. (3) (Prerequisite: HS 2613). One hour lecture. Four hours laboratory. Concentrated study of color and light relationships as they apply to the visual, technical and functional aspects of interior spaces.

ID 3673. Environments for Special Needs. (3) (Prerequisite: HS 2613 or consent of instructor). Three hours lecture. Laws, attitudes, conditions, specifications, and environmental issues affecting private and public spaces. (Same as HS 3673).

ID 4644. Interior Design Studio V. (3) (Prerequisite: ID 3614). Two hours lecture. Four hours laboratory. Integration of the total living environment, through the application of the design elements and technical aspects of the interior design field.

ID 4651. Internship Placement. (1) (Prerequisite: Senior Standing in Interior Design and ID 4663). One hour lecture. Professional opportunities as they relate to internships for interior design students. Preparation of resume and portfolio for procurement of internship.

ID 4654. Interior Design Studio VI. (3) (Prerequisite: ID 4644). Two hours lecture. Four hours laboratory. Advanced study of commercial interior design problems through the individual research and the execution of design solutions.


ID 4693. Furniture Design. (3) (Prerequisite: EG 1513, HS 3643, HS 3653 and consent of instructor). Two hours lecture. Two hours laboratory. Exploration of the basic methods and processes of furniture design.

ID 4753. Interior Design Internship. (3) (Prerequisite: Senior Standing, 2.0 GPA, and consent of instructor). Individual work experience in an approved setting under supervision of Mississippi State University faculty.

Department of INDUSTRIAL ENGINEERING

Office: 260 McCain Engineering Building
Professors Bowden (head), Bullington, Greenwood and Usher; Associate Professors Duffy and Smyer; Assistant Professors Eksioglu and Jin

IE 1911. Introduction to Industrial Engineering. (1) Three hours laboratory. Concepts of industrial engineering, emphasizing the total systems
approach. Introduction to analysis and design of general and industrial sys-
tems.
IE 2990. Special Topics in Industrial Engineering. (1-9) Credit and
title to be arranged. This course is to be used on a limited basis to offer devel-
oping subject matter areas not covered in existing courses. (Courses limited
to two offerings under one title within two academic years).
IE 3124. Industrial Ergonomics. (4) (Co-requisite: IE 4613). Three
hours lecture. Three hours laboratory. Analysis of work tasks; ergonomic de-
design principles for manual work design, workplace design, and work environ-
ment design; work measurement; and design of wage payment plans.
IE 3323. Manufacturing Processes. (3) (Prerequisites: Grade of C or
better in IE 3913, Co-requisites: CHE 3413 and IE 4613). Two hours lecture.
Three hours laboratory. Manufacturing processes and materials; interaction-
ship of product design, material properties, and processing methods; robot-
ics and CAM systems; economic factors in material, process, and equipment selec-
tion.
IE 3913. Engineering Economy I. (3) (Prerequisite: MA 1713). Three
hours lecture. Principles of evaluating alternative engineering proposals. Eco-
nomic measures of effectiveness, costs and cost estimates, basic comparative
models, break even and replacement analysis.
IE 4000. Directed Individual Study. Hours and credits to be arranged.
IE 4113/6113. Human Factors Engineering. (3) (Prerequisite: Junior
standing in engineering). Two hours lecture. Three hours laboratory. Human
capabilities and limitations affecting communications and responses in man-
machine systems. Emphasis on physiological and psychological fundamen-
tals.
IE 4123/6123. Psychology of Human-Computer Interaction. (3) (Pre-
 requisite: PSY 3713 or CSE 4663/6663 or IE 4113/6113 or consent of the
instructor). Two hours laboratory. Exploration of psychological factors that in-
teract with computer interface usability. Interface design techniques and usability evaluation methods are emphasized. (Same as CSE
4663/6663 and PSY 4743/6743).
IE 4173/6173. Occupational Safety Engineering. (3) (Prerequisite: Ju-
nior standing). Three hours lecture. Causes and prevention of industrial acci-
dents. Analysis of hazardous processes and materials. Design of occupational
safety systems and programs.
IE 4333/6333. Production Control Systems I. (3) (Prerequisite: Grade of
C or better in IE 4613). Three hours lecture. Principles, analysis, and de-
sign of production and inventory planning and control. Demand forecasting,
production scheduling and control systems.
IE 4353/6353. Materials Handling. (3) (Prerequisite: IE 3124). Three
hours lecture. Analysis and design of materials handling systems and compo-
nents. Introduction to facilities design.
IE 4373/6373. Automation. (3) Two hours lecture. Three hours labora-
tory. Introduction to the various technologies used in both design and manu-
facturing automation.
IE 4393/6393. Concurrent Engineering. (3) (Prerequisite: Junior or
senior standing). Three hours lecture. An introduction to the implementation,
application, and management of concurrent engineering, as well as, the tools and
methods that support new product development.
IE 4513/6513. Engineering Administration. (3) (Prerequisite: Senior or
graduate standing in engineering). Three hours lecture. Study of problems
confronting the engineering manager. Includes: Organization and commu-
nication theory, internal and external relationships and responsibilities, and
designing and implementing managerial systems.
IE 4533/6533. Project Management. (3) (Prerequisites: Grade of C or
better in IE 4613). Three hours lecture. Use of CPM, PERT, and GERT for
planning, managing and controlling projects. Computer procedures for com-
xplex networks.
IE 4553/6553. Logistics Engineering. (3) (Prerequisite: IE 4613 and
senior or graduate standing. Co-requisite: IE 4733). Three hours lecture.
Analysis of complex logistics networks. Integration or supply, production,
inventory, transportation, and distribution. Strategies for reducing logistics
costs and lead times. Customer-supplier partnerships.
IE 4553/6553. Engineering Law and Ethics. (3) (Prerequisite: Senior
standing in engineering). Three hours lecture. The engineer and his relations
with the law, to the public, and the ethics of his profession. Includes contracts,
patents, copyrights, sales agreements, engineering specifications.
IE 4573/6573. Process Improvement Engineering. (3) Three hours
lecture. Introduction to quality and productivity improvement methodologies
and tools. The design and implementation of continuous improvement sys-
tems in organizations.
IE 4613/6613. Engineering Statistics I. (3) (Prerequisite: MA 1723).
Three hours lecture. Introduction to statistical analysis. Topics include: prob-
ability, probability distributions, data analysis, and statistical inferences. Sim-
ple, multiple, and polynomial models for regression and correlation.
IE 4623/6623. Engineering Statistics II. (4) (Prerequisite: Grade of C
or better in IE 4613). Three hours lecture. Continuation of IE 4613/6613.
Introduction to engineering applications of regression, experimental design
and analysis, and nonparametric methods.
IE 4653/6653. Industrial Quality Control I. (3) (Prerequisite: IE 4613).
Three hours lecture. The theory and application of statistical quality control:
statistical process control and statistical acceptance sampling.
IE 4673/6673. Reliability Engineering. (3) (Prerequisites: IE 4613 and
MA 3253). Three hours lecture. Probability functions and statistical methods
for component life testing and system reliability prediction. System availabil-
ity and maintainability. Redundancy in time-dependent and time-independent
situations.
IE 4713/6713. Operations Research I. (3) (Prerequisites: CSE 1213
and IE 4613). Mathematical techniques of decision making, queuing, net-
works, simulation and dynamic programming.
IE 4733/6733. Linear Programming. (3) (Prerequisites: MA 3113).
Three hours lecture. Theory and application of linear programming: simplex
algorithm, revised simplex algorithm, duality and sensitivity analysis, trans-
portation and assignment problem algorithms, integer and goal programming.
(Same as MA 4733/6733).
IE 4743/6743. Engineering Design Optimization. (3) (Prerequisite:
Consent of instructor). Three hours lecture. Introduction to optimality cri-
teria and optimization techniques for solving constrained or unconstrained
optimization problems. Sensitivity analysis and approximation. Computer
application in optimization. Introduction in MDO. (Same as ASE 4553/6553
and EM 4143/6143).
IE 4753/6753. Systems Engineering and Analysis. (3) (Prerequisite: IE
4613). Three hours lecture. Systems concepts, methodologies, models, and
tools for analyzing, designing, and improving new and existing human-made
systems.
IE 4773/6773. Systems Simulation I. (3) (Prerequisites: Grade of C or
better in IE 4613 and in IE 4934). Three hours lecture. The principles of
simulating stochastic systems with an emphasis on the statistics of simulation
and the use of discrete-event simulation languages.
IE 4915/6915. Design of Industrial Systems. (5) (Prerequisites: Grade
of C or better in the following courses: IE 3124, IE 3323, and IE 4333).
Two hours lecture. Eight hours laboratory. The fundamental procedures and
techniques in design of operational systems. Emphasis on both sub-systems
and total systems.
IE 4923/6923. Six Sigma Methods and Project. (3) (Prerequisites: IE
4623/6623 and IE 4653/6653). One hour lecture. Four hours laboratory.
Introduction of six sigma and problem solving methodologies. Application of
learned methodologies in selecting, performing and completing a process
involvement project.
IE 4934/6934. Information Systems for Industrial Engineering. (4)
(Prerequisites: IE 3124, IE 1911). Three hours lecture. An introduction to the
design and development of information systems for use in industrial engineering applications.
IE 4990/6990. Special Topics in Industrial Engineering. (1-9) Credit
and title to be arranged. This course is to be used on a limited basis to of-
fer developing subject matter areas not covered in existing courses. (Courses limited
to two offerings under one title within two academic years).
IE 7000. Directed Individual Study. Hours and credits to be arranged.
IE 8000. Thesis Research/Thesis. Hours and credits to be arranged.
IE 8153. Cognitive Engineering. (3) Three hours lecture. Implications of
human perceptual , cognitive, and psycho-motor capabilities on the design of
systems for effective, efficient and safe human-machine performance.
IE 8333. Production Control Systems II. (3) (Prerequisites: IE 4333).
Three hours lecture. Inventory systems, static and dynamic production plan-
ning, operations scheduling and forecasting systems.
IE 8343. Artificial Intelligence in Manufacturing. (3) (Prerequisite:
Computer programming ability and consent of instructor) Three hours lecture.
Introduction to artificial intelligence techniques used in manufacturing.
Topics include the application of expert systems, neural networks, machine
learning, and discussion of current research.
IE 8353. Manufacturing Systems Modeling. (3) (Prerequisites: IE
4713, IE 4773). Three hours lecture. Focuses on the design and improvement
of models used to describe and analyze manufacturing systems. Development of models using queuing
networks, mathematical programming, simulation, and other techniques.
IE 8373. Computer Integrated Manufacturing. (3) (Consent of in-
structor). Three hours lecture. An investigation of computer integrated manu-
facturing and the technologies that support its implementation.
IE 8583. Enterprise Systems Engineering. (3) (Prerequisite: Consent of
instructor). Three hours lecture. Focuses on the design and improvement
of an enterprise through the use of engineering tools and methods, based on
the systems perspective of industrial engineering.


IE 8743. Nonlinear Programming I. (3) (Prerequisite: IE 4733 or MA 4733). Three hours lecture. Optimization of nonlinear functions; quadratic programming, gradient methods, integer programming; Lagrange multipliers and Kuhn-Tucker theory.


IE 8783. Neural Networks in Optimization. (3) (Prerequisites. IE 4733/6733). Three hours lecture. A study of neural network models and their applications to optimization problems.

IE 8913. Engineering Economy I. (3) (Prerequisites: IE 3913 and IE 4613). Three hours lecture. Advanced principles and methods for engineering analysis of industrial problems. Topics include criteria for decisions, project investment and analysis, and elements of risk and uncertainty.

IE 8990. Special Topics in Industrial Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

IE 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

INSURANCE, RISK MANAGEMENT, and FINANCIAL PLANNING

Office: 326 McCool Hall

(For departmental information, see FINANCE and ECONOMICS.)

INS 3413. Introduction to Personal Financial Planning. (3) (Cross listed with FIN 2003). Three hours lecture. The individual’s acquisition and management of an optimal personal income and expenditure pattern over a lifetime to best meet his/her financial objectives. (Not open to finance majors).

INS 2990. Special Topics in Insurance. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

INS 3103. Principles of Insurance. (3) (Prerequisite: Junior standing). Three hours lecture. A study of the principles and concepts of insurance plus a survey of personal coverages such as Homeowners, Automobile, Life and Health insurance.

INS 3203. Property and Casualty Insurance. (3) Three hours lecture. A study of the major issues in property and casualty insurance including property and liability coverages, company operations, rate making, and international concepts.

INS 3303. Life and Health Insurance. (3) Three hours lecture. The nature and function of life insurance; policy forms and provisions; reserves; company organization; legal aspects; taxation and practical application.

INS 3403. Financial Planning. (3) (Prerequisites: FIN 3123, and INS 3103, INS 3303 or consent of instructor). Three hours lecture. A study dealing with the problems of the individual in the creating, conserving, and disposing of an estate through the use of property, securities, and insurance.

INS 3503. Employee Benefits. (3) Three hours lecture. A comprehensive study of employee benefit plans available to employers, including the principles and concepts necessary to design and implement successful employee benefit programs.

INS 4000. Directed Individual Study. (1-3) Hours and Credits to be arranged with instructor.

INS 4503/6503. Enterprise Risk Management. (3) (Prerequisites: FIN 3123, MGT 3114, MKT 3013, or consent of instructor.) Three hours lecture. A study of the principles, concepts and techniques to manage pure risk exposures which organizations face while pursuing their objectives.

INS 4990/6990. Special Topics in Insurance. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

INTERNATIONAL STUDENT EXCHANGE

Office: 608 Allen Hall

ISE 4100-4200. International Student Exchange. (Prerequisite: Acceptance into the International Student Exchange Program). Grades from the host institution will be transferred and recorded at MSU after each semester the student participates in the program.

ISE 6100-6200. International Student Exchange. (Prerequisite: Acceptance into the International Student Exchange Program). Grades from the host institution will be transferred and recorded at MSU after each semester the student participates in the program.

Department of LANDSCAPE ARCHITECTURE

Office: Landscape Architecture Facility

Professors Man (Head), and Melby; Associate Professors Cook; Assistant Professors Brzuszek, Mulley, Schauwecker, Seymour, Walker and Wilkerson

LA 1153. Introduction to Landscape Architecture. (3) Six hours studio/lab. Acquaints students with the profession’s design vocabulary, application, types, work, and initial experiences dealing with the creation of and evaluation of three dimensional space.


LA 1701. Introduction to Landscape Contracting. (1) Two hours laboratory. A survey of the construction industry with emphasis on landscape contracting and the roles of principals involved. Opportunities in the landscape industry.

LA 1711. Landscape Contracting Internship I. (1) (Prerequisites: LA 1701; completion of 12 hours; 2.0 GPA). Internship of planned, progressive and supervised experiential learning with a landscape contracting firm.

LA 1803. Landscape Architecture Appreciation. (3) Three hours lecture. A survey of landscape architecture encompassing design, construction, management, maintenance and practice. Emphasis on development and improvement of home, neighborhood and community environment. (For non-majors.)

LA 2253. Planting Design Fundamentals in Landscape Architecture. (3) One hour lecture. Four hours studio. Using plants as landscape architectural functional elements in a holistic design context. Applying the design elements and principles to design with emphasis on planting design.

LA 2323. Presentation Methods and Media. (3) (Prerequisite: None; recommended: ART 1123 & ART 1213). Six hours studio/lab. Delineation and professional presentation techniques for the practice of Landscape Architecture utilizing traditional and contemporary presentation approaches.

LA 2334. Plant Specifications For Small Properties. (4) (Prerequisite: PSS 3473). One hour lecture. Six hours studio. Plant selection, design and specifications for small properties in response to environmental conditions and user needs.


LA 2433. Landscape Systems and Plant Communities. (3) One hour lecture. Four hours laboratory. The nature, scope and relevancy of landscape systems and their respective plant communities as they relate to land planning and landscape architectural design.

LA 2453. Site Inventory and Analysis. (3) One hour lecture. Four hours studio/lab. The collection, presentation, and use of pertinent site related data. Conventional non-technical methods of presentation of data and computer generated formats are considered and analyzed.

LA 2701. Landscaped Contracting Seminar I. (1) (Prerequisite: LA 1711). One hour lecture. Weekly seminar to investigate topics related to mod-
ern landscape practices experienced in LA 1711 LC Internship I. Formal pre-
sentations of internship case studies.
LA 2711. Landscape Contracting Internship II. (1) (Prerequisite: LA 1711.}
LC Internship I, 2.00 GPA). Internship of planned, progressive and super-
vised experiential learning with a landscape contracting firm.
LA 2990. Special Topics in Landscape Architecture. (1-9) Credit and
title to be arranged. This course is to be used on a limited basis to offer-
developing subject matter areas not covered in existing courses. (Courses limited
to two offerings under one title within two academic years).
LA 3544. Landscape Architecture Construction I. (4) (Prerequisite: none;
Recommended: ABE 2873 & MA 1323). Two hours lecture. Four hours
studio/lab. Course is concerned with land surveying, landscape architecture
grading, road alignments and calculations for cut and fill volumes.
LA 3555. Landscape Architecture Design Studio I. (5) (Prerequisites:
LA 1153, LA 1223, LA 2325, LA 2253 & LA 2453). Two hours lecture. Six
hours studio/lab. A landscape architectural design process applied to site
planning for small aearages. Emphasis on accommodation and application of
design principles to site design elements.
LA 3603. Design of the Golf Environment. (3) (Prerequisite: LA 1803).
Three hours lecture. Defining site development concerns of a golf complex,
addressing areas of history, design, construction and maintenance.
LA 3623. Urban Planning Theory. (3) Three hours lecture. Open to majors
and non-majors. Survey of principles and practice of urban planning.
Emphasis on the planning process and use of a city’s police power to regulate
use of land.
LA 3644. Landscape Architecture Construction II. (4) (Prerequisite:
none; Recommended: LA 3544). Two hours lecture. Four hours studio/lab.
Calculations for storm-water management, best management practices, sur-
face and subsurface drainage systems, basic hydrology and erosion and sedi-
mant control design and practices.
LA 3652. Case Studies of Executed Works in Landscape Architecture.
(2) (Prerequisite: LA 3655). Special five to ten day on-site observa-
tion visit for the study of notable LA projects and construction methods with
lecturers.
LA 3655. Landscape Architecture Design Studio II. (5) (Prerequisites:
LA 1153, LA 1223, LA 2323, LA 2253 & LA 2453). Two hours lecture. Six
hours studio/lab. Deals with program and site specific requirements, inven-
tory and analysis, construction detailing, economic issues, social impact, and
planting design applied to medium scale projects.
LA 3701. Landscape Contracting Seminar II. (1) (Prerequisite: LA 2711).
One hour lecture. Weekly seminar to investigate topics related to mod-
ern landscape practices experienced in LA 2711 LC Internship II. Formal
presentations of internship case studies.
LA 3711. Landscaping Contracting Internship III. (1) (Prerequisites: LA 2711,
LA 3701, and 2.50 GPA). Internship of planned, progressive and super-
vised experiential learning with a landscape contracting firm.
LA 3713. Landscape Contracting I. (3) (Prerequisites: ABE 1073 and
EG 1513; 2.00 GPA). Two hours lecture. Two hours laboratory. Study of the nature,
scope, and application of the varied construction materials used in landscape
projects; and, the construction processes related to landscape development.
LA 3721. Landscape Contracting Field Trip I. (1) (Prerequisite: LA 1701).
Five to ten day trip to visit landscape contracting firms and observe
completed works.
LA 3742. Landscape Architecture Internship. (2) (Prerequisite: Satis-
factory completion of semester six of B.L.A. program with an overall G.P.A.
3.0 in the Junior Year). Supervised experiential learning with a profes-
sional office or public agency.
LA 4000. Directed Individual Study. Hours and credits to be arranged.
LA 4244. Landscape Architecture Construction III. (4) (Prerequisite:
LA 2323). Two hours lecture. Four hours studio. The nature of materials and
their physical attributes. Calculations, drawings, and specifications for con-
struction design and details.
LA 4344. Landscape Architecture Construction IV. (4) (Prerequisites:
LA 3274 or consent of instructor). Two hours lecture. Four hours laboratory.
Preparation of landscape architectural construction plans, details, and specifi-
cations for outdoor lighting, for irrigation, and for septic systems.
LA 4523/6523. Applications for GIS for Landscape Architects. (3)
(Prerequisite: LA 1223 or consent of instructor). One hour lecture. Four hours
studio/lab. Applying geographical information systems technology to the prac-
tice of Landscape Architecture.
LA 4701. Landscape Contracting Seminar III. (1) (Prerequisite: LA 3712).
One hour lecture. Weekly seminar to investigate topics related to mod-
ern landscape practices experienced in LA 3712 LC Internship III. Formal
presentations of internship case studies.
LA 4721. Landscape Contracting Field Trip II. (1) (Prerequisite: LA 3721).
Five to ten day trip to visit with landscape contracting firms and ob-
serve completed works.
LA 4723. Professional Practice of Landscape Architecture. (3) Three
hours lecture. Office management, contracting, budgeting, design proposals,
supervision of construction contracts, professional liability, and professional
ethics.
LA 4724. Landscape Contracting II. (3) (Prerequisites: LA 3713 or LA 4334).
Two hours lecture. Four hours laboratory. Analysis of legal, financial, and
management aspects of landscape contracts; and quantity surveying, cost
estimation, and critical path management of landscape construction projects.
LA 4733. Landscape Contracting III. (3) (Prerequisites: LA 4724,
ACC 2101, and MGT 3114). Two hours lecture. Two hours laboratory. Theo-
ry and practice of managing a Landscape Construction Firm. Case studies of
contemporary issues.
LA 4744. Landscape Contracting IV. (4) (Prerequisite: LA 4724 and
PSS 4414). Two hours lecture. Two hours laboratory. Application levels stud-
ies of post-construction management practices of landscape projects.
LA 4755. Landscape Architecture Design Studio III. (5) (Prereq-
Six hours studio/lab. The design process applied to intermediate size project,
with emphasis on providing shelter for society. Integration of techniques for
design development into a holistic process.
LA 4844. Design of Sustainable Communities. (4) (Prerequisite: none;
Recommended: MA 1313 and MA 1323). Three hours lecture. Two hours
studio/lab. Nature of materials used in landscape architecture, their physi-
cal attributes and liabilities that contribute to their use in a safe and healthy
manner.
LA 4855. Landscape Architecture Capstone Studio. (5) (Prerequisites:
LA 3555, LA 3655, LA 4755, LA 3544, LA 3644, LA 4723). Twelve hours stu-
dio/lab that self-directed effort includes an approved terminal project includ-
ing proposal, analytical design process, master plan, support drawings, and
construction documents of selected plant elements.
LA 4990/6990. Special Topics in Landscape Architecture. (1-9) Credit and
title to be arranged. This course is to be used on a limited basis to offer-
developing subject matter areas not covered in existing courses. (Courses limited
to two offerings under one title within two academic years).
LA 5544. Golf Course Architecture I. (4) (Prerequisite: LA 4445 and
PSS 4414). One hour lecture. Six hours studio. Comprehensive studies of golf
course architecture, including analysis, design, irrigation, construction detail-
ing, cost analysis, and management concerns.
LA 7000. Directed Individual Study. Hours and credit to be arranged.
LA 8000. Thesis Research/Thesis. Hours and credit to be arranged.
LA 8512. Landscape Architecture Graduate Studio I. (2) (Prereq-
usite: admission to the Master of Landscape Architecture). Four hours studio.
Emphasis on holistic approaches to sustainable watershed planning and man-
gagement. Course deals specifically with prevention of destruction of habitat,
biological stress, and hydrologic changes.
LA 8522. Landscape Architecture Graduate Studio II. (2) (Prereq-
usite: admission to the Master of Landscape Architecture). Four hours stu-
dio. Emphasis on community-based planning and design, including consid-
eration of natural resource planning, main street revitalization, open
space planning, community design, and small town planning.
LA 8613. Research Methods in Landscape Architecture. (3) Three
hours lecture. Application of research methods specific to problems in Land-
scape Architecture.
LA 8711. Seminar in Watershed Planning and Management. (1)
(Prerequisite: admission to the Master of Landscape Architecture program or
consent of the instructor). One hour seminar. Examination of major elements of
watershed planning and management pertinent to landscape architecture,
with particular emphasis on emerging trends in the field.
LA 8721. Seminar in Landscape Management. (1) (Prerequisite: ad-
mission to the Master of Landscape Architecture program or consent of the
instructor). One hour seminar. Examination of major elements of
watershed planning and management pertinent to landscape architecture,
with particular emphasis on emerging trends in the field.
LA 8731. Seminar in Community Based Planning. (1) (Prereq-
usite: second year standing in the Master of Landscape Architecture). Four
hours studio. Emphasis on community based planning and design, including
consideration of natural resource planning, main street revitalization, open
space planning, community design, and small town planning.
LA 8741. Seminar in Landscape Architecture Thesis. (1) (Prereq-
site: second year standing in the Master of Landscape Architecture program
or consent of the instructor). One hour seminar. Preparation of a detailed

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propos, selection of the student’s thesis committee, and submission of the proposal to the Graduate Studies Committee for review and approval.

LA 0990. Special Topics in Landscape Architecture. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years.)

THE LEARNING CENTER

Office: 267 Allen Hall

LSK 0003. Developmental Reading. (3) Three hours lecture. Emphasizes and develops basic reading skills. Offered to students required to enroll in development studies. Credit received for this course will not be applicable toward any degree.

LSK 0023. Developmental Studies Laboratory. (3) Six hours laboratory. Computer tutorials and study skills for intermediate algebra, basic English and effective reading. Designed especially for students who have attended the Summer Developmental Program.

LSK 0103. Intermediate Reading. (3) (Prerequisite: Score of 15 to 19 on the reading section of the ACT.) Three hours lecture. Emphasizes and develops intermediate reading skills, including comprehension, vocabulary development, and reading rate. Credit received for this course will not be applicable toward any degree.

LSK 1001. Freshman Seminar. (1) One hour seminar. Multi-disciplined, campus-wide approach to orientation to the university, and strategies for employing personal and university resources.

LSK 1011. Study Skills for College. (1) Development of study principles and skills needed for college.

LSK 1013. Effective Reading. (3) (Designed to prepare a student to comprehend college reading materials; does not count toward a degree.) Three hours lecture. Comprehension and vocabulary improvement through the use of computer-aided-instruction and directed group activities.

LSK 1023. College Reading and Study Skills. (3) Three hours lecture. Development of reading and study skills needed for college.

LSK 2013. Speed Reading. (3) Three hours lecture per week. Development of techniques for increasing rate of comprehension for all types of reading material.

LSK 2990. Special Topics in Learning Skills. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

LSK 6990. Special Topics in Learning Skills. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

Department of MATHEMATICS and STATISTICS

Office: 410 Allen Hall

Professors Dang, Ebanks, Gerard, L. Miller, Neumann (Interim Head), Oppenheimer, Qian, Razzaghi, Shivaji, and Xu;

Associate Professors Dobson, DuBlen, Harvill, Johnson, Kim, Knudson, V. Miller and Smith;

Assistant Professors Fabel, Jonkman, Lim, Lu, Okhuryuen, Scarborough, Stocker and Wu;

Instructors Crittenden, Daniels, Hughes, King and Walters

Students who have credit for one or more upper division mathematics courses will not receive repeat credit for a mathematics course numbered below MA 2000. Students who have credit for MA 1713 are not permitted to enroll in any mathematics course numbered below MA 1713 without departmental approval.

MA 0003. Developmental Mathematics. (3) (MA 0003 is a developmental course designed to prepare a student for university mathematics courses at the level of MA 1313 College Algebra: credit received for this course will not be applicable toward a degree). Three hours lecture. Real numbers, fractions, decimal fractions, percent, algebraic expressions, factoring, algebraic fractions, linear equations/inequalities, integral exponents, quadratic equations.

MA 0103. Intermediate Algebra. (3) (MA 0103 is designed to prepare a student for MA 1313 College Algebra) Two hours lecture. Two hours laboratory. Real numbers, algebraic expressions, factoring, algebraic fractions, literal equations/inequalities, quadratic equations, Pythagorean Theorem. Does not count toward any degree.

MA 1303. Quantitative Reasoning. (3) (Prerequisites: ACT Math sub-score 20, or grade of C or better in MA 0103. High School Credit in Algebra I, Algebra II, and Geometry, or equivalent. MA 1303 is a general education core alternative to MA 1313; credit may be earned for both MA 1303 and MA 1313 but the completion of same will not satisfy the MSU core requirement of “three hours of mathematics beyond the level of College Algebra”). Three hours lecture. Descriptive statistics, normal and binomial distributions, sampling, probability, hypotheses testing; logical statements and arguments; graphical solution of systems of equations/inequalities; estimation and approximation.

MA 1313. College Algebra. (3) (Students with credit in MA 1713 will not receive credit for this course. Prerequisite: ACT Math sub-score 20, or grade of C or better in MA 0103.) Two hours laboratory. Review of fundamentals: linear and quadratic equations; inequalities; functions; simultaneous equations; topics in the theory of equations.

MA 1323. Trigonometry. (3) (Students with credit in MA 1713 will not receive credit for this course. Prerequisite: ACT Math sub-score 24, or grade of C or better in MA 1313). Three hours lecture. The trigonometric functions: identities; trigonometric equations: applications.

MA 1413. Structure of the Real Number System. (3) (Prerequisite: a C or better in MA 1313 or an ACT Math sub-score of 24). Three hours lecture. The nature of mathematics; introductory logic; structure and development of the real number system. (For Elementary and Special Education majors only).

MA 1423. Problem Solving with Real Numbers. (3) (Prerequisite: a C or better in MA 1413). Three hours lecture. Proportions, percent problems, probability, counting principles, statistics. (For Elementary or Special Education majors only).

MA 1433. Informal Geometry and Measurement. (3) (Prerequisites: a C or better in both MA 1413 and MA 1423). Three hours lecture. Measurements and informal geometry. (For Elementary and Special Education majors only).

MA 1453. PreCalculus with Graphing Calculators. (3) (Prerequisites: Math ACT 22 or C or better in MA 1313). Three hours lecture. Properties, applications, and graphs of linear, quadratic, polynomial, exponential, logarithmic, and trigonometric functions; trigonometric identities, equations and inverses; inequalities; conic sections; polar and parametric equations. (Degree credit will not be granted for MA 1453 and either MA 1313 or MA 1323. This course is intended to prepare students to take MA 1713 Calculus I).

MA 1463. Finite Mathematics and Introduction to Calculus. (3) (Prerequisite: ACT Math sub-score 24, or grade of C or better in MA 1313). Three hours lecture. Matrices and systems of linear equations; introduction to calculus.

MA 1613. Calculus for Business and Life Sciences I. (3) (Prerequisite: ACT Math sub-score 24, or grade of C or better in MA 1313). Three hours lecture. Algebraic and some transcendental functions, solutions of systems of linear equations, limits, continuity, derivatives, applications.

MA 1623. Calculus for Business and Life Sciences II. (3) (Prerequisite: MA 1613). Three hours lecture. Antiderivatives, the definite integral, applications of the definite integral, functions of two or more variables, partial derivatives, maxima and minima, applications.

MA 1713. Calculus I. (3) (Prerequisite: ACT Math sub-score 26, or grade of C or better in MA 1323 or MA 1453). Three hours lecture. Analytic geometry; functions; limits; continuity; derivatives of algebraic functions. Application of the derivative. Honors section available through invitation.

MA 1723. Calculus II. (3) (Prerequisite: Grade of C or better in MA 1713). Three hours lecture. Antidifferentiation; the definite integral; applications of the definitive integral, differentiation and integration of transcendental functions. Honors section available through invitation.

MA 2113. Introduction to Statistics. (3) (Prerequisite: ACT Math sub-score 24, or a grade of C or better in MA 1313). Three hours lecture. Introduction to statistical techniques: descriptive statistics, random variables, probability distributions, estimation, confidence intervals, hypothesis testing, and measurement of association. Computer instruction for statistical analysis. (Same as ST 2113).

MA 2733. Calculus III. (3) (Prerequisite: Grade of C or better in MA 2733). Three hours lecture. Further methods of integration; polar coordinates; vectors; infinite series. Honors section available through invitation.

MA 2743. Calculus IV. (3) (Prerequisite: Grade of C or better in MA 2733). Three hours lecture. Differential calculus of functions of several variables; multiple integration; vector calculus. Honors section available through invitation.

MA 2990. Special Topics in Mathematics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing
subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MA 3053. Foundations of Mathematics. (3) (Prerequisite: MA 1273). Three hours lecture. The logical structure of mathematics; the nature of a mathematical proof; applications to the basic principles of algebra and calculus.

MA 3113. Introduction to Linear Algebra. (3) (Prerequisite: MA 1273). Three hours lecture. Vector spaces; matrices; linear transformations; systems of linear equations; characteristic values and characteristic vectors.

MA 3123. Introduction to Statistical Inference. (3) (Prerequisite: ACT Math score 24, or grade of C or better in MA 1313). Two hours lecture. Two hours laboratory. Basic concepts and methods of statistics, including descriptive statistics, probability random variables, sampling distribution, estimation, hypothesis testing, introduction to analysis of variance, simple linear regression. (Same as ST 3123.)

MA 3163. Introduction to Modern Algebra. (3) (Prerequisite: MA 3113 and MA 3053). Three hours lecture. Rings, integral domains, and fields with special emphasis on the integers, rational numbers, real numbers and complex numbers; theory of polynomials.

MA 3253. Differential Equations I. (3) (Prerequisite: MA 2743 or coregistration in MA 2743). Origin and solution of differential equations; series solutions; Laplace Transform methods; applications.


MA 3463. Foundations of Geometry. (3) (Prerequisite: MA 1273). Three hours lecture. The structural nature of geometry; modern methods in geometrical finiteness geometries.

MA 3513. History of Mathematics. (3) (Prerequisite: MA 2733 or coregistration in MA 2733). Three hours lecture. A historical development of mathematicians and their most important contributions will be emphasized.

MA 4000. Directed Individual Study. Hours and credits to be arranged.

MA 4133/6133. Discrete Mathematics. (3) (Prerequisite: MA 3163 or consent of instructor). Three hours lecture. Sets, relations, functions, combinatorics, review of group and ring theory, Burnside’s theorem, Polya’s counting theorem, group codes, finite fields, cyclic codes, and error-correcting codes.

MA 4143/6143. Graph Theory. (3) (Prerequisite: MA 3113 or consent of instructor). Three hours lecture. Basic concepts, graphs, and matrices, algebraic graph theory, planarity and nonplanarity, Hamiltonian graphs, digraphs, network flows, and applications.

MA 4153/6153. Matrices and Linear Algebra. (3) (Prerequisite: MA 3113 and MA 3253). Three hours lecture. Linear transformations and matrices; eigenvalues and similarity transformations; linear functionals, bilinear forms; orthogonal and unitary transformations; normal matrices; applications of linear algebra.

MA 4163/6163. Group Theory. (3) (Prerequisite: MA 3163 or consent of instructor). Three hours lecture. Elementary properties: normal subgroups; factor groups; homomorphisms and isomorphisms; Abelian groups; Sylow theorems; composition series; solvable groups.

MA 4173/6173. Number Theory. (3) (Prerequisite: MA 3113). Three hours lecture. Divisibility; congruences; quadratic reciprocity; Diophantine equations; continued fractions.

MA 4213. Senior Seminar in Mathematics. (3) (Prerequisite: MA 3163, MA 3253, MA 4633). Three hours lecture. Students explore topics in current mathematical research, write expository articles, and give oral presentations. Refinement of specialized writing skills needed for effective mathematical communication.

MA 4313/6313. Numerical Analysis I. (3) (Prerequisites: CSE 1213 or equivalent. MA 3113 and MA 2743). Three hours lecture. Matrix operations; error analysis; norms of vectors and matrices; transformations; matrix functions; numerical solutions of systems of linear equations; stability; matrix inversion; eigen value problems; approximations. (Same as CSE 4313/6313).

MA 4323/6323. Numerical Analysis II. (3) (Prerequisites: CSE 1213 or equivalent. MA 3113 and MA 3253). Three hours lecture. Numerical solution of equations; error analysis; finite difference methods; numerical differentiation and integration; series expansions; difference equations; numerical solution of differential equations. (Same as CSE 4323/6323).

MA 4373/6373. Introduction to Partial Differential Equations. (3) (Prerequisite: MA 3253). Three hours lecture. Linear operators: linear first order equations; the wave equation; Green’s function and Sturm—Liouville problems; Fourier series; the heat equation; Laplace’s equation.

MA 4513/6513. Applied Probability and Statistics for Secondary Teachers. (3) (Prerequisite: MA 1723). Three hours lecture. Credit not available for students with credit in MA-ST 4543/6543). Graphical methods of presenting data; analysis of data; probability, binomial distribution, normal distribution; random sampling; linear regression and correlation.

MA 4523/6523. Introduction to Probability. (3) (Prerequisite: MA 2733). Three hours lecture. Basic concepts of probability, conditional probability, independence, random variables, discrete and continuous probability distributions, moment generating function, moments, special distributions, central limit theorem. (Same as ST 4523/6523).

MA 4533/6533. Introductory Probability and Random Processes. (Prerequisites: MA 3113 and MA 2743). Three hours lecture. Probability, law of large numbers, central limit theorem, sampling distributions, confidence intervals, hypothesis testing, linear regression, random processes, correlation functions, frequency and time domain analysis. (Credit can not be earned for this course and MA/ST 4523/6523.)

MA 4543/6543. Introduction to Mathematical Statistics I. (3) (Prerequisite: MA 2743.) Three hours lecture. Combinatorics; probability, random variables; discrete and continuous distributions, generating functions, moments, special distributions, multivariate distributions, independence, distributions of functions of random variables. (Same as ST 4543/6543.)

MA 4553/6553. Foundations of Analysis For Secondary School Teachers. (3) (Prerequisite: Consent of instructor). Three hours lecture. Elementary set theory; the real numbers as a complete ordered field; mathematical induction; introduction to metric spaces; convergence theorems.


MA 4573/6573. Introduction to Mathematical Statistics II. (3) (Prerequisite: MA 4543/6543.) Three hours lecture. Continuation of MA-ST 4543/6543. Transformations, sampling distributions, limiting distributions, point estimation, interval estimation, hypothesis testing, likelihood ratio tests, analysis of variance, regression, chi-square tests. (Same as ST 4573/6573.)

MA 4633/6633. Advanced Calculus I. (3) (Prerequisite: MA 2743). Three hours lecture. Theoretical investigation of functions; limits; differentiability and related topics in calculus.

MA 4643/6643. Advanced Calculus II. (3) (Prerequisite: MA 4633/6633). Three hours lecture. Rigorous development of the definite integral; sequences and series of functions; convergence criteria; improper integrals.

MA 4733/6733. Linear Programming (3) (Prerequisites: MA 3113). Three hours lecture. Theory and application of linear programming; simplex algorithm, revised simplex algorithm, duality and sensitivity analysis, transportation and assignment problem algorithms, integer and goal programming. (Same as IE 4733/6733).

MA 4753/6753. Applied Complex Variables. (3) (Prerequisite: MA 2743). Three hours lecture. Analytic functions: Taylor and Laurent expansions; Cauchy theorems and integrals; residues; contour integration; introduction to conformal mapping.

MA 4990/6990. Special Topics in Mathematics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MA 4933/6933. Mathematical Analysis I. (3) (Prerequisite: MA 4753/6753). Three hours lecture. Continuation of the topics introduced in MA 4933/6933. Riemann-Stieltjes integration, sequences and series of functions; limit of functions of bounded variation and differentiability in normed spaces.

MA 4943/6943. Mathematical Analysis II. (3) (Prerequisite: MA 4933/6933). Three hours lecture. Rieman-Stieljes integration, sequences and series of functions; implicit function theorem; multiple integration.

MA 7000. Directed Individual Study. Hours and credits to be arranged.

MA 8000. Thesis Research/Thesis. Hours and credits to be arranged.


MA 8123. Modern Higher Algebra II. (3) (Prerequisite: MA 8113). Three hours lecture. A continuation of the topics introduced in MA 8113.

MA 8203. Foundations of Applied Mathematics I. (3) (Prerequisites: MA 3113, MA 3253 or consent of instructor.) Three hours lecture. Principles of applied mathematics including topics from perturbation theory, calculus of variations, and partial differential equations. Emphasis of applications from heat transfer, mechanics, fluids, etc.

MA 8213. Foundations of Applied Mathematics II. (3) (Prerequisite: MA 8203). Three hours lecture. A continuation of MA 8203 including topics from wave propagation, stability, and similarity methods.

Courses numbered MA 8273, 8283, 8293 and 8313 have as prerequisites at least one of the courses MA 4633/6633, MA 4153/6153, 4353/6353, 4753/6753.

MA 8273. Special Functions. (3) Three hours lecture. Infinite products: asymptotic series; origin and properties of the special functions of mathematical physics.

MA 8283. Calculus of Variations. (3) Three hours lecture. Functionals: weak and strong extrema; necessary conditions for extrema; sufficient conditions for extrema; constrained extrema; direct methods; applications.

MA 8293. Integral Equations. (3) Three hours lecture. Equations of Fredholm type: symmetric kernels; Hilbert-Schmidt theory; singular integral equations; applications; selected topics.

MA 8313. Ordinary Differential Equations I. (3) Three hours lecture. Linear systems of differential equations; existence and uniqueness; second order systems; systems with constant coefficients; periodic systems; matrix comparison theorems; applications and selected topics.

MA 8323. Ordinary Differential Equations II. (3) (Prerequisite: MA 8313). Three hours lecture. Existence, uniqueness, continuation of solutions of nonlinear systems; properties of solutions of linear and nonlinear equations including boundedness, oscillation, asymptotic behavior, stability, and periodicity; application.

MA 8333. Partial Differential Equations I. (3) (Prerequisite: MA 4373/6373 or consent of instructor). Three hours lecture. Solution techniques; existence and uniqueness of solutions to elliptic, parabolic, and hyperbolic equations; Green’s functions.

MA 8343. Partial Differential Equations II. (3) (Prerequisite: MA 8333). Three hours lecture. A continuation of the topics introduced in MA 8333.

MA 8363. Numerical Solution of Systems of Nonlinear Equations. (3) (Prerequisites: MA 4313/6313 and MA 4323/6323). Three hours lecture. Basic concepts in the numerical solution of systems of nonlinear equations with applications to unconstrained optimization.


MA 8443. Numerical Solution of Partial Differential Equations I. (3) (Prerequisites: MA 4313/6313, MA 4323/6323, and MA 4373/6373 or consent of instructor). Three hours lecture. Basic concepts in the finite difference and finite element methods; methods for parabolic equations; analysis of stability and convergence.


MA 8633. Real Analysis I. (3) (Prerequisite: MA 4943/6943). Three hours lecture. Lebesgue measure and Lebesgue integrals; convergence theorems, differentiation and L spaces.

MA 8643. Real Analysis II. (3) (Prerequisite: MA 8633). Three hours lecture. General measures; the Radon-Nikodym theorem and other topics.

MA 8663. Functional Analysis I. (3) (Prerequisite: MA 8643). Three hours lecture. Hilbert spaces; Banach spaces; locally convex spaces; Hahn-Banach and closed graph theorems; principle of uniform boundedness; weak topologies.

MA 8673. Functional Analysis II. (3) (Prerequisite: MA 8663). Three hours lecture. Continuation of topics introduced in MA 8663.

MA 8713. Complex Analysis I. (3) (Prerequisite MA 4943/6943 or consent of instructor). Three hours lecture. Complex numbers; functions of a complex variable; continuity; differentiation and integration of complex functions; transformations in the complex plane.

MA 8723. Complex Analysis II. (3) (Prerequisite: MA 8713). Three hours lecture. Series; analytic continuation; Riemann surfaces; theory of residues.

MA 8913. Introduction to Topology I. (3) (Prerequisite: MA 4643/6643 or MA 4953/6953). Three hours lecture. Basic general topology; introduction of homotopy and homology groups.

MA 8923. Introduction to Topology II. (3) (Prerequisite: MA 8913). Three hours lecture. Continuation of topics introduced in MA 8913.

MA 8981. Teaching Seminar. (1) One hour lecture. Preparation for service as instructors in mathematics and statistics courses; includes practice lectures and exam preparation. (May be taken for credit more than once.)

MA 8990. Special Topics in Mathematics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years.)

MA 9000. Dissertation Research. (1-6) Hours and credits to be arranged.

MA 9163. Selected Topics in Combinatorics. (3) (Prerequisites: MA 8133 or consent of instructor). (May be taken for credit more than once). Three hours lecture. Continuation of one or more advanced topics introduced in MA 8133.

MA 9313. Selected Topics in Ordinary Differential Equations. (3) (Prerequisite: MA 8313 and consent of instructor). (May be taken for credit more than once). Three hours lecture. Topics to be chosen from such areas as bifurcation theory, biological modeling, control theory, dynamical systems, functional differential equations, nonlinear oscillations, and quantitative behavior.

MA 9333. Selected Topics in Partial Differential Equations. (3) (Prerequisite: MA 8333 and consent of instructor). (May be taken for credit more than once). Three hours lecture. Topics to be chosen from such areas as bifurcation theory, boundary integral methods, evolution equations, maximum and variational principles, and spectral methods.

MA 9413. Selected Topics in Numerical Analysis. (3) (Prerequisite: Consent of instructor). (May be taken for credit more than once). Three hours lecture. Current topics in Numerical Analysis. The subject matter may vary from year to year.

MA 9633. Selected Topics in Analysis. (3) (Prerequisite: MA 8643 and consent of instructor). (May be taken for credit more than once). Three hours lecture. Topics to be chosen from such areas as analysis of partial differential equations, methods of analysis of current interest.

MA 9913. Selected Topics in Algebra. (3) (Prerequisite: MA 8123 and consent of instructor). (May be taken for credit more than once). Three hours lecture. Topics to be chosen from such areas as valuation theory; polynomial rings; Noetherian, Prufer, Dedekind, and other domains of classical ideal theory; nonassociative algebraic systems.

Department of MECHANICAL ENGINEERING

Office: 210 Carpenter Engineering Building

Professors Steele (head), Adebiyi, Berry, Daniewicz, German, Hodge, Horstemeyer, and Marcum;

Associate Professors Cain, Chamra, Felicelli, Li, Luck and Schneider;

Assistant Professors Mago, Patton, and Walters; Instructor Emplaincourt

ME 1111. Introduction to Mechanical Engineering. (1) (Prerequisite: Freshmen standing or consent of instructor). One hour lecture. Introduction to the mechanical engineering curriculum, the profession, and career opportunities. Historical perspective; the support role of the department, college, and university; student roles and responsibilities.

ME 2990. Special Topics in Mechanical Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years.)

ME 3113. Engineering Analysis. (3) (Prerequisites: Computer Literacy, Grade of C or better in MA 3113, MA 3253, and PH 2213). Three hours lecture. Analysis of engineering problems requiring the use of engineering fundamentals and mathematical techniques of analysis with computer application.

ME 3133. Modeling and Manufacturing. (3) (Prerequisite: Junior standing). Two hours lecture. Three hours laboratory. Intermediate drafting and design techniques using solid modeling software, with special emphasis placed on tolerancing, dimensioning, and manufacturing process selection.

ME 3313. Heat Transfer. (3) (Prerequisites: Grade of C or better in EM 3513, MA 3253, and ME 3533 or ME 3513). Three hours lecture. A study of the fundamental principles of heat transfer; processes; steady and transient conduction in solids; thermal radiation; and convective processes.

ME 3403. Materials for Mechanical Engineering Design. (3) (Prerequisites: Grade of C or better in CH 1223 and EM 2413, Co-requisite EM 3213). Three hours lecture. Behavior, testing and processing of engineering materials.
DESCRIPTION of COURSES

ME 3423. Mechanics of Machinery. (3) (Prerequisites: Grade of C or better in EM 2433 and ME 3113). Three hours lecture. Analysis of mechanisms for motions, velocities, accelerations, and forces.

ME 3513. Thermodynamics I. (3) (Prerequisites: Grade of C or better in CH 1223, MA 2733, and PH 2213). Three hours lecture. Definitions; properties of a pure substance; work and heat; First and Second Laws; entropy; ideal gases.

ME 3523. Thermodynamics II. (3) (Prerequisite: Grade of C or better in ME 3513). Three hours lecture. Mixtures of ideal gases; irreversibility and availability; vapor power cycles; gas power cycles; refrigeration cycles; flow through nozzles and turbine blades; combustion; chemical equilibrium.

ME 3533. Thermodynamics. (3) (Prerequisite: MA 1723). Three hours lecture. Definitions; work and heat; pure substances; fundamental laws; processes; externally reversible cycles; entropy; vapor and gas power cycles; heat transfer.

ME 3613. System Dynamics. (3) (Prerequisites: Grade of C or better in EM 2433, ME 3113, EM 3313, and ECE 3183). Three hours lecture. Mathematical description of mechanical, electrical, hydraulic and pneumatic systems. Transient and frequency response of linear systems.

ME 3701. Experimental Orientation. (1) (Prerequisites: credit or registration in ME 3113 and a technical junior level writing course). Three hours laboratory. Measurements: their accuracy and usefulness; reporting; measurements of pressure, temperature, mass, weight, volume, speed, time, frequency, torque, power, area, force, and displacement.

ME 4000. Directed Individual Study. Hours and credits to be arranged.

ME 4113/6113. Material Selection in Design. (3) (Prerequisite: ME 3403 or equivalent). Three hours lecture. Principles of materials selection related to mechanical design requirements.

ME 4123/6123. Failure of Engineering Materials. (3) (Prerequisite: EM 3213). Three hours lecture. The failure of constituent materials using real-world case studies is the focus. Experimental and analytical techniques for failure analysis and prevention are covered.

ME 4133/6133. Mechanical Metallurgy. (3) (Prerequisite: ME 3403 or equivalent). Three hours lecture. The mechanical and metallurgical fundamentals of metals are discussed. Mechanical fundamentals cover the stress and strain relationships and metallurgical fundamentals cover the microstructure.

ME 4223/6223. Mechanical Systems Analysis. (3) (Prerequisites: EM 3413 or ME 3613 and senior standing). Three hours lecture. Fourier methods, shock spectra, signature analysis, relation to specific phenomena and malfunctions; acoustical aids; field measurement analysis; random functions, correlations; mobility and impedance methods.


ME 4353/6353. Alternate Energy Sources. (3) (Prerequisite: ME 3313). Three hours lecture. Analysis and design of systems using energy derived from solar, hydro, geothermal, wind, ocean, waste, and biomass sources.

ME 4373/6373. Air Conditioning. (3) (Prerequisites: ME 3523 and ME 3313). Three hours lecture. Psychrometrics; comfort conditions; determination of heat losses and gains; determination of sizes of elements; energy usage estimates; residential and commercial systems.

ME 4383/6383. Heat Exchanger Design. (3) (Prerequisites: ME 3313 and EM 3313). Three hours lecture. Thermal design and application of various types of heat exchangers including: surface selection, design, sizing, rating, and operational challenges.


ME 4413/6413. Casting and Joining. (3) (Prerequisite: ME 3403 or consent of instructor). Three hours lecture. Fundamentals of solidification in casting and joining processes, including design applications.

ME 4423/6423. Machining and Forming. (3) (Prerequisite: ME 3403 or consent of instructor). Three hours lecture. Fundamentals of mechanical processing of metals, including bulk and sheet forming techniques.

ME 4443/6443. Mechanical Systems Design. (3) (Prerequisites: ME 3423 and ME 4403). Three hours lecture. Mechanical design projects involving analysis; industrial standards and considerations for safety and manufacturability; the use of computers in design and manufacturing automation (CAD/CAM).


ME 4463/6463. Engineering Design. (3) (Prerequisites: ME 3613 and Senior standing). Three hours lecture. In-depth topics in mechanical design. Design of friction devices, hydrodynamic drives, and shells of revolution. Design for thermal creep, thermal stresses, surface contact, and impact.


ME 4483/6483. Computer-Aided Design. (3) (Prerequisite: ME 4403). Three hours lecture. Role of computers in design process, CAD tools, design software development, numerical methods, finite elements, design optimization, shape description, presentation of design data, data structures.

ME 4493/6493. Concurrent Engineering. (3) (Prerequisite: Junior or Senior standing). Three hours lecture. An introduction to the implementation, application, and management of concurrent engineering, as well as, the tools and techniques that support new product development.

ME 4543/6543. Combustion Engines. (3) (Prerequisites: ME 3523 and ME 3313). Three hours lecture. Application of thermodynamics, heat transfer, and combustion in the determination of performance characteristics of various engines, e.g., internal combustion, jet, and rocket engines.


ME 4624/6624. Experimental Methods in Materials Research. (4) (Prerequisites: CHE 3413 or ABE 3813 or ME 3403 or consent of instructor). Three hours lecture. Three hours laboratory. An introduction to research methodologies commonly used in the evaluation of treatments and mechanical properties. (Same as ABE 4624/6624 and CHE 4624/6624).


ME 4721. Experimental Techniques I. (1) (Prerequisites: ME 3701, ME 3313, and credit or registration in ME 3313). Three hours laboratory. Application of experimental design, data collection, data analysis, and laboratory equipment. (Same as ABE 4721 and CHE 4721).

ME 4731. Experimental Techniques II. (1) (Prerequisite: ME 4721). Three hours laboratory. Continuation of ME 4721. Plan and use the microcomputer to record data and control experiments in traditional mechanical engineering subject areas. Analyze and report results.

ME 4743/6743. Labview. (3) (Prerequisite: ME 3701 or equivalent Labview Experience). Two hours lecture. Three hours laboratory. Labview programming for applications in laboratory data acquisition (DAQ). Basic and intermediate graphical programming theory with emphasis on transducer measurements and triggering.

ME 4823/6823. Compressible Flow and Turbomachinery. (3) (Prerequisites: EM 3313 and ME 3523). Three hours lecture. Fundamental principles, shock and expansion waves, generalized one-dimensional flows, simple processes, energy transfer in turbomachines, turbomachinery efficiencies, multi-dimensional effects.


ME 4990/6990. Special Topics in Mechanical Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Course is limited to two offerings under one title within two academic years).

ME 7000. Directed Individual Study. Hours and credits to be arranged.

WE 8000. Thesis Research/Thesis. Hours and credits to be arranged.

WE 8011. Graduate Seminar. (1) Presentation and discussion of research and current mechanical engineering literature by students, faculty, and visiting lecturers. Attendance required for students in Mechanical Engineering Graduate Program.

ME 8223. Inelasticity. (3) (Prerequisite: EM 8113 and EM 8203). Three hours lecture. This course covers plasticity, creep, viscoelasticity, and inelastic behavior in relation to microstructure-property relations, constitutive modeling at different length scales, and computational simulations.


ME 8313. Conductive Heat Transfer. (3) Three hours lecture. Closed form analytical and approximate numerical solutions to one, two, and three dimensional steady-state and transient problems in conduction heat transfer.

ME 8323. Radiative Heat Transfer. (3) Three hours lecture. Thermal radiation through non-absorbing and absorbing media; integral equations for radiative transfer; unified method for radiation-exchange calculations; solar terrestrial, and planetary radiation.

ME 8333. Convective Heat Transfer. (3) Three hours lecture. Analytical and empirical methods of solution of problems in laminar and turbulent, natural and forced convective heat transfer. Stability; thermal boundary layer techniques; multiphase systems.


ME 8353. Advanced Energy Conversion. (3) (Prerequisite: Graduate standing in Mechanical Engineering or consent of instructor.) Three hours lecture. Physical process in advanced energy conversion technologies, with practical application to devices/energy cycles. Emphasis on fuel cells, photovoltaics, and related materials engineering issues.

ME 8363. Computational Heat Transfer. (3) (Prerequisite: Consent of Instructor). Three hours lecture. Application of numerical techniques to elliptic and parabolic problems in engineering heat transfer and fluid flow. Discretization techniques; linearization; stability analysis. (Same as ASE 8363).

ME 8403. Principles of Computer-Aided Design and Manufacturing. (3) Three hours lecture. CAD/CAM principles and tools presented in generic and basic forms; engineering and design applications; numerical control part programming and manufacturing.


ME 8613. Dynamical Systems. (3) Three hours lecture. Mathematical description and simulation of systems with mechanical, electrical, pneumatic, and hydraulic components; state variables; bondgraphs; stability; observability and controllability.


ME 8733. Experimental Procedures. (3) Three hours lecture. Design of experiments; instrumentation; data acquisition; and correlation and evaluation of results.

ME 8743. Stress Analysis. (3) (Prerequisite: EM 3213). Two hours lecture. Three hours laboratory. Analysis of stress distributions in machine and structural members by the experimental methods of photoelasticity, electrical-resistance strain gages, and brittle coating; dynamic stress analysis.

ME 8813. Viscous Flow I. (3) Three hours lecture. Fundamental laws of motion for a viscous fluid; classical solutions of the Navier-Stokes equations; inviscid flow solutions; laminar boundary layers; stability criteria.


ME 8990. Special Topics in Mechanical Engineering. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

Department of MANAGEMENT and INFORMATION SYSTEMS

ME 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

Office: 3103 McCool Hall
Professors Smith (Head), Arnett, Barnett, Chrisman, Cochran, Freedman, Lehman, A. Pearson, R. Pearson, Shin, Spencer, Taylor, Warkentin and White; Associate Professor Long
Assistant Professors Kellermans, Otondo, Shaw, Templeton and Vance

MGT 2900. Special Topics in Management. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MGT 3114. Principles of Management and Production. (4) (Prerequisites: EC 2113, BQA 2113, and junior standing). Four hours lecture. Management principles for all organizations including planning, organizing, leading, and controlling as well as the purposes, methods, tools, and procedures of production management.

MGT 3213. Organizational Communications I. (3) (Prerequisites: EN 1113 and junior standing). Three hours lecture. A study of the role of communications in the modern business organization. Emphasis is given to the basic writing skills applied to various forms of business communications.

MGT 3323. Entrepreneurship. (3) (Prerequisite: EC 2113). An introduction to the processes involved in owning and managing a business. Includes the entrepreneurial activities normally associated with starting and operating a business.

MGT 3333. Field Studies in Entrepreneurship. (3) (Prerequisite: MGT 3323). Three hours lecture. Students, working in groups under the direction of their professor, will assess the problems of an embryonic or operating entrepreneurial organization and recommend appropriate solutions.

MGT 3413. Production Management. (3) (Prerequisite: MGT 3114 and BQA 2113). Three hours lecture. Purposes, methods, tools, and procedures of production/operations management: systems used in large and small firms.


MGT 3813. Organizational Behavior. (3) (Prerequisites: MGT 3114). Three hours lecture. Study of behavioral theories used by managers to assist them in better understanding, anticipating, and influencing behavior in an organizational setting.

MGT 4000. Directed Individual Study. (Prerequisite: Junior standing). Hours and credits to be arranged.

MGT 4113. Advanced Management. (3) (Prerequisite: MGT 3114). Three hours lecture. A brief history of management thought and study in depth of the managerial functions of planning, organizing, controlling.

MGT 4153. Organization Theory. (3) (Prerequisite: Final semester senior standing). Presents for analysis, discussion, and solution case-problems of actual situations met in day-to-day operation of business enterprise which require managerial action.

MGT 4533. Advanced Human Resource Management. (3) (Prerequisite: MGT 3513 or consent of instructor). Three hours lecture. Study of problems in the field of human resource management emphasizing development of the ability to analyze problems and to apply management fundamentals to human resource.

MGT 4543. Compensation Management. (3) (Prerequisite: MGT 3513). Three hours lecture. Compensation fundamentals, practices, and problems, including wage level determinants, wage & salary structures, merit rating, methods of wage payments, fringe benefits, & controls.


MGT 4563. Staffing in Organizations. (3) (Prerequisites: MGT 3114 and MGT 3513). Three hours lecture. Study of the staffing function in organizations, with emphasis on human resource planning, recruitment and selection.

MGT 4713. Quality in Organizations. (3) (Prerequisites: MGT 3114). Three hours lecture. An introduction to theories and tools associated with quality management in organizations. Consider the managerial, employee, organizational, and cultural changes required to enhance quality.

MGT 4990/6990. Special Topics in Management. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MGT 7000. Directed Individual Study. Hours and credits to be arranged.

MGT 8000. Thesis Research/Thesis. Hours and credits to be arranged.

MGT 8063. Survey of Management. (3) (Prerequisite: Graduate standing). Three hours lecture. Survey of management principles and techniques including: objective, policies, functions, leadership, organization, and production control procedures and systems as applied to all fields of business.

MGT 8111. Human Resources Issues. (1) (Prerequisite: MGT 8063 or equivalent). One hour lecture. Survey of nature and influences of human resource management in organizations. Case studies are used to apply and reinforce theory.

MGT 8112. Leadership Skills for Managerial Behavior. (2) (Prerequisite: MGT 8063 or equivalent). Two hours lecture. Survey of major behavioral skills used by managers to help them understand and influence behavior in an organizational setting.

MGT 8121. Strategic Management. (1) (Prerequisite: MGT 8063 or equivalent). One hour lecture. A detailed study of strategic management covering such topics as environmental analysis, competition between firms, establishing and sustaining a competitive advantage, and strategy implementation.

MGT 8122. Business Consulting Project. (2) (Prerequisite: MGT 8121 or equivalent). Two hours lecture. A group-based, consulting project on strategic issues currently facing a participating organization.

MGT 8132. Project Management Field Study. (2) Prerequisites: IE 6533 or equivalent and instructor consent). Two hours lecture. A project based field study requiring the application of specific project management skills in a organized setting.

MGT 8213. Graduate Seminar in Communications. (3) (Prerequisite: MGT 3114). Three hours lecture. Communication orientation to the managerial function. Includes study of verbal and nonverbal communication, persuasion, semantics, upward, downward and horizontal communication, communication skills, and communication programs.

MGT 8413. Operations Research Problems. (3) (Prerequisites: BQA 8443 and MGT 4413 or consent of instructor). Three hours lecture. Survey of major quantitative and operations research techniques useful in business decision-making, planning, and control; practice in model formulation and solution using the computer.


MGT 8613. Managing in the Global Business Environment. (3) Three hours lecture. Analysis of the global environmental elements which impact and are impacted by organizations: global politics and economics, culture, international competition, natural resources, technology.

MGT 8813. Organizational Behavior. (3) Three hours lecture. A study of the major behavioral theories and technologies as they relate to an organizational setting. Theory and research in the major organizational behavior areas will be emphasized.

MGT 8823. Organization Development. (3) (Prerequisite: MGT 3114). Study of the ways organizations can better adapt to the challenges of a modern society. The focus is on innovation, change, and action-oriented research.

MGT 8990. Special Topics in Management. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MGT 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

MGT 9143. Development of Management Theory. (3) (Prerequisite: Approval of Instructor). Three hours lecture. Doctoral Seminar. A survey, analysis and synthesis of the classical idea which have influenced the development of management and current management theory.

MGT 9533. Seminar in Human Resource Management Literature. (3) (Prerequisite: Approval of Instructor). Discussions and presentations pertaining to HRM literature. Emphasis on understanding the empirical and theoretical research in this area and developing individual theoretical manuscripts for presentation.

MGT 9613. Organizational Theory and Practice. (3) (Prerequisite: Approval of Instructor). Three hours lecture. Doctoral Seminar: Analysis and design of organization structure and dynamics of organization. Behavioral aspects of the executive factors affecting the administrative process within organizations.

MGT 9813. Seminar in Organizational Behavior. (3) (Prerequisite: Approval of Instructor). Discussions and presentations pertaining to OB literature. Emphasis on understanding the empirical and theoretical research in this area and developing individual theoretical manuscripts for presentation.

MGT 9913. Seminar in Strategy Formulation. (3) (Prerequisite: Approval of Instructor). Doctoral seminar covering the strategic management literature in the area of strategy formulation.

MGT 9933. Seminar in Strategy Implementation. (3) (Prerequisite: Approval of instructor). Doctoral seminar covering the strategic management literature in the area of strategy implementation.

Department of MARKETING, QUANTITATIVE ANALYSIS and BUSINESS LAW

Office: 301 McCool Hall

Professors Bryant, Capella, Eshee, LeMay, Sullivan, Tahai, Taylor and Webster;
Associate Professors Engelland (head), P. Liddell, M. Moore and R. Moore;
Assistant Professors Chakrabarti, G. Liddell, Lueg and Ponder-Lueg;
Instructors Goree and Lam

MKT 2211-2221. PGM Level I Seminar. (1) (Prerequisite: enrollment in the PGM program or permission of instructor). One hour lecture. This course introduces the PGM program and helps students work through Level I checkpoint material as designated by the PGA of America.

MKT 2311. PGM Level II Seminar. (1) (Prerequisite: completion of Level I of the PGA of America requirements or permission of the instructor). One hour lecture. This course introduces the PGM program and helps students work through Level II checkpoint material as designated by the PGA of America.

MKT 2990. Special Topics in Marketing. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MKT 3013. Principles of Marketing. (3) (Prerequisite: junior standing). Three hours lecture. A general survey of the functions, processes, institutions and costs in distribution of goods and services from producers to users.

MKT 3213. Retailing. (3) (Prerequisite: MKT 3013 and Junior standing). Three hours lecture. Survey of the nature, procedure and results of trade at the retail level.

MKT 3933. International Marketing. (3) (Prerequisites: MKT 3013, and senior standing in business/marketing.) Three hours lecture. Study of the marketing function in the global marketplace, including the techniques and strategies required when marketing in various cultural, economic, legal and political environments.

MKT 4000. Directed Individual Study. Hours and credits to be arranged.

MKT 4113. Personal Selling. (3) (Prerequisite: Junior standing). Three hours lecture. Psychology of personal selling; planning and presentation; the sales approach; the interview; closing the sale.

MKT 4123. Advertising. (3) (Prerequisite: MKT 3013 or consent of instructor). Three hours lecture. A course dealing with the role of advertising in society, the relation of advertising to other business activity, and the use of advertising as communication.

MKT 4143/6143. Sales Management. (3) (Prerequisites: MKT 3013 and MKT 3114). Three hours lecture. Application of scientific management to the selling and distribution of consumer and industrial goods.

MKT 4213/6213. Internet Marketing. (3) (Prerequisite: MKT 3013). Three hours lecture. Introduction to practical marketing use of Internet technologies, including basic principles, impact on business and society, and strategic implications.

MKT 4233/6233. Golf Merchandising Management. (3) (Prerequisite: PG Major, MKT 3213). Three hours lecture. Development of marketing strategies for the organization, operation, and maintenance of operations in the golf shop and golf course environment.

MKT 4413. Consumer Analysis and Behavior. (3) (Prerequisite: MKT 3013). A study of the nature and dynamics of consumer markets, and the significance of these markets to marketing executives.
MKT 4533. Marketing Research. (3) (Prerequisites: BQA 3123 and MKT 3013). Three hours lecture. Study of modern marketing research techniques and their applications. Scope and purpose of marketing research: planning of surveys; collecting and analysis of data; preparation of reports.

MKT 4613. Services Marketing. (3) (Prerequisite: MKT 3013.) Three hours lecture. A study of the unique problems associated with the marketing of services and of alternative strategies with which to improve service marketing effectiveness.

MKT 4813. Marketing Management. (3) (Prerequisites: Marketing Graduating Senior). Marketing from managerial viewpoints: critical analysis of functions of marketing opportunity assessment, marketing planning and programming, marketing leadership and organization, evaluating and adjusting marketing effort.

MKT 4990/6990. Special Topics in Marketing. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MKT 7000. Directed Individual Study. Hours and credits to be arranged.

MKT 8000. Thesis Research/Thesis. Hours and credits to be arranged.

MKT 8072. Survey of Marketing. (2) (Prerequisite: Graduate standing; EC 8043, equivalent of concurrent enrollment). Two hours lecture. Survey of product, price, promotion, and distribution decisions in for-profit and not-for-profit settings; external environmental factors affecting marketing decisions; focus on strategic decision making.

MKT 8112. Marketing Management. (2) (Prerequisite: MKT 8072 or equivalent). Two hours lecture. A graduate survey of marketing focused on the strategic analysis and planning necessary to effectively match marketing strategies with changing macro, micro, and organizational environments.

MKT 8122. Management of Delivery Systems. (2) (Prerequisite: MKT 8072 or equivalent). Two hours lecture. Provides knowledge of operations, purchasing and logistics that is crucial to managing in the modern business world.

MKT 8132. Business Research Methods. (2) (Prerequisite: MKT 8072 or equivalent). Two hours lecture. Investigation of the managerial decisions involved with the development of questionnaires, creation of a sampling plan, collection and analysis of data, and presentation of results.

MKT 8313. Marketing Policies. (3) (Prerequisite: MKT 3013). Three hours lecture. A graduate survey of marketing focused on the analysis and planning necessary to effectively match marketing programs with competitive, economic, social, political and ethical environments.

MKT 8323. Problems in Marketing. (3) (Prerequisite: MKT 8112 or equivalent). Seminar. Identification of current marketing problems and the specification, evaluation and modification of strategies for their resolution, with emphasis on the use of conceptual modeling.

MKT 8333. Seminar in Marketing—Promotion and Distribution Strategies. (3) (Prerequisite: MKT 8313). Intensive analysis of promotion and distribution strategies as key functional marketing variables. Emphasis is on obtaining an advanced understanding of strategic and research alternatives.

MKT 8343. Seminar in Marketing—Pricing and Product Strategies (3) (Prerequisite: MKT 8313). Intensive analysis of pricing and product strategies as key functional marketing variables. Emphasis is on obtaining an advanced understanding of strategic and research alternatives.

MKT 8413. Seminar on Consumer Behavior. (3) (Prerequisite: MKT 8313). An analysis of macro and micro consumer behavior. Particular emphasis is placed on the consumer decision process in the market place.

MKT 8533. Research Design and Execution. (3) (Prerequisite: Consent of instructor). Interdisciplinary; designing and executing valid quantitative research projects, development valid, reliable data collection instruments, correctly analyzing, interpreting data. Wide-range applicability. Master-doctoral-level.

MKT 8543. Quantitative Marketing Seminar. (3) (Prerequisites: MKT 8313 and BQA 8443 or consent of instructor). Development of marketing strategy and the solution of marketing problems using quantitative methods.

MKT 8990. Special Topics in Marketing. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MKT 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

MKT 9333. Advanced Marketing Theory. (3) (Prerequisite: MKT 8313). Seminar. A critical examination of the evolution of marketing concepts, terminology, principles, and theory, through analysis of the literature in the field.

MILITARY SCIENCE
Office: 1st Floor, Middleton Hall
LTC McManigal, Major Graham, Major Smith, Major Ashapanek, MSG Lacour, SFC Marquez, SGT Betts

MS 1112. Introduction to ROTC. (2) One hour lecture. Two hours laboratory. Increases self-confidence through team study and activities in basic drill, physical fitness, rappelling, first aid, and basic marksmanship. Students learn fundamental concepts of leadership.

MS 1122. Introduction to Leadership. (2) One hour lecture. Two hours laboratory. Applies principles of effective leadership, develops communications skills to improve individual performance and group interaction, and relates organizational ethical values to the effectiveness of leaders.

MS 2113. Advanced Leadership. (3) Two hours lecture. Two hours laboratory. Applies leadership and problem-solving principles to complex case studies/simulations. Examines principles of subordinate motivation and organizational skills. (Fall).

MS 2123. Tactics and Officership. (3) Two hours lecture. Two hours laboratory. Introduces basic tactics. Examines national and Army values. Applies principles of ethical decision-making. Examines the legal and historical foundations, duties and functions of officers. (Spring)

MS 2256. Introductory Leadership Course. (6). (The equivalent of MS 1112, MS 1122, MS 2122; or MS 1113 and MS 2223). Summer leadership training course designed to introduce students to the basics of the military with a focus on understanding traditional military leadership values. (Summer)

MS 3113. Advanced Military Skills I. (3) (Prerequisites: MS 1112, MS 1122, MS 2112, and MS 2122 or instructor’s consent.) Fall semester. Three hours lecture. Two hours laboratory. Detailed instruction on problem solving, squad offensive and defensive tactics, to include specialized operations. Additional instruction in leadership and operations orders.

MS 3123 Advanced Military Skills II (3) (Prerequisite: MS 1112, MS 1122, MS 2112, MS 2122, MS 3113 or instructor’s consent.) Spring Semester. Three hours lecture. Two hours laboratory. Advanced instruction on platoon tactical operations and small unit patrolling. Discussion on the operation and deployment of weapons in the platoon.

MS 3376. Advanced Leadership Course. (6) (Prerequisite: MS 3113 and MS 3123). Summer leadership training course designed to train and to evaluate cadet’s leadership ability and officer potential. (Summer)

MS 4000. Directed Individual Study. Hours and credits to be arranged. Maximum of six hours.

MS 4114/6114. Leadership Challenges and Goal-Setting. (4) (Prerequisite: Military Science Status or consent of instructor). Three hours lecture. Three hours laboratory. Plan, conduct and evaluate activities of the ROTC organization. Develop confidence in skills to lead people and manage resources. Apply Army policies and programs. (Fall)

MS 4124/6124. Transition to Lieutenant. (4) (Prerequisite: Military Science Senior Status or consent of instructor). Three hours lecture. Three hours laboratory. Theory and practice of the laws of war, leadership, and resolving ethical problems.

Department of MUSIC EDUCATION

Music Building
Professors Michael R. Brown (Head), Edwards-Henry, Hood, Johns and Smith
Associate Professors Dunn and Pappas
Assistant Professors Human, Min and Sebb; Instructors Aarhus, Falcone, Huff and Payton

Music

MU 1010. Recital Hour. (0) Minimum one (1) hour weekly. Performance and critique experiences in applied music. Required for music majors.

MU 1103. African American Music. (3) Three hours lecture. A study of African musical and cultural traditions with focus on the impact of these traditions on the development and advancement of African American Music.

MU 1111-1211. Piano Class. (1) Two hours laboratory. Beginning piano for non-music majors.

MU 1113. History and Appreciation of Music. (3) Three hours lecture. Historical development of music and the composers of the different eras; individual investigation of related special topics; individual and directed listening to musical examples.
MU 1131. Voice Class. (1) Two hours laboratory. Class study of Voice Production.

MU 1141. Seminar for Voice Majors. (1) One hour seminar. Acquiring the skills to pronounce and sing vocal text correctly in various languages by the use of the International Phonetic Alphabet (IPA). Music education majors only.

MU 1162. Music History I. (2) Two hours lecture. An introduction to musical styles and an intensive study of the music and composers of the Medieval and Renaissance periods, emphasizing listing and score-study. (Prerequisite: MU 1211 for music majors.)

MU 1211. Guitar Class. (1) Two hours laboratory. Class study of guitar-playing techniques at the beginning level.


MU 1413. Music Theory II. (3) Three hours lecture. Further elements of harmony, including seventh-chords, non-chord tones, chromatic vocabulary. Small forms. Co-requisite: MU 1521 or consent of instructor.

MU 1521. Ear Training II. (1) Two hours laboratory. Aural identification, singing and dictation of diatonic melodies, triads, simple intervals and rhythms. Co-requisite: MU 1413 or consent of instructor.

MU 2011. Third Year Woodwind Ensembles. (1) Audition required. One to five rehearsals per week. The study and performance of significant woodwind literature. May be repeated for credit more than once.

MU 2111-2121. Piano Class. (1) Two hours laboratory. Beginning piano for instrumental and vocal music majors.

MU 2322. Music History II. (2) (Prerequisite: Grade of C or better in MU 1162 or permission of instructor). Two hours lecture. An intensive study of the music and composers of the Baroque and Classical periods, Monteverdi through Beethoven, emphasizing listing and score-study. (Primarily for music majors.)

MU 2323. Music History III. (3) (Prerequisite: Grade of C or better in MU 2322 or permission of instructor). Three hours lecture. An intensive study of Nineteenth and Twentieth Century Western Art music and composers and music of non-Western cultures, emphasizing listing, score-study, writing and speaking. (Primarily for music majors.)

MU 2411. Guitar Ensemble. (1) Audition required. One to five rehearsals per week. The study and performance of guitar ensemble literature. May be repeated for credit more than once.

MU 2511. Marching Band. (1) Audition required. One to five rehearsals per week. The study and performance of significant marching band literature. May be repeated for credit more than once. (Fall semester only)

MU 2551. Percussion Ensemble. (1) Audition required. One to five rehearsals per week. The study and performance of significant percussion literature. May be repeated for credit more than once.

MU 2561. Symphonic Band. (1) Audition required. One to five rehearsals per week. The study and performance of significant symphonic band literature. May be repeated for credit more than once. (Spring semester only)

MU 2571. Wind Ensemble. (1) Audition required. One to five rehearsals per week. Study, rehearsal, and performance of select literature from the wind band repertory. May be repeated for credit more than once.

MU 2611. Concert Choir. (1) Audition required. One to five rehearsals per week. The study and performance of significant choral literature. May be repeated for credit more than once.

MU 2613. Music Theory III. (3) (Prerequisite: Grade of C or better in MU 1413; Co-requisite: MU 2721). Three hours lecture. Chromatic vocabulary, including augmented sixth chords, Neapolitans and modulation. Late Romantic and early 20th Century innovations such as extended tertian chords and substitution chords.

MU 2711. Pop/Jazz Choir. (1) Audition required. One to five rehearsals per week. The study and performance of significant choral literature. May be repeated for credit more than once.

MU 2721. Ear Training III. (1) (Prerequisite: Grade of C or better in MU 1521; Co-requisite: MU 2613). Two hours laboratory. Aural identification, singing and dictation of diatonic melodies with chromatic inflection, seventh chords and rhythms.

MU 2731. Chamber Singers. (1) (Audition required). One to five rehearsals per week. The study and performance of significant choral literature. May be repeated for credit more than once.

MU 2813. Music Theory IV. (3) (Prerequisite: Grade of C or better in MU 2613; Co-requisite: MU 2921). Three hours lecture. 16th century counterpoint, 18th century counterpoint, and 20th century practices. Modes, artificial scales, non-triad chords, complex meter, changing meter, symmetrical divisions.

MU 2851. Brass Ensembles. (1) (Audition required). One to five rehearsals per week. The study and performance of significant brass literature. May be repeated for credit more than once.

MU 2911. Jazz Ensemble. (1) Audition required. One to five rehearsals per week. The study and performance of significant jazz ensemble literature. May be repeated for credit more than once.

MU 2921. Ear Training IV. (1) (Prerequisite: Grade of C or better in MU 2721; Co-requisite: MU 2851). Two hours laboratory. Aural identification, singing and dictation of modes, artificial scales, non-triad chords, modulating melodies, compound intervals.

MU 2990. Special Topics in Music. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MU 3111-3121. Piano Class. (1) (Prerequisite: grade of C or better in MU 2121 or equivalent or permission of instructor). Two hours laboratory. Intermediate piano for instrumental and vocal music majors; continuation of MU 2121.

MU 3112-3122. Piano Class. (2) (Prerequisite: Prior credit or concurrent enrollment in MU 1213-1413). Two hours laboratory. Functional keyboard skills for music majors who read and play intermediate to advanced-level piano repertoire.

MU 3123 Creative Arts for Elementary and Middle Levels. (3) (Prerequisite: Admission to Teacher Education) Three hours lecture. An exploration of musical and artistic elements utilizing a variety of multicultural music, dance, drama and aesthetic visuals. (Same as EDE 3443)

MU 3333. Orchestration. (3) Three hours lecture. Basic arranging/orchestration techniques for chorus and band. The student will learn the practical ranges of band instruments and voices so that they can write idiomatically.

MU 3412. Conducting. (2) Two hours lecture. The elements of conducting, baton technique, and interpretation.

MU 3442. Advanced Conducting. (2) (Prerequisite: MU 3412 or consent of instructor). One hour lecture. Two hours laboratory. Continuation of MU 3412 with emphasis on interpretation of significant instrumental and choral literature.

MU 4000. Directed Individual Study. Hours and credits to be arranged.

MU 4131. Form and Analysis. (3) (Prerequisites: MU 2214/2224). Three hours lecture. A comparative survey of music majors of the principal formal designs found in instrumental and vocal literature with emphasis on compositional techniques and harmonic structure.

MU 4990/6990. Special Topics in Music. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MU 7000. Directed Individual Study. Hours and credits to be arranged.

MU 8990. Special Topics in Music. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

Band
Office: Band Hall
Director: Elva Kaye Lance

MU 2511. Marching Band. (1)
Symphonic Band
MU 2561. Symphonic Band. (1) Second Semester Only.
Wind Ensemble
MU 2571. Wind Ensemble (1)
Choral
Office: Choral Building
Director: Bruce Lesley
Training in the correct principles of singing. Stress on tone quality, enunciation, pronunciation, even scale and musicianship. Repertoire for each of the choral groups during a four-year period is designed to provide participants with opportunity to study and perform standard and contemporary compositions.

Chorus
MU 2611. Concert Choir. (1)
MU 2631. Starkville Community Choir. (1)

Vocal Ensembles
MU 2711. Pop/Jazz Choir. (1)
MU 2731. Chambers Singers. (1)

Intrumental Ensembles
Woodwind Ensembles
MU 2011. Woodwind Ensemble. (1)
Brass Ensembles
MU 2851. Brass Ensemble. (1)
Stage Band
MU 2911. Jazz Ensemble. (1)

APPLIED MUSIC
Variable credit 1 or 2 hours credit: 3 hours practice per week per hour of credit. May be repeated for credit. All students of applied music will be given proficiency examinations which will be held at the end of each semester. All Music Majors are required to perform in Student Recital on their major instrument at least once each semester. (Does not apply in the first semester of the freshman year or during the teaching internship semester).

MUA 1010, 2010, 3010. Piano
MUA 1050, 2050, 3050. Voice
MUA 1110, 2110, 3110. Flute
MUA 1150, 2150, 3150. Clarinet
MUA 1210, 2210, 3210. Saxophone
MUA 1250, 2250, 3250. Oboe
MUA 1310. Bassoon
MUA 1350, 2350, 3350. Trumpet
MUA 1410, 2410, 3410. Horn
MUA 1450, 2450, 3450. Trombone
MUA 1510, 2510, 3510. Euphonium
MUA 1550, 2550, 3550. Tuba
MUA 1610, 2610, 3610. Percussion
MUA 1650. Strings
MUA 1710, 2710, 3710. Guitar
MUA 1750, 2750, 3750. Organ

MUSIC EDUCATION
MUE 2990. Special Topics in Music Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MUE 3001. Practicum in Music Education. (1) Two hours laboratory. Observation, discussion, and critique of elementary and secondary school music classroom settings.

MUE 3212. Brass Techniques. (2) Two hours lecture. Study of brass winds with emphasis on embouchure, techniques, and teaching problems.

MUE 3213. Performance Assessment in Music Education. (3) (Prerequisite: Admission to Teacher Education) Three hours lecture. Limited to music majors. Methods and materials of performance assessment in music education.

MUE 3221. Woodwind Class. (1) Two hours laboratory. Study of woodwinds with emphasis on embouchure, techniques, and teaching problems.

MUE 3222. Woodwind Techniques. (2) Two hours lecture. Study of woodwinds with emphasis on embouchure, techniques, and teaching problems.

MUE 3231. String Class. (1) Two hours laboratory. Study of strings with emphasis on bowing, techniques, and teaching problems.

MUE 3242. Percussion Class. (2) Two hours lecture. Detailed study of percussion instruments with emphasis on teaching problems, training materials, and performance literature.

MUE 3243. Planning and Managing Learning in Music Education. (3) (Prerequisite: Admission to Teacher Education). Three hours lecture. Study of variables contributing to efficiency and competency for teacher-learner activities and the creation and maintenance of a positive learning environment in music classrooms.

MUE 3262. Instrumental Class. (2) One hour lecture. Two hours laboratory. Instrumental experiences for vocal and piano majors.

MUE 3333. Introduction to Piano Pedagogy. (3) Two hours lecture. Two hours laboratory. Methods, materials, curriculum building, and philosophical bases for teaching beginning piano. Required of all piano pedagogy students.

MUE 4000. Directed Individual Study. Hours and credits to be arranged.

MUE 4873. Professional Seminar in Music Education. (3) (Prerequisites: Admission to Teacher Education and senior standing). Three hours lecture. A seminar dealing with legal, professional, administrative, and curriculum issues as they relate to music education in the schools.

MUE 4886/4896. Teaching Internship in Music Education. (6-6) (Both courses to be taken concurrently). (Prerequisites: Admission to Teacher Education and senior standing). Supervised observation and directed teaching in respective field of endorsement.

MUE 4990/6990. Special Topics in Music Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

MUE 7000. Directed Individual Study. Hours and credits to be arranged.

MUE 8990. Special Topics in Music Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

NUTRITION
(For the interdisciplinary graduate programs in Nutrition, consult College of Agriculture and Life Sciences section of this Catalog, and the Graduate Bulletin.)


NTR 4233/6233. Medical Nutrition Therapy. (3) (Prerequisites: BCH 3613, HS 4253 and/or HS 4293, and BIO 2140 or consent of instructor). Two hours lecture. Two hours laboratory. Treatment of human diseases through nutrient modification. (Same as FNH 4233/6233).

NTR 4253/6253. Human Nutrition I. (3) (Prerequisites: BIO 2140 and CH 2503 or equivalent). Three hours lecture. Advanced human nutrition: digestion, metabolism, function, requirements, and recommendations for carbohydrates, lipids, proteins and water. (Same as FNH 4253/6253).

NTR 4293/6293. Human Nutrition II. (3) (Prerequisites: NTR 4253/6253 or consent of instructor). Three hours lecture. Advanced human nutrition and metabolism with emphasis on the functions, requirements, and recommendations of the regulatory nutrients (vitamins and minerals) and water. (Same as FNH 4293/6293).

NTR 4293/6293. Human Nutrition III. (3) (Prerequisites: NTR 4253/6253 or consent of instructor). Three hours lecture. Advanced human nutrition and metabolism with emphasis on the functions, requirements, and recommendations of the regulatory nutrients (vitamins and minerals) and water. (Same as FNH 4293/6293).

NTR 4990/6990. Special Topics in Nutrition. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

NTR 6333. Fish and Shellfish Nutrition. (3) (Prerequisites: CH 2503 and CH 2501 or BCH 3613). Three hours lecture. Fundamental and applied aspects of the nutrition of fish, crustaceaen, and mollusk species including feeding behavior, nutritional ecology, energetics, and nutrient requirements. (Same as WF 4333/6333).

NTR 6353. Nutrition Throughout the Life Cycle. (3) (Prerequisite: BIO 4253/6253 or consent of instructor). Three hours lecture. Study of interrelationships of physiological, biochemical and sociological factors and nutrient needs of individuals and groups during the life cycle; infancy through the later years. (Same as HS 4353/6353 and FNH 4353/6353).

NTR 6423. Feed Manufacturing. (3) (Prerequisites: CH 2503 and CH 2501). Two hours lecture. Two hours laboratory. Mill design and equipment;
procurement, storage and quality control for ingredients and complete feeds; formulation of practical type poultry rations. (Same as PO 4423/6423).

NTR 7000. Directed Individual Study. Hours and credits to be arranged.


NTR 8111-8131. Nutrition Seminar. (1) Survey of current literature; preparation, organization, and presentation of papers on selected topics in nutrition.

NTR 8123. Methods in Nutrition Research. (3) Fall semester. (Prerequisite: NTR 4115/6115 and ST 8114 or equivalent). Two hours lecture. Three hours laboratory. Application of analytical methods used in research techniques; practice in writing research proposals, conducting a research project, and preparing research finds suitable for scientific publication.

NTR 8153. Ruminant Nutrition. (3) (Prerequisite: NTR 4115/6115 or Equivalent). Three hours lecture. In-depth treatment of rumen function and recent concepts in ruminant nutrition.

NTR 8162. Monogastric Nutrition. (2) Fall semester. (Prerequisite: NTR 4115/6115 or equivalent). Two hours lecture. Monogastric nutritional relationships with special emphasis on swine nutrition. Metabolic functions, dietary requirements, deficiency symptoms and distribution of nutrients in feedstuffs.

NTR 8233. Maternal, Infant and Child Nutrition. (3) Three hours lecture. Nutritional needs during reproduction and growth; problems in nourishing women during the reproductive period, infants, and children; indices of growth and development. (Same as FNH 8233).

NTR 8243. Community Nutrition. (3) (Prerequisite: HS 3213). Three hours lecture. Nutrition services and problems in the community. Supervised experience in methods for determining and implementing action programs in nutrition education. (Same as FNH 8243).

NTR 8253. Nutrition and Food Science Research Techniques. (3) Spring semester. One hour lecture. Six hours laboratory. Application of various instruments and techniques for assay of food and biological material. (Same as FNH 8253).

NTR 8261. Dietetic Internship Seminar. (1) (Prerequisite: Admission into the Dietetic Internship/Graduate Studies Program). One hour lecture. Selection of current topics in foods, nutrition or dietetics and in-depth review of current literature for critical analysis presentation.

NTR 8273. Dietetic Internship Capstone. (3) (Prerequisite: Admission into the Dietetic Internship/Graduate Studies Program). Three hours lecture. Theoretical aspects of dietetics gained through the study of resources, technology, professional standards, and other factors that influence entry-level practice.

NTR 8443. Avian Nutrition. (3) (Prerequisite: NTR 4115/6115 or equivalent). Three hours lecture. Study of the nutrient functions, dietary relationships, deficiency symptoms, distribution in feedstuffs and quantitative requirements of nutrients.

NTR 8463. Advanced Animal Nutrition. (3) (Prerequisite: NTR 4115/6115 or prior approval from instructor). Two hours lecture. Two hours laboratory. Develop an understanding of nutritional physiology, metabolism, and utilization of nutrients by animal species.

NTR 8473. Micro-Nutrient Nutrition. (3) (Prerequisite: NTR 8114 or equivalent). Three hours lecture. Detailed study of functions, deficiency symptoms, dietary considerations necessary to the nutrition of fish, dogs, cats, horses, mink, rabbits, and laboratory animals.

NTR 8990. Special Topics in Nutrition. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

NTR 9000. Dissertation Research and Dissertation. Hours and credits to be arranged.

**Department of KINESIOLOGY**

Office: 216 McCarthy Gymnasium

Professor Abadie; Associate Professors Chroniak (Interim head), Lamberth; Assistant Professors: Foxworthy, Hoyt, Ridpath, Rukavina, and Zullo; Instructors Drey, Funderburk, Joe, Wiley, and Young.

**PE 1001. Racquetball.** (1) Two hours laboratory. Emphasis is on rules, knowledge, skill development, and team tactics necessary to successfully participate in an organized game.

**PE 1021. Basic Physical Fitness Concepts.** (1) Two hours laboratory. Basic knowledge, understandings and values of physical fitness. Emphasis on individualized fitness evaluation procedures and diversified program construction.

**PE 1041. Aerobics.** (1) Two hours laboratory. Assessment, development and maintenance of physical fitness through aerobic exercises to music.

**PE 1051. Beginning Karate.** (1) Two hours laboratory. The essential principles both physical and psychological will be stressed. Emphasis is placed on organization of karate techniques and training methods.

**PE 1071. Soccer.** (1) Two hours laboratory. Emphasis is on rules, knowledge, skill development, and team tactics necessary to successfully participate in an organized game.

**PE 1081. Beginning Golf.** (1) Two hours laboratory. Instruction and laboratory experience in the development of individual skills for participation in golf.

**PE 1091. Contemporary Dance.** (1) Two hours laboratory. A non-major course designed to develop skills in contemporary dance routines.

**PE 1101. Karate for Intermediates.** (1) (Prerequisite: PE 1051 or prior Karate experience having attained the rank of Yellow Belt). Two hours laboratory. Current events of the American Karate world. Advanced free-fighting and self-defense techniques. Interpretation of forms.

**PE 1111. Physical Development.** (2) Two hours laboratory. This course is designed to develop understanding in the conceptual knowledge of fitness and physical conditioning and maintenance of human wellness. (May be taken up to four times for credit.)

**PE 1112. Teaching Team Sports.** (2) One hour lecture. Two hours laboratory. Theory of and participation in non-traditional and traditional team sports. Analysis of skills, discussion of developmental appropriateness, terms, basic rules and teaching strategies.

**PE 1121. Advanced Physical Development.** (1) Two hours laboratory. A continuation of PE 1111. This course is designed to further the understanding in the conceptual knowledge of physical fitness and physical conditioning and maintenance of human wellness. (May be taken up to four times for credit.)

**PE 1122. Teaching Individual and Dual Sports.** (2) One hour lecture. Two hours laboratory. Theory of and participation in non-traditional and traditional individual and dual sports. Analysis of skills, discussion of developmental appropriateness, terms, basic rules and teaching strategies.

**PE 1123. History and Appreciation of Dance.** (3) Two hours lecture, two hours laboratory. A course designed to acquaint students with the history of dance and to develop a greater sensitivity, appreciation and understanding of this art.

**PE 1131. Fitness Walking/Jogging.** (1) Two hours laboratory. An exercise and activity class emphasizing walking and/or jogging to develop and maintain fitness, weight control and flexibility.

**PE 1132. Teaching Lifetime Activities.** (2) One hour lecture. Two hours laboratory. Activities, methods and theories within outdoor education. Introduction of concepts, activities, technologies and teaching methods for strength training, aerobic conditioning, fitness assessment and stress management.

**PE 1142. Teaching Rhythms.** (3) One hour lecture. Two hours laboratory. Instruction, demonstration, skill development, and teaching techniques in the areas of square, folk, and contemporary dance.

**PE 1181. Training Techniques for Physical Conditioning.** (1) Two hours laboratory. Provides the student with theoretical and laboratory experience in the development of muscular strength, flexibility, and cardiovascular endurance. (May be taken up to four times for credit.)

**PE 1213. Introduction to Exercise Science.** (3) Three hours lecture. This course is designed to provide students and overall understanding of the professions within Exercise Science.

**PE 1221. Volleyball.** (1) Two hours laboratory. Emphasis is on rules, knowledge, and team tactics necessary to successfully participate in an organized game.

**PE 1223. Personal Health.** (3) Three hours lecture. An introductory survey of the multiple dimensions of health. Focus is on healthy behaviors across the lifespan as well as environmental and social influences.

**PE 1231. Modern Dance.** (1) (Prerequisite: Consent of Department Head). Two hours laboratory. Laboratory experience including a wide range of fundamental exercises and techniques, movement patterns, and dance choreography.

**PE 1233. Introduction to Lifetime Leisure.** (3) Three hours lecture. A comprehensive examination of leisure from psychological, sociological, economical and historical contexts. Includes an exploration of individual and group activities appropriate for lifetime involvement.

**PE 1241. Tennis** (1) Two hours laboratory. Emphasis is on rules, knowledge, skill development, and team tactics necessary to successfully participate in an organized game.

**PE 1271. Fitness and Conditioning.** (1) Two hours laboratory. This course provides the student with necessary cognitive and laboratory experiences to make personal decisions specific to fitness and conditioning. (May be taken up to four times for credit.)
PE 1313. Introduction to Physical Education. (3) Three hours lecture. Interpretation of the meaning of physical education based on the significant facts of the biological sciences.

PE 1361. Strength Training. (1) Two hours laboratory. Principles and practice of strength training with particular emphasis on specificity of design and management of load, repetitions, rate of exercise and recovery time.

PE 1461. Badminton. (1) Two hours laboratory. Emphasis is on rules, knowledge, skill development, and team tactics necessary to successfully participate in an organized game.

PE 2001. Principles of Health and Physical Education. (1) Two hours laboratory. This course is designed to provide a laboratory experience for health and physical education majors in actual teaching situations.

PE 2003. Foundations of Health Education. (3) Three hours lecture. Introduction to the discipline of Health Education. Examination of fundamental concepts and required competencies of the health educator in a variety of settings.

PE 2603. Medical Terminology. (3) Three hours lecture. A working knowledge of terminology related to the human body through descriptive definitions, practical applications, and medical abbreviations will be developed.

PE 2613. Exercise Electrocardiography. (3) (Prerequisite: BIO 1004 or BIO 2014). Three hours lecture. Basic and intermediate electrocardiography including cardiac function, lead systems, rate, rhythm, axis, infarction, ischemia, hypertrophy and effectiveness of cardiovascular drugs and exercise on ECG.

PE 2990. Special Topics in Physical Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PE 3033. Basketball/Football Officials. (3) Three hours lecture. A course designed to qualify officials for major sports officiating in Mississippi. Rules, rules interpretation, and mechanics of officiating for the major sports are covered.

PE 3111. Advanced Military Physical Fitness. (1) (Prerequisites: MS 3113, MS 3123, MS 4113, MS 4123). One hour laboratory. Develops the physical fitness required of an officer in the Army through emphasis of individual fitness programs and examination of the role of exercise/fitness. (May be taken up to four times for credit).

PE 3123. Principles and Methods of Elementary School Health and Physical Education. (3) Admission to Teacher Education required. Three hours lecture. Principles and methods of teaching health and physical education to elementary school children.

PE 3133. Adapted Physical Education. (3) (Prerequisite: Consent of the instructor). Two hours lecture. Two hours laboratory. A study of the psychomotor domain with emphasis on identifying handicapping problems and developing instructional strategies for remedying these problems.

PE 3153. Methods of Elementary Physical Education. (3) Three hours lecture. Designed to provide students with knowledge and practical experience that will enhance their effectiveness in teaching physical education to pre-school through fifth grade students.

PE 3173. Measurement and Evaluation in Exercise Science. (3) Three hours lecture. Emphasis is placed on fitness assessment and statistical interpretation of data related to fitness.

PE 3183. Psychology of Sport and Exercise. (3) Three hours lecture. Psychological principles applied to leadership in sport and exercise settings.

PE 3213. Emergency Health Care. (3) Three hours lecture. First Aid procedures which include shock, wounds, CPR, resuscitation, poisoning, transportation, hemorrhaging, splitting, burns, respiratory problems, etc. are taught and practiced.


PE 3273. Athletic Training. (3) (Prerequisites: BIO 1004 or 2004). Two hours lecture. Two hours laboratory. Prevention and treatment of injuries prevalent in athletics, physical education and adult fitness programs.

PE 3303. Exercise Physiology I. (3) (Prerequisite: BIO 1004 or BIO 2014). Two hours lecture. Two hours laboratory. Examines the physiological aspects of muscular work, nervous system function, and metabolism, and their relationship to exercise, fitness, training, injury and fatigue.

PE 3422. Coaching Football. (2) Two hours lecture. Theoretical study of football fundamentals, positions, styles of offensive and defensive rules, signal methods, generalship, and team play.

PE 3432. Coaching Basketball. (2) Two hours lecture. Theoretical study of basketball from a coaching standpoint; fundamental and team play; methods of teaching fundamentals stressed; team organization.


PE 3452. Coaching Softball and Baseball. (2) Two hours lecture. Theoretical study of baseball and softball fundamentals and coaching techniques.

PE 3623. Exercise Physiology II. (3) (Prerequisite: PE 3303). Three hours lecture. Examines the cardiovasular, respiratory, endocrine, immunologic, and osteogenic aspects of physiology and their application to acute and chronic exercise throughout the lifespan.

PE 3633. Rehabilitation Techniques in Sport. (3) (Prerequisite: PE 3273). Two hours laboratory. Two hours lecture. Two hours laboratory. Investigate aspects of physiotherapy utilized in treatment of injuries. Course will be supported with assistance of Oktibbeha County Hospital.

PE 3643. Applied Anatomy. (3) (Prerequisite: BIO 1004 or 2004). Three hours lecture. Provide in-depth analysis of muscle structure, muscle function, adaption of muscle to resistance training, and effects of disease.

PE 4000. Directed Individual Study. Hours and credits to be arranged.

PE 4113/6113. Fitness Programs and Testing Procedures. (3) (Prerequisite: PE 3303 and PE 3173). Two hours lecture. Two hours laboratory. Provides study of and practice in conducting adult fitness programs and fitness testing procedures.

PE 4133. Exercise Programs for Special Populations. (3) Three hours lecture. This course describes the methods of prescribing exercise programs for individuals with special medical conditions.

PE 4153/6153. Training Techniques for Exercise and Sport. (3) (Prerequisite: PE 3303). Three hours lecture. Training techniques used for exercise and sport and their acute and chronic effect upon the body.

PE 4163/6163. Principles and Methods of Secondary School Health and Physical Education. (3) (Prerequisite: Senior standing and PE 3153). Admission to Teacher Education required. Three hours lecture. This course is designed to emphasize contemporary teaching methods in all areas of health and physical education in the secondary school.

PE 4173. Tests and Measurements in Health and Physical Education. (3) Admission to Teacher Education required. Three hours lecture. Test construction, test administration, and statistical procedures for evaluating test results in health and physical education.

PE 4183. Exercise and Weight Control. (3) Two hours lecture. Two hours laboratory. The course describes the relationship between physical activity and nutrition for the maintenance of ideal body weight and optimal health throughout life.

PE 4210. Fitness Management Internship. (1-6) (Prerequisite: senior status, PE 3623, PE 4113, PE 4133, PE 4183 and PE 4233). Hours and credits to be arranged. A supervised observation and teaching experience in a fitness/health enhancement facility.

PE 4233. Biomechanics. (3) (Prerequisites: BIO 1004 or BIO 2004). Three hours lecture. Analysis of body mechanics; relationship and application of principles of movement to teaching physical education.

PE 4313-4316. Sports Communication Internship. (3,6) (Prerequisite: Consent of instructor). Hours and credits to be arranged. A supervised observation and practicum experience in a sports communication setting.

PE 4410. Clinical Exercise Physiology Internship. (1-6) (Prerequisites: PE 2603, PE 2613, PE 3303, PE 3623, PE 3633, PE 4163, PE 4113, PE 4133; senior status). A supervised observation and teaching experience in clinical exercise physiology setting.

PE 4413. Basic Driver and Traffic Safety Education I. (3) (Prerequisite: Valid driver’s license, two years driving experience). Two hours lecture. Two hours laboratory. Critical analysis of traffic accidents, attitude factors, essential knowledge of automobile operations and traffic laws and regulations; laboratory experiences for developing driving skills.

PE 4423. Driver and Traffic Education Methods II. (3) (Prerequisite: PE 4413). Two hours lecture. Two hours laboratory. Professional preparation of college students who plan to teach driver education in secondary schools; methods of teaching and administering program; scheduling, financing, and public relations.

PE 4603. Exercise in Health and Disease. (3) (Prerequisites: PE 3303 and PE 2603). Three hours lecture. Focus on the pathophysiology and risk factors of diseases and associated health problems attributable to physical inactivity at rest.

PE 4853. Motor Learning and Skill Analysis. (3) (Prerequisite: PE 3223 and full admission to Teacher Education) Three hours lecture. Designed to provide students with an understanding of how movement is produced and controlled and the principles that underlie the learning of motor skills.

PE 4873. Professional Seminar in Physical Education and Athletics. (3) (Prerequisites: Admission to Teacher Education and senior standing). Three hours lecture: A seminar dealing with legal, professional, administra-
tive, and curriculum issues as they relate to physical education and athletics in the schools.

**PE 4803/6883. School Health Education (3)** (Prerequisite: Admission to Teacher Education). Three hours lecture. Preparation for prospective teachers in planning, implementing and evaluating all aspects of comprehensive school health education.

**PE 4886. 4896. Teaching Internship in Physical Education. (6,6)** (Both courses to be taken concurrently). (Prerequisites: Admission to Teacher Education and senior standing). Supervised observation and directed teaching in respective field of endorsement.

**PE 4990/6990. Special Topics in Physical Education. (1-9)** Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**PE 7000. Directed Individual Study.** Hours and credits to be arranged.

**PE 8000. Thesis Research/Thesis.** Hours and credits to be arranged.

**PE 8123. Physical Education and Sport Programs.** Three hours lecture. Study of principles, problems, human relationships, and procedures in supervision. Involves theories of leadership, programs, and philosophies of the profession.

**PE 8153. Wellness and Aging. (3)** (Prerequisites: PE 3303 or PSY 4403/6403 or consent of Department). Three hours lecture. A study designed to prepare practitioners to initiate, develop, and conduct programs in wellness and geriatric activities for the enrichment of life in older populations.

**PE 8163. Seminar in Physical Education. (3)** The course gives a complete review of current literature in Health, Physical Education, and Recreation.

**PE 8213. Problems in the Administration of Athletics.** (3) Three hours lecture. Interscholastic athletic program; place of athletics in education, program organization and administration, budget, equipment, facilities, public relations, legal liability, and eligibility and contest regulations.

**PE 8243. Cardiorespiratory Exercise Physiology. (3)** (Prerequisite: PE 3303). Three hours lecture. Advanced principles of cardiovascular and respiratory physiology, with special emphasis on the physiological responses of these systems to acute and chronic exercise.

**PE 8253. Doping and Supplemental Use in Sports. (3)** (Prerequisite: PE 3303 or equivalent, or consent of instructor). Three hours lecture. Examination of the pharmacological and nutritional agents used to enhance muscular development and athletic performance. Examination of commonly abused recreational drugs.

**PE 8263. Exercise Biochemistry. (3)** (Prerequisites: PE 3303). Three hours lecture. Functioning, interrelationships and adaptations of the systems of the body during acute and chronic exercise.

**PE 8273. Laboratory Instrumentation. (3)** (Prerequisite: PE 3303). Six hours laboratory. A course in the function, calibration and operation of physical education laboratory instruments.

**PE 8283. Environmental Exercise Physiology. (3)** (Prerequisite: PE 3303; suggested prerequisite or co-requisite PE 8243). Three hours lecture. Advanced principles and applications in exercise physiology including responses to acute exercise and chronic training in the heat, cold, and at high and low pressures.

**PE 8303. Research in Exercise Science and Sport. (3)** A study of research methods and techniques; the preparation of the research proposal specific to exercise science and sport; and familiarization with APA writing guidelines.

**PE 8313. Interpretation of Data in Exercise Science and Sport. (3)** Three hours lecture. Measurement, analysis and interpretation of data in exercise science and sport.

**PE 8323. Introductory Concepts Basic to Cardiac Rehabilitation. (3)** (Prerequisite: PE 3303). Two hours lecture. Two hours laboratory. An overview of the expanding field of cardiac rehabilitation and the opportunities for the physical educator.

**PE 8423. Graded Exercise Testing. (3)** (Prerequisite: PE 3303). Two hours lecture. Two hours laboratory. Methods of supervising graded exercise testing, including interpretation of basic electrocardiography.

**PE 8710. Internship. (3-6)** (Prerequisite: Consent of the Department Head). Opportunity for practical experience in business, fitness/wellness and sports organizations.

**PE 8803. Sport Law (3)** Three hours lecture. The analysis and application of the legal foundations, concepts and issues impacting the sports industry.

**PE 8823. The Sport Product. (3)** Three hours lecture. An examination of the uniqueness of the sport product and the effective advancement and visibility of the sport product.

**PE 8833. Event and Facility Management. (3)** Three hours lecture. The principles and applications of management, design, and maintenance concepts as they apply to indoor and outdoor events and facilities.

**PE 8883. Sports Ethics. (3)** Three hours lecture. Philosophical exploration in the recognition, analysis, and implementation of ethical thought and the ethical decision making process within the multivalued contexts of the sports industry.

**PH 8990. Special Topics in Physical Education. (1-9)** Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

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**Department of PHYSICS and ASTRONOMY**

Office: Hilburn Hall

Professors Novotny (Head), Bauman, Foley, Harpole, Lestrange, Ma, Monts, Su and Winger;

Assistant Professors Afanasjevs, Clay, Ermer and Kim;

Adjunct Linder, Linth, Singh, Y. Su, Tao and Wang;

Instructor Worthy

When both PHY 2414 and PHY 2424 are taken at the same community college they will equate to PH 1113, PH 1123 and PH 1133.

When both PHY 2514/2515 and PHY 2524/2525 are taken at the same community college they will equate to PH 2213, PH 2223, and PH 2233.

**PH 1001. Introduction to Physics. (1)** (Prerequisite: Consent of instructor). One hour lecture. Only open to Freshmen and transfer physics majors or prospective majors. Introduction to the profession. Historical perspectives. Use of microcomputers in physics.

**PH 1011. Physical Science Laboratory 1. (1)** Two hours laboratory. Experiments in mechanics, sound, light, electricity, and magnetism. Recommended lab to accompany PH 1013.

**PH 1013. Physical Science Survey 1. (3)** Three hours lecture. Topics include mechanics, sound, light, electricity, and magnetism. Recommended laboratory PH 1011.

**PH 1021. Physical Science Laboratory 2. (1)** Two hours laboratory. Experiments in chemistry, heat, astronomy and energy. Recommended lab to accompany PH 1023. Could also accompany PH 1063.

**PH 1023. Physical Science Survey 2. (3)** Three hours lecture. Topics include chemistry, heat, astronomy and energy. Recommended laboratory PH 1021.

**PH 1063. Descriptive Astronomy. (3)** Three hours lecture. Night observation. The solar system; description and evolution of stars and the universe; methods of obtaining astronomical information; applications of astronomical knowledge.

**PH 1113. General Physics I. (3)** (Prerequisites: MA 1313 and MA 1323 or equivalent) Two hours lecture, one hour drill, two hours laboratory. Noncalculus-based study of the fundamental laws of mechanics, fluids, and relativity.

**PH 1123. General Physics II. (3)** (Prerequisite: PH 1113). Two hours lecture, one hour drill, two hours laboratory. Noncalculus-based study of thermal physics, waves, sound, and light.

**PH 1133. General Physics III. (3)** (Prerequisite: PH 1113). Two hours lecture, one hour drill, two hours laboratory. Noncalculus-based study of electricity and magnetism and selected topics in modern physics.

**PH 2213. Physics I. (3)** (Prerequisite: MA 1713). Three hours lecture. Calculus-based course emphasizing Newtonian mechanics and conservation laws. Honors section also available through invitation only.

**PH 2223. Physics II. (3)** (Prerequisites: PH 2213 and MA 1723). Two hours lecture, one hour recitation, two hours laboratory. Calculus-based introduction to gravitation, electricity and magnetism. Laboratory emphasizes concepts of force and motion, conservation laws, and simple electrical circuits. Honors section also available through invitation only.

**PH 2233. Physics III. (3)** (Prerequisite: PH 2223). Two hours lecture, one hour recitation, two hours laboratory. Calculus-based course in simple harmonic motion, waves, optics and an introduction to modern physics. Laboratory emphasizes optics and electronics.

**PH 2990. Special Topics in Physics. (1-9)** Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**PH 3063. Astrophysics. (3)** (Co-requisite: PH 3613 or consent of instructor). Three hours lecture. Quantitative treatment of astronomical topics.
Stellar evolution, black holes, neutron stars, gamma-ray bursts, Newtonian and relativistic cosmologies, Big Bang.

PH 3613. Modern Physics. (3) (Prerequisites: PH 2233 or PH 1133; MA 2733, or registration in MA 2733). Three hours lecture. Special relativity, quantum physics, atomic, nuclear, and solid state physics.

PH 4000. Directed Individual Study. Hours and credits to be arranged.

PH 4013/6013. Selected Topics in Physics for Teachers. (3) Two hours class work, three hours laboratory. For teachers. Basic concepts of physics. Will include discussion and clarification of material from currently adopted public school textbooks.

PH 4023/6023. Astronomy for Teachers. (3) Two hours class work. Three hours laboratory. For teachers. An introduction to the physical universe with emphasis on observational astronomy.

PH 4033/6033. Demonstrations and Concepts for Physics Teachers I. (3) (Prerequisite: Consent of instructor). Two hours lecture, three hours laboratory. Topics are those normally covered in first semester high school physics. Equal emphasis on the topics. Problems, demonstrations, and laboratory.

PH 4043/6043. Demonstrations and Concepts for Physics Teachers II. (3) (Prerequisite: Consent of instructor). Two hours lecture, three hours laboratory. Topics are those normally covered in second semester high school physics. Equal emphasis on theory, problems, demonstrations, and lab.

PH 4113/6113. Electronic Circuits for Scientists. (3) (Prerequisites: PH 1133 or PH 2225 and MA 2733). Two hours lecture and three hours laboratory. Circuits. Resistors, capacitors, inductors, diodes and transistors in basic analog circuits. Topics include filters, tuned circuits, power supplies, amplifiers and oscillators.


PH 4213/6213. Intermediate Mechanics I. (3) (Prerequisites: PH 1133 or PH 2233 and MA 2733). Three hours lecture. Plane statics and dynamics of particles and systems of particles with emphasis on both derivation and application of principles involved.

PH 4223/6223. Intermediate Mechanics II. (3) (Prerequisite: PH 4213/6213). Three hours lecture. Statics and dynamics of particles in three dimensional space using vector notation; Lagrange’s equations; introduction to the special theory of relativity.

PH 4323/6323. Electromagnetic Fields I. (3) (Prerequisites: PH 1133 or PH 2233 and MA 2743). Three hours lecture. Electrostatics, dielectrics, electric current, magnetostatics, electromagnetic induction, magnetic properties of matter.

PH 4333/6333. Electromagnetic Fields II. (3) (Prerequisite: PH 4323/6323). Three hours lecture. Maxwell’s equations, propagation of electromagnetic waves in free space and in matter, reflection and refraction, radiation. 


PH 4433/6433. Computational Physics. (3). (Prerequisites: PH 3613 and MA 3253). Three hours lecture. An introduction to modern methods of computational physics including topics such as: solution of differential equations, numerical matrix methods, and Monte Carlo simulation.

PH 4513/6513. Intermediate Optics. (3) (Prerequisites: PH 1123 or PH 2233 and MA 2733). Three hours lecture. Geometrical optics and physical optics.

PH 4613/6613. Nuclear and Particle Physics. (3) (Prerequisite: PH 3613). Three hours lecture. Special theory of relativity; nuclear structure; radioactivity; nuclear reactions; nuclear forces; fission; fusion; high energy particle and astrophysics. Experimental apparatuses and techniques.

PH 4713/6713. Introduction to Quantum Mechanics. (3) (Prerequisites: PH 3613 and MA 3253). Three hours lecture. Principles of quantum mechanics, Heisenberg uncertainty principle, angular momentum; the Schrödinger wave equation in one and three dimensions; the one-electron atom.

PH 4723/6723. Applications of Quantum Mechanics. (3) (Prerequisite: PH 4713/6713). Three hours lecture. Introduction to perturbation theory and quantum statistics. Topics selected from multi-electron atoms, diatomic molecules, solid state and nuclear physics.

PH 4813/6813. Introduction to Solid State Physics. (3) (Prerequisite: PH 3613). Three hours lecture. Crystal structure, crystal diffraction and the reciprocal lattice, crystal binding, free electron gas, energy bands, and semiconductors.

PH 4990/6990. Special Topics in Physics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PH 7000. Directed Individual Study. Hours and credits to be arranged.

PH 8000. Thesis Research/Thesis. Hours and credits to be arranged.

PH 8013. Modern Topics for Physics Teachers. (3) (Prerequisites: Consent of instructor). Two hours lecture, three hours laboratory. Historical development of special relativity and quantum physics with particular emphasis on topics and experiments in atomic and nuclear physics.

PH 8213. Mechanics. (3) (Prerequisite: A good undergraduate training in physics and mathematics—consent of instructor). Coordinate systems and transformations, tensors, and matrices. Particle dynamics, variational principles, Lagrange’s and Hamilton’s equations, rigid body motion, special relativity in mechanics.

PH 8233. Methods of Theoretical Physics I. (3) (Prerequisite: Consent of instructor). Topics will vary, but may include linear vector spaces, tensor analysis, group theory, function space and orthogonal polynomials.

PH 8243. Methods of Theoretical Physics II. (3) (Prerequisite: PH 8233). Topics will vary but may include analytic functions, Fourier analysis, Green’s functions, integral transforms, partial differential equations and integral equations.

PH 8313. Electromagnetic Theory I. (3) (Prerequisite: PH 4333 or equivalent). Maxwell’s theory of electromagnetism. Boundary value problems in electrostatics, static multiple moments, theory of dielectrics, magnetostatics, plane electromagnetic waves, simple radiating systems. (Same as ECE 8313).


PH 8623. Nuclear Physics II. (3) (Prerequisite: PH 8613, PH 8743). Elementary particle theory and interpretation of experimental data.

PH 8743. Quantum Mechanics I. (3) (Prerequisites: PH 4723 and MA 3313). Schrödinger theory, spherically symmetric systems, matrix mechanics, angular momentum and spin, time-independent perturbation theory.


PH 8813. Solid State Physics. (3) (Prerequisite: PH 8743). Theoretical interpretation of thermal, electric, and magnetic properties of solids.

PH 8990. Special Topics in Physics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PH 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

Department of PHILOSOPHY and RELIGION

Office: 29-30 President Circle
Professors Seger, Jacobs, Clifford and Holt; Associate Professors Estes; Assistant Professors Hardin, Mullen and Phillips

PHI 1103. Introduction to Philosophy. (3) Three hours lecture. An introduction to the major ideas and methods of philosophy. At least one philosophic classic is read, usually one suitable for orientation purposes. Honors section available through invitation.

PHI 1123. Introduction to Ethics. (3) Three hours lecture. A study of the specific considerations, such as facts, feelings, principles, values and conflicts, which influence the making of concrete moral decisions.

PHI 2123. Medical Ethics. (3) Three hours lecture. A philosophical study of situations requiring ethical decision making in the area of medicine. (Not open to freshmen).
ANIMAL PHYSIOLOGY

(For the interdisciplinary graduate programs in Animal Physiology, consult College of Agriculture and Life Sciences section of this Bulletin, and the Graduate Bulletin.)

PHY 6114. Cellular Physiology. (4) (Same as BIO 4114/6114).

PHY 6514. Animal Physiology. (4) (Same as BIO 4514/6514).

PHY 6611. Practice in Physiology of Reproduction. (1) (Prerequisite: BIO 1504). Three hours laboratory. Artificial insemination and rectal palpation of reproductive organs of cattle; semen collection, evaluation, processing and handling. (Same as ADS 6611/6611).

PHY 6613. Physiology of Reproduction. (3) (Prerequisite: BIO 1504). Three hours lecture. Anatomy and physiology; reproductive cycles; production, evaluation and preservation of gametes; gestation; endocrine regulations; managed production. (Same as ADS 6613/6613).

PHY 6623. Physiology of Lactation. (3) (Prerequisite: BIO 1504). Two hours lecture. Two hours laboratory. Anatomy, physiology and pathology of the mammary gland; nervous and hormonal control of lactation, theories of milk secretion, modern methods of milking, factors affecting lactation. (Same as ADS 6623/6623).

PHY 6843. Poultry Physiology. (3) (Prerequisite: PO 4833/6833 or consent of instructor). Two hours lecture. Two hours laboratory. Physiology of the fowl with emphasis on integration of body functions. (Same as PO 6843).


PHY 8133. Endocrinology (3) Three hours lecture. Study of factors by which cells communicate: the traditional endocrine system, autocrine, paracrine and neurocrine secretion. Physiological and genetic control of synthesis and secretion.

PHY 8243. Advanced Physiology of Reproduction. (3) (Prerequisite: ADS 4613/6613). (Same as ADS 8243).

PHY 8333. Advanced Toxicology. (3) (Prerequisite: EPP 4543/6543 or elementary biochemistry). (Same as EPP 8333).

PHY 8433. Bone, Muscle and Fat Deposition in Animals. (3) (Prerequisite: BCH 4613/6613). (Same as ADS 8433).

PHY 8623. Physiology of Digestion and Metabolism. (3) (Prerequisite: CH 4523/6523). (Same as PO 8823).

PHY 8633. Homeostatic Regulations and Physiological Stress. (3) Prerequisites: PHY 8133 and BIO 4514/6514. (Same as ADS 8633).


PHY 8890. Special Topics in Physiology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).


Department of POULTRY SCIENCE

Office: 114 Hill Poultry Science
Professors Morgan (Head), Chen, Hargis*, Lott, May*, McDaniel, Peebles, Sadler*, Thaxton and Vizzier; Associate Professors Chamblee and Kidd; Assistant Professor Branton*

PO 2990. Special Topics in Poultry. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PO 3011-3021. Seminar. (1) One hour seminar. Preparation and presentation of specially assigned current problems in poultry science.

PO 3103. Genetics I. (3) (Prerequisites: MA 1313, BIO 1504, or BIO 1203, or equivalents). Two hours lecture. Two hours laboratory. Principles of heredity, genetic material, and gene expressions. (Same as BIO 3103, GNS 3103).

PO 3313. Commercial Poultry Production. (3) Three hours lecture. An introduction to practical management problems encountered in the production of commercial eggs, broiler production, and breeding flocks.

PO 3323. Poultry Judging. (3) Two hours lecture. Two hours laboratory. Breed type and variety characteristics including production and exhibition qualities; judging live, dressed poultry, poultry products; organization and operation of poultry contests and shows.
PO 3333. Advanced Poultry Judging. (3) Two hours lecture. Two hours laboratory. Advanced study of breed type and characteristics: intensified training in judging for production and exhibition qualities.

PO 3353. Poultry Production Internship. (3) (Prerequisite: Consent of instructor). Structured, progressive experiential learning with the live production division of a poultry integrator.

PO 3363. Poultry Processing Internship. (3) (Prerequisite: Consent of instructor). Structured, progressive experiential learning with the processing division of a poultry integrator.

PO 3834. Microbiology of Food Animal Production. (4) Two hours lecture. Four hours laboratory. Provides training in common food animal industry techniques utilizing basic microbiological methodologies including aseptic technique, isolation of pure colonies and identification of unknown samples.

PO 4000. Directed Individual Study. Hours and credits to be arranged.

PO 4031–4041. Seminar. (1) One hour seminar. Preparation and presentation of specially assigned current problems in poultry science.

PO 4313/6313. Management of Commercial Layers. (3) Three hours lecture. Management of laying flocks as related to production of edible eggs; including housing, cage design, equipment, feeding techniques, lighting, molting and other factors involved with efficient production.

PO 4324/6324. Avian Reproduction. (4) Three hours lecture. Two hours laboratory. Principles of avian reproductive physiology and applications in poultry management to maximize reproductive performance. Reproductive characteristics of several bird species are included.

PO 4333/6333. Broiler Production. (3) Three hours lecture. Practical management problems encountered in the production of broilers including breeding, housing, brooding, diseases, and feeding; field trips to intensified broiler areas.

PO 4373. Hatchery Management Laboratory. (3) Six hours laboratory. Fundamental principles of hatchery design, incubator layout, ventilation and humidity control, fertility and hatchability problems that relate to hatchery chicks.

PO 4413/6413. Poultry Nutrition. (3) Three hours lecture. Study of the digestion, absorption, and metabolism of nutrients in avian species. Special emphasis is given to practical nutritional needs of commercial poultry flocks.

PO 4423/6423. Feed Manufacturing. (3) Two hours lecture. Two hours laboratory. Mill design and equipment; procurement, storage and quality control for ingredients and complete feeds; formulation of practical type poultry rations. (Same as NTR 6423).

PO 4513/6513. Poultry Processing. (3) Two hours lecture. Two hours laboratory. Operation and study of modern processing equipment; grading poultry and eggs; killing, dressing, eviscerating, and packaging poultry; studying methods of retail and wholesale marketing. (Same as FNH 4513/6513).

PO 4523/6523. Commercial Broiler Processing Technology. (3) Three hours lecture. Study of preparation of live broiler chickens for retail sales, including all pertinent technology, product flow, equipment and applicable regulations.

PO 4833/6833. Avian Anatomy. (3) Two hours lecture. Two hours laboratory. Anatomy of the fowl with emphasis on morphology and organization of the avian body structures.

PO 4990/6990. Special Topics in Poultry. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PO 8483/6843. Avian Physiology. (3) (Prerequisites: PO 4833/6833 or consent of instructor). Two hours lecture. Two hours laboratory. Physiology of the fowl with emphasis on integration of body functions. (Same as PHY 6843).

PO 7000. Directed Individual Study. Hours and credits to be arranged.

PO 8000. Thesis Research/Thesis. Hours and credits to be arranged.

PO 8513. Poultry Food Science Readings. (3) (Prerequisite: PO 6513 or 3 hours in related courses offered in Animal Science, Dairy Science or Horticulture). One hour lecture. Six hours library research weekly. An intensive study of poultry food science literature dealing with chemical, microbial, physical and organoleptic attributes of eggs and poultry meats. (Same as FNH 8513).

PO 8823. Physiology of Digestion and Metabolism. (3) (Prerequisites: CH 4523/6523). Three hours lecture. The chemistry and physiology of digestion and absorption; the fate of absorbed products in the body. (Same as PHY 8823).

PO 8890. Special Topics in Poultry. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PO 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

**Department of POLITICAL SCIENCE and PUBLIC ADMINISTRATION**

**Public Policy and Public Administration**

PDA 7000. Directed Individual Study. Hours and credits to be arranged.

PDA 8103. Seminar in Public Administration. (3) (Prerequisite: consent of instructor). Detailed examination of the major elements of the field of public administration, with emphasis on emerging trends in the field.

PDA 8123. State Government Administration. (3) Seminar in the practice and principles of state government administration, including judicial and legislative administration.

PDA 8133. City and County Management. (3) Seminar focus on small town and county management in quasi-bureaucratic settings. Detailed consideration of problem solving capabilities as they relate to different forms of local government structure.

PDA 8143. Civil Rights and Affirmative Action. (3) (Prerequisite: consent of instructor). Seminar which examines the various civil rights laws and acts and court decisions related to affirmative action in the workplace and public policy.

PDA 8153. Seminar in Privatization. (3) (Prerequisite: Consent of instructor). Three hours lecture. Examination of the theoretical and practical issues of public-private partnerships.

PDA 8193. Seminar in Intergovernmental Relations. (3) (Prerequisite: 9 hours of graduate work). Three hours lecture. Examines the current day functioning of the American federal system. Focuses upon national-state, national-local, interstate, state-local and interlocal relationships as well as fiscal federalism.

PDA 8400. Public Administration Internship. (1-6) Hours and credits to be arranged. (Prerequisite: Consent of instructor). Individual work experience under faculty guidance in a governmental or public agency. Scholarly paper on approved topic required. Student evaluations are assigned on satisfactory/unsatisfactory basis.

PDA 8703. Government Organization and Administrative Theory. (3) Detailed survey of organization theories and managerial techniques as they relate to the public sector.

PDA 8713. Public Personnel Management. (3) Course considers major developments in the issues and management practices affecting personnel such as affirmative action, unions, and civil service reforms.

PDA 8723. Public Budgeting and Financial Management. (3) Analysis of current financial and budgetary techniques as they apply to the public sector. Capital budgeting, debt administration, and financial management.

PDA 8733. Public Program Evaluation. (3) Techniques and analytical methods of assessing governmental program success. Special emphasis will be given to program designs, data collection and quantitative applications.

PDA 8743. Administrative Law. (3) (Prerequisite: PS 4703/6703). Three hours lecture. An environmental study of the legal nature and effect of policies and attitudes of government toward business, especially the power and limitations of regulatory agencies.

PDA 8803. Research Methods for Public Affairs. (3) Stress on research designs and methods, survey research and other techniques and measuring data. Focus on applied approaches for mathematically analyzing governmental data. (Same as PS 8803).

PDA 8833. Systems in Public Administration. (3) (Prerequisite: BIS 1012, CSE 1013, TKT 1273, or equivalent). Three hours lecture. Role of automated, computer-based systems in government; their impact on the workplace, government institutions, and the governmental systems; selected topical applications.

PDA 8893. Public Policy. (3) Nature, determinants, and effects of public goods and services; policy formulation and implementation; seminar emphasizes contemporary issues such as strategic planning, leadership, and managerial control. (Same as PS 8903).

PDA 8899. Special Topics in Public Policy Administration. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to of
fer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PPA 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

PPA 9103. American Political Institutions. (3) (Prerequisite: consent of instructor). Three hours lecture. Seminar addressing theoretical and empirical issues pertaining to the dynamics of American political institutions. (Same as PS 9103)

PPA 9413. Normative Analysis of American Public Policy. (3) Three hours lecture. Seminar exploring issues in American politics and public policy from a normative perspective. (Same as PS 9413)

PPA 9603. Scope of American Public Administration. (3) (Prerequisite: Consent of the instructor). Seminar dealing with historical background and development of American Public Administration as a discipline, and a review and analysis of current topics in the field.

PPA 9613. Rural Government Administration I: Theoretical and Environmental Aspects. (3) (Prerequisite: Consent of the instructor). A seminar dealing with the principles of democratic theory as they affect the role of government and citizens’ participation in government in rural settings.

PPA 9623. Rural Government Administration II. Implementation Aspects. (3) (Prerequisite: Consent of the instructor). A seminar dealing with program implementation by rural and small town governments, including adoption and diffusion of management innovation by public administrators as change agents.

PPA 9703. Organization Behavior in the Public Sector. (3) (Prerequisite: Consent of the instructor). Seminar dealing with major topics, issues, concerns of individual and group behavior in public organizations.

PPA 9713. Administration of Human Resources in a Public Sector Environment. (3) (Prerequisite: Consent of the Instructor). A seminar dealing with current basic research concerning management in the public sector environment.

PPA 9723. Public Budgeting Processes and Their Policy Implications. (3) (Prerequisite: Consent of instructor). A seminar dealing with norms and behaviors of budget process participants, their impact on budget policy and implications of budget actions for democratic government.

PPA 9803. Multivariate Analysis and Design for Public Affairs. (3) (Prerequisite: PPA 8813). Seminar dealing with applications of multivariate statistical methods and special topics in research design to problems in public policy and administration.

PPA 9893. American Political Behavior. (3) (Prerequisite: PPA 9803 and consent of instructor). Three hours lecture. Seminar in American political behavior including public opinion, socialization, participation, and voting behavior. (Same as PS 9893).

PPA 9903. Public Policy Formulation and Implementation. (3) (Prerequisite: Consent of the instructor). A seminar dealing with public policy formulation implementation and evaluation which stresses the theoretical aspects of policy processes.

**POLITICAL SCIENCE**


PS 1361. Mississippi Model Security Council Internship III. (1) (Prerequisite: PS 1341) Hours arranged. Internship experience as participant in Mississippi Model Security Council as delegate, country adviser, council president, or United Nations Secretary General.


PS 1381. Mississippi Model Security Council Internship IV. (1) (Prerequisite: PS 1361. Hours arranged. Internship experience as participant in Mississippi Model Security Council as delegate, country adviser, council president, or United Nations Secretary General.

PS 1513. Comparative Government. (3) Three hours lecture. Survey of various governmental systems. 1513H. Honors section open through invitation. Introduction to comparative political inquiry including developing, democratic and authoritarian political systems.

PS 2403. Introduction to Political Theory. (3) Three hours lecture. An examination of selected thinkers, text, ideas, and periods in the history of political thought.

PS 2703. Introduction to Public Policy. (3) (Prerequisite: PS 1113 or consent of instructor). Three hours lecture. An examination of the formulation and implementation of public policy and the roles of government institutions and actors in policy making.

PS 2990. Special Topics in Political Science. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PS 4000. Directed Individual Study. (Prerequisite: Junior standing). Hours and credits to be arranged.

PS 4083. Senior Honors Research in Political Science. (3) (Prerequisite: Senior standing, and consent of department head). Topic to be selected by the student under the guidance of an honors faculty advisor.

PS 4093. Senior Honors Thesis in Political Science. (3) (Prerequisites: PS 4083, and consent of department head). Thesis writing on the topic researched in PS 4083.

PS 4464. Political Analysis. (4) (Prerequisite: 6 hours in political science). Three hours lecture. Two hours laboratory. Philosophical and historical foundations of political analysis; constructing and executing research designs; measuring political phenomena; elementary methods of data analysis; games, models, and simulations.

PS 4990-6990. Special Topics in Political Science. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

**American Politics**

PS 3013. Political Leadership. (3) Analysis of political leadership, emphasizing characteristics of successful leadership and opportunities available to students for leadership in the political arena.

PS 3033. Gender and Politics. (3) Three hours lecture. Examines gender differences in law, the courts, voting, political involvement, approaches to political power, and violence.

PS 3063 Constitutional Powers. (3) (Prerequisite: Junior standing or consent of instructor). Three hours lecture. A study of the constitutional system; constitutional modification, federal courts and judicial review, separation of powers, federalism, congressional and presidential powers, and contact clause.

PS 3073. Civil Liberties. (3) (Prerequisite: Junior standing or consent of instructor). Three hours lecture. Political and civil rights; individual rights, national security and individual freedom; war and the Constitution; equal protection, criminal procedure; administrative process.

PS 3183. Law and Politics. (3) (Prerequisite: Sophomore standing or consent of instructor). Three hours lecture. Study of the policies of selected federal courts and the political implications of their decisions as a tool for social control.

PS 3193. Intergovernmental Relations. (3) (Prerequisites: PS 1113 or PS 1193). Three hours lecture. Historical, prescriptive, and empirical studies of federalism with emphasis upon recent development in federal-state-local relationships.

PS 4113/6113. State Government. (3) (Prerequisites: PS 1113 and junior standing). Three hours lecture. Comparative study of the structures, functions, and policies of the various American states.

PS 4163/6163. The Chief Executive. (3) (Prerequisites: PS 1113 and junior standing). Three hours lecture. Historical and comparative study of
chief executives, including governors and mayors, with special emphasis on the Presidency.

PS 4173/6173. Legislative Process. (3) (Prerequisites: PS 1113 and junior standing). Three hours lecture. Organization, work, and procedures of legislative bodies and other law-making authorities.


PS 4193/6193. Mississippi Judicial System. (3) (Prerequisite: PS 1113). Three hours lecture. A study of the interrelationship of the actors within Missis- sippis judicial system. Emphasis is placed on judicial decision-making, selection process, and resource allocation.


PS 4213/6213. Campaign Politics. (3) (Prerequisites: PS 1113 and junior standing). Three hours lecture. Survey of the theory of political campaigns, the resources and techniques they employ, and their effects on voters.


PS 4233/6233. Interest Groups. (3) (Prerequisite: PS 1113 or consent of instructor). Three hours lecture. The study of the politics and practices of interest groups within the American political process.

PS 4253/6253. Southern Politics. (3) (Prerequisites: PS 1113 and junior standing). Three hours lecture. Survey of the politics of the Confederate and border states, examination of party development, leadership, and impact of the South in national politics.


PS 4273/6273. African American Politics. (3) (Prerequisite: PS 1113). Three hours lecture. The nature, processes, structures, and functions of Afri- can American politics in the domestic arena and international arena.

PS 4283/6283. Public Opinion. (3) (Prerequisites: PS 1113 and junior standing). Three hours lecture. The nature of public opinion; the influence of the press; pressure groups and propaganda techniques; the means of political communication.

PS 4293/6293. Political Behavior. (3) (Prerequisites: PS 1113 and junior standing). Three hours lecture. Examination of the foundations and types of individual political activity; emphasis on psychological, social and cultural factors influencing personal political behavior.

PS 4703/6703. Principles of Public Administration. (3) (Prerequisites: PS 1113 and junior standing). Three hours lecture. Bureaucratic politics and power; administrative responsibility in a pluralist democracy; public adminis- trative organization; public personnel administration; and public budgeting.

PS 4743/6743. Environmental Policy. (3) (Prerequisite: PS 1113, PS 2703, or consent of instructor). Three hours lecture. History, development, and practice of environmental policy in the United States.

International Politics

PS 4303/6303. U.S. Foreign Policy. (3) (Prerequisite: PS 1313 or con- sent of instructor.) Three hours lecture. An examination of the decision-mak- ing processes, institutions and structures that influence the formulation and execution of past and current U.S. foreign policy.

PS 4313/6313. Principles of International Law. (3) (Prerequisites: PS 1313 and junior standing). Three hours lecture. The nature, sources and scope of international law as found in custom, international convention, the teach- ings of authoritative writers, and judicial decisions.


PS 4333/6333. Theories of International Relations. (3) (Prerequisites: PS 1313 and junior standing). Three hours lecture. This course critically ex- amines traditional and contemporary, normative and behavioral, qualitative and quantitative theories of international relations.


PS 4353/6353. International Political Economy. (3) (Prerequisite: PS 1313 or consent of instructor). Three hours lecture. This course will system- atically address the relationship between politics and economics in an inter- national context.

PS 4383/6383. National Security Policy. (3) (Prerequisites: PS 1313 and junior standing). Three hours lecture. An examination of those policies and practices affecting American national security with attention to the institu- tions, organizations and processes which shape them.

PS 4393/6393. The Global Context. (3) (Prerequisite: Junior standing or consent of instructor). Three hours lecture. Examination of selected issues of current importance to international relations.

Political Theory

PS 4423/6423. 20th Century Political Thought. (3) (Prerequisites: PS 2403 or consent of instructor). Three hours lecture. An examination of selected thinkers, text, and ideas in the history of political thought from the late 19th Century to the present.

PS 4433/6433. American Political Theory. (3) (Prerequisites: PS 1113 and junior standing). Three hours lecture. Major schools of political thought in America from the colonial to the contemporary period.

PS 4453/6453. Western Political Theory: Plato to Marx. (3) (Prereq- usite: PS 1113 or PS 2403). Three hours lecture. Chronological survey of central thinkers, texts, ideas, and movements in Western political thought from Plato to Marx.

Comparative Politics

PS 4543/6543. African Politics. (3) (Prerequisites: PS 1513 and junior standing). Three hours lecture. Contemporary sub-Saharan Black Africa; prospects for political development or decay. Role of parties, bureaucracy and military and their relationship to elite formation and political integration.

PS 4553/6553. West European Politics. (3) (Prerequisites: PS 1513 and junior standing). Three hours lecture. Governments of countries of Western Europe with emphasis upon England, France, Germany, Italy, and Spain.

PS 4573/6573. South and Southeast Asian Politics. (3) (Prerequisites: PS 1513 and junior standing). Three hours lecture. An examination of the tradi- tional and contemporary political institutions, behavior and ideas of the coun- tries of South and Southeast Asia.

PS 4593/6593. Latin American Politics. (3) (Prerequisites: PS 1513 and junior standing). Three hours lecture. Background, organization, and struc- ture of the governments of the various Latin American countries.

PS 4623/6623. Politics of the Third World. (3) (Prerequisites: PS 1513 and junior standing). Three hours lecture. Political processes of developing nations. Prospects for development and decline considered. Relationship be- tween political, economic and cultural dimension during the process of social change.

Master of Political Science

NOTE: See latest Graduate Bulletin for admission information into the Political Science Department’s M.A., M.P.P.A., or Ph.D. graduate programs.

PS 7000. Directed Individual Study. Hours and credits to be arranged.

PS 8000. Thesis Research/Thesis. Hours and credits to be arranged.

PS 8113. Seminar in State Government and Politics. (3) (Prerequi- sites: PS 4113 and nine hours of related courses, or consent of instructor). Three hours lecture. The examination of selected concepts in the policies, politics, machinery and/or powers of state government.

PS 8153. Seminar in Campaign Politics. (3) (Prerequisite: Consent of instructor). Analysis of conduct and phases of political campaigns; and their effect on voters and the political system generally.

PS 8203. Seminar in Comparative Government. (3) (Prerequisites: PS 1513 and nine hours of related courses, or consent of instructor). Special re- search problems dealing with governmental organization and administration in the major nations of the modern world.

PS 8303. Seminar in International Relations. (3) (Prerequisites: PS 1313 and nine hours of related courses, or consent of instructor). Special re- search dealing with major international problems.

PS 8413. Seminar in Political Theory. (3) (Prerequisites: PS 2403 and nine hours of related courses, or consent of instructor). Three hours lecture. Seminar on selected aspects of political theory from the ancient to the modern period.

PS 8513. Readings in Local Government and Politics. (3) (Prerequi- site: Consent of instructor). Reading assigned material in local government and politics and making reports thereon under the supervision of a member of the graduate faculty.

PS 8523. Readings in State Government and Politics. (3) (Prerequi- site: Consent of instructor). Reading assigned material in state government and politics and making reports thereon under the supervision of a member of the graduate faculty.

PS 8533. Readings in National Government and Politics. (3) (Prereq- uisite: Consent of instructor). Reading assigned material in an appropriate subfield of national government and making reports thereon under the super- vision of a member of the graduate faculty.
PS 8543. Readings in Comparative Government and Politics. (3) (Prerequisite: Consent of instructor). Reading assigned material in an appropriate subfield of comparative government and making reports thereon under the supervision of a member of the graduate faculty.

PS 8553. Readings in International Relations. (3) (Prerequisite: Consent of instructor). Reading assigned material in an appropriate subfield of international relations and making reports thereon under the supervision of a member of the graduate faculty.

PSS 8803. Research Methods for Public Affairs. (3) Stress on research designs and methods, survey research and other techniques and measuring data. Focus on applied approaches for mathematically analyzing governmental data. (Same as PPA 8803).

PS 8813. Quantitative Methods for Public Affairs. (3) (Prerequisite: PS 8803 or PPA 8803). Detailed consideration of selected quantitative analytic models and their application to public sector management and policy problems. (Same as PPA 8813).

PS 8903. Public Policy. (3) Nature, determinants, and effects of public goods and services; policy formulation and implementation; seminar emphasizes contemporary issues such as strategic planning, leadership, and managerial control. (Same as PPA 8903).

PS 8990. Special Topics in Political Science. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PS 9103. American Political Institutions. (3) (Prerequisite: consent of instructor). Three hours lecture. Seminar addressing theoretical and empirical issues pertaining to the dynamics of American political institutions. (Same as PPA 9103)

PS 9413. Normative Analysis of American Public Policy. (3) Three hours lecture. Seminar exploring issues in American politics and public policy from a normative perspective. (Same as PPA 9413)

PS 9893. American Political Behavior. (3) (Prerequisite: PPA 9803 and consent of instructor). Three hours lecture. Seminar in American political behavior including public opinion, socialization, participation, and voting behavior. (Same as PPA 9893).

Department of PLANT and SOIL SCIENCES

Offices: 117 Dorman Hall
Professors Byrd, Collins (Head), Creech, Jenkins*, Kingery, Matta, McCarty*, Nagel, Reichert, Reynolds, Rowe*, Shaw, Tatum, Triplett, Varco, and Williams;
Associate Professors Baldwin, Cox, DelPrince, Harkess, Lang, Reddy and Wallace; Assistant Professors Greer, Massey, Meints, Munshaw, Peterson, Rankins and Stewart; Instructor McDougall (*-adjunct professor)

PSS 1313. Plant Science. (3) Two hours lectures. Two hours laboratory. Scientific principles as the basis for practice in producing, handling, processing, marketing, and utilizing agronomic and horticultural plants.

PSS 2343. Floral Design. (3) Two hours lecture. Two hours studio. The history and appreciation of floral art through exploration of design principles, plant materials, and compositional floral forms.

PSS 2351. Techniques in Flowershop Management. (1) (Prerequisite: PSS 2343. Floral Design). Two hours laboratory. Demonstrations and practice of fundamentals which are essential in the operation of a retail flower shop.

PSS 2423. Plant Materials I. (3) Two hours lecture. Two hours laboratory. Characteristics, identification and landscape uses of ornamental trees, shrubs, vines, flowers and grasses adapted to Southern conditions.

PSS 2990. Special Topics in Plant and Soil Sciences. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PSS 3023. Retail Floristry Operation and Management. (3) (Prerequisites: ACC 2023, MGT 3114, and MKT 3013). Three hours lecture. To identify and understand the basic principles of retail floristry management and the operation of a florist shop.

PSS 3043. Fruit Science. (3) Three hours lecture. Principles and practices involved in the production of deciduous trees and small fruits. Fall semester, odd years.

PSS 3133. Introductory Weed Science. (3) (Prerequisites: BIO 1203, CH 1213 or CH 1053). Three hours lecture. Managing weeds; basic weed biology; methods of controlling weeds, introductory herbicide technology, weed control systems, and the fate of herbicides in the environment.

PSS 3301. Soils Laboratory. (1) (Prerequisite: Prior credit or for current enrollment in PSS 3303.) Two hours laboratory. Fall and Spring semesters. General treatment of selected phases of the subject matter.

PSS 3303. Soils. (3) (Prerequisite: One semester (preferably two) of inorganic chemistry, CH 1043.) Three hours lecture. Fall and Spring semester. General treatment of all phases of the subject including lime and fertilizers.

PSS 3313. Interior Planting Design and Maintenance. (3) Two hours lecture, two hours laboratory. Identification of plant materials for interior planting and principles of design, installation and maintenance, preparation of cost estimates and maintenance contracts for interior plantings.

PSS 3343. Advanced Floral Design I. (3) (Prerequisite: PSS 2343). One hour lecture. Four hours laboratory. Application of design theory and principles to specific operations encountered in retail floristry.

PSS 3411. Turf Seminar I. (1) One hour lecture. Class discussions with invited turf industry representatives. Topics will include turf industry overview, turf career opportunities, writing a resume, and job interviews. May be repeated for credit.

PSS 3413. Floristry Internship. (3) (Prerequisites: PSS 2343, PSS 2351 and consent of Retail Floristry Management faculty). Individual work experience in a floral industry enterprise with an approved employer under faculty supervision.

PSS 3421. Turf Seminar II. (1) One hour lecture. Review of turfgrass literature and presentations of scientific articles. May be repeated for credit.

PSS 3423. Agronomy Internship. (3) (Prerequisites: Junior standing and consent of Agronomy Faculty). Individual work experience in an agronomic or environmental organization with an approved employer under faculty supervision. This course may be repeated under approved conditions.

PSS 3433. Horticulture Internship. (3) (Prerequisite: Consent of the Floriculture and Ornamental Horticulture faculty). Individual work experience in an horticulture or allied industry organization with an approved employer under faculty supervision. This course may be repeated under approved conditions.

PSS 3443. Advanced Floral Design II. (3) One hour lecture. Four hours laboratory. Application of design theory and principles to non-perishable, dried, and preserved floral products.

PSS 3473. Plant Materials II. (3) (Prerequisite: PSS 2423). Two hours lecture. Two hours laboratory. Continuation of PSS 2423.

PSS 3511. Seminar. (1) (Prerequisite: Nine credits in horticulture). One hour lecture. Review of horticultural literature, and presentation and discussion of scientific articles.

PSS 3923. Plant Propagation. (3) (Prerequisite: BIO 1203). Two hours laboratory. Two hours lecture. Basic principles in the propagation of horticultural plants. Spring semester.

PSS 4000. Directed Individual Study. Hours and credits to be arranged.

PSS 4103/6103. Forage and Pasture Crops. (3) Two hours lecture. Two hours laboratory. Fall semester. Origin, uses, and ecology of forage plants, establishment, nutritive value, use, yield and maintenance of forage plants as related to morphology, physiology and pasture management.

PSS 4123/6123. Grain Crops. (3) (Prerequisite: Junior standing). Two hours lecture. Two hours laboratory. Spring semester, odd-numbered years. Corn, small grain, practice in commercial grading given in laboratory.

PSS 4133/6133. Fiber and Oilseed Crops. (3) (Prerequisite: Junior standing). Three hours lecture. Spring semester. Production and utilization of fiber and oilseed crops. Emphasis on cotton and soybean production in Mississippi.

PSS 4143/6143. Advanced Fruit Sciences. (3) (Prerequisite: PSS 3043 or equivalent). Three hours lecture. Three hours laboratory. A study of the latest advances in pomology and interpretation of current research findings and their application to modern fruit growing. Spring semester, odd years.

PSS 4223/6223. Seed Production. (3) (Prerequisite: Junior standing). Two hours lecture. Two hours laboratory. Fall semester (odd years). Principles and practices, special emphasis on production of varietally pure seeds; agronomic factors in harvesting, drying, storage, treating and marketing seed.

PSS 4243/6243. Seed Technology. (3) (Prerequisite: Senior standing). One hour lecture. Four hours laboratory. Spring semester (odd years). Seed development and morphology; germination; vigor and other special tests for seed quality; maintenance of seed viability; and seed quality control system.

PSS 4253/6253. Seed and Grain Conditioning and Storage. (3) (Prerequisite: Senior standing). Two hours lecture. Two hours laboratory. Fall semester. Physical and biological principles involved in the conditioning and storage of seed and grain with emphasis on systems used, operational procedures, management and economic considerations.

PSS 4313/6313. Soil Fertility and Fertilizers. (3) (Prerequisites: PSS 3303 and Junior standing). Three hours lecture. Spring semester. Fundamen-
tals and concepts of soil fertility; sources and responses of crops to plant nutrients; soil fertility evaluation and maintenance through fertilization.

PSS 4314/6314. Soil Microbiology. (4) (Prerequisite: BIO 3304). Three hours lecture. Three hours laboratory. Spring semester. Soil microorganisms and their importance in ammoinification, nitrification, and other biological processes. (Same as BIO 4324)

PSS 4323/6323. Soil Classification. (3) (Prerequisite: PSS 3303). Three hours lecture. Fall semester; odd-numbered years. Origin, development, and classification of soils including identification and field mapping.

PSS 4333/6333. Soil Conservation and Land Use. (3) (Prerequisite: PSS 3305). Two hours lecture. Three hours laboratory. Soil identification, topographic relationships and soil-water resources; their characteristics, quality, suitability, and management; conservation practices; using soil maps to determine land use.

PSS 4343/6343. Arboriculture and Landscape Maintenance. (3) Two hours lecture. Two hours laboratory. Care of ornamental trees and shrubs, including pruning, bracing, surgery, transplanting, and fertilization.

PSS 4363/6363. Nursery Management. (3) (Prerequisites: PSS 3923, PSS 4243, and PSS 3473). Two hours lecture. Two hours laboratory. The production and handling of ornamental nursery stock. Spring semester, even-numbered years.

PSS 4373/6373. Geospatial Agronomic Management. (3) (Prerequisites: PSS 3303 and PSS 3133). Two hours lecture. Three hours laboratory. This class will utilize the basic tools of geographical information systems and geographical positioning systems technologies to analyze agronomic case studies.

PSS 4411-4414/6411-6441. Remote Sensing Seminar. (1) (Prerequisite: Junior standing). One hour lecture. Lectures by remote sensing experts from industry, academia, and governmental agencies on next-generation systems, applications, and economic and societal impact of remote sensing.

PSS 4414/6414. Turf Management. (4) (Prerequisite: Junior Standing). Three hours lecture. Two hours laboratory. A comprehensive study of turfgrasses, their establishment, and the varied management strategies employed for golf and sports turf, home lawns and commercial turf, and sod production.

PSS 4423/6423. Golf Course Operations. (3) (Prerequisite: PSS 4414/6414). Two hours lecture. Two hours laboratory. Fall semester. Scheduling maintenance practices, golf course construction and renovation with emphasis on operation and care of specialized turf equipment.

PSS 4443/6443. Athletic Field Management. (3) (Prerequisite: PSS 3303, PSS 4414, or consent of instructor). Two hours lecture. Two hours laboratory. A comprehensive study of athletic fields, including construction, maintenance, renovation and management. Emphasis will be placed on interactions between soil properties and sports performance.

PSS 4444/6444. Plant Tissue Culture. (4) (Prerequisite: BIO 4214 and CH 1053 or equivalent). Three hours lecture. Three hours laboratory. A comprehensive study of plant cell, tissue and organ culture with emphasis on practical applications of tissue culture in various areas of plant science.

PSS 4453/6453. Vegetable Production. (3) (Prerequisite: PSS 3303 and PSS 3301 or BIO 4204). Two hours lecture. Two hours laboratory. Principles and practices of commercial vegetable production.

PSS 4483/6483. Intro to Remote Sensing Technologies. (3) (Prerequisite: Senior or graduate standing, or consent of instructor). Three hours lecture. Electromagnetic interactions, passive sensors, multispectral and hyperspectral optical sensors, active sensors, imaging radar, SAR, Lidar, digital image processing, natural resource applications (Same as ECE 4423/6423 and ABE 4853/6853).

PSS 4503/6503. Plant Breeding. (3) (Prerequisite: PO 3103). Two hours lecture. Two hours laboratory. Application of genetic principles to the improvement of crop plants; history, methods and procedures of plant breeding.

PSS 4603/6603. Soil Chemistry. (3) (Prerequisite: PSS 3303). Two hours lecture. Three hours laboratory. Fall semester, even-numbered years. Introduction to the basic chemistry of soils, including: mineral weathering/formation, ion exchange; adsorption, oxidation/reduction, acidity, salinity/alkalinity, and soil reactions of environmental importance.

PSS 4613/6613. Floriculture Crop Production. (3) (Prerequisite: PSS 4343/6343). Two hours lecture. Two hours laboratory. A detailed study of the techniques involved in the production of the major commercial flower crops. Spring semester, odd-numbered years.

PSS 4633/6633. Weed Biology and Ecology. (3) (Prerequisites: BIO 1203, PSS 3133. Junior standing or consent of instructor). Two hours lecture. Two hours laboratory. Weed identification and population responses to agricultural production systems. Spring semester.

PSS 4813/6813. Herbicide Technology. (3) (Prerequisites: PSS 3133 and Junior standing). Two hours lecture. Three hours laboratory. Classification and use of herbicides. A detailed look at herbicide application-field use and factors influencing herbicide activity. Spring semester. Credit may not be given for this course and PSS 4823/6823.

PSS 4823/6823. Turfgrass Weed Management. (3) (Prerequisite: PSS 3133 and Junior standing). Two hours lecture. Three hours laboratory. Classification and use of herbicides with emphasis on herbicides used in turfgrass. Credit may not be given for this course and PSS 4813/6813.

PSS 4990/6990. Special Topics in PSS. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PSS 7000. Directed Individual Study. Hours and credits to be arranged.

PSS 8000. Thesis Research/Thesis. Hours and credits to be arranged.

PSS 8103. Pasture Development. (3) Three hours lecture. Utilization systems for forage crops in the southeast; adaptation, morphology, identification, and physiology of grasses and legumes; analyses of forage quality; interpretation of forage research.

PSS 8123. Crop Ecology. (3) (Prerequisite: BIO 4213/6213 or consent of instructor). Three hours lecture. Spring semester, even-numbered-years. The geographical distribution, use, and adaptation of field crops as influenced by soil, climate, and other environmental factors.

PSS 8163. Environmental Plant Physiology. (3) Three hours lecture. Spring semester, even-numbered years. The influences of physical factors of the environment on growth and development of crop plants.

PSS 8203. Seed Physiology. (3) (Prerequisite: PSS 4243/6243 or approval of instructor). Three hours lecture. Spring semester (even years). Physiology of seed maturation, germination, dormancy, and deterioration; relation of seed quality to growth and development of plants.


PSS 8314. Clay Mineralogy. (4) (Prerequisite: Approval of instructor). Two hours lecture. Four hours laboratory. Spring semester, even-numbered years. Crystal structure and reaction mechanisms of clay minerals weathering. X-ray diffraction, thermal, and chemical studies of clay minerals.

PSS 8323. Advanced Soil Chemistry. (3) (Prerequisite: CH 4413 and preferably CH 4423 or approval of instructor). Three hours lecture. Spring semester, odd-numbered years. Application of the fundamental laws of colloid chemistry to inorganic and organic soil colloids with special emphasis on chemical equilibria, cation exchange. Gouy-Chapman theory and electrokinetics.

PSS 8333. Advanced Soil Fertility. (3) (Prerequisite: Graduate standing). Two hours lecture. Three hours laboratory. Fall semester, even-numbered years. Advanced course in soil fertility; special emphasis on all soil conditions affecting plant growth. Experimental techniques in plant nutrition and in soil fertility will be utilized.

PSS 8343. Modeling Watershed Hydrology (3) (Prerequisite: PSS 3301/3303 or CE 4513 or consent of instructor). Two hours lecture. Three hours laboratory. Simulation modeling of watershed hydrology and point/non-point source pollution, including data availability and quality, calibration/verification, sensitivity analysis, TMDL calculations, and other modeling issues.

PSS 8511. Seminar. (1) (Prerequisite: Graduate standing). One hour lecture. Review of scientific literature and presentation of scientific papers.

PSS 8513. Advanced Plant Breeding. (3) (Prerequisite: PSS 4503/6503 or equivalent). Three hours lecture. Fall semester, even-numbered years. An in-depth review of methods of plant improvement and the application of these methods to modern plant breeding. (Same as GNS 8113.)

PSS 8523. Nutrition of Horticultural Plants. (3) (Prerequisites: PSS 3303 and PSS 3301 and BIO 4214/6214 or equivalent). Three hours lecture. Principles of mineral nutrition applied to diverse horticultural plants.

PSS 8543. Biometrical Genetics in Plant Breeding. (3) (Prerequisites: PSS 4503/6503 and ST 8114). Three hours lecture. Spring semester, odd-numbered years. Analysis and interpretation of experiments for estimation of hereditary parameters. Emphasis on mating designs, heritability, and genotype x environment interactions in plant breeding. (Same as GNS 8143.)

PSS 8553. Plant Growth and Development. (3) (Prerequisites: BIO 4214/6214 and CH 2503). Three hours lecture. Auxins, gibberellins, and other growth regulating substances, photoperiodism, thermoperiodicity. Fall semester, odd-numbered years.

PSS 8554. Plant Genetic Engineering. (4) (Prerequisite: PSS 6444 or PSS 6443 and BCH 6713). Two hours lecture. Four hours laboratory. A study
of molecular techniques, product development, applications and implications of plant improvement through genetic engineering.

PSS 8563. Post-Harvest Physiology of Horticultural Plants. (3) (Prerequisites: Organic Chemistry and BIO 4214/6214 or equivalent). Three hours lecture. The nature, evaluation, and control of chemical and physiological changes that occur after harvest of horticultural products.

PSS 8573. Morphology of Horticultural Plants. (3) (Prerequisite: BIO 4204/6204). One hour lecture. Four hours laboratory. Development of the floral and vegetative organs of horticultural plants. Fall semester, even-numbered years.

PSS 8613. Methods of Horticultural Research. (3) (Prerequisites: Graduate standing). One hour lecture. Four hours laboratory. Techniques and instrumentation in plant research.

PSS 8634. Environmental Fate of Herbicides. (4) (Prerequisites: CH 4513/6513, PSS 4813/6813). Three hours lecture. Three hours laboratory. Fate of herbicides, including drift volatility, adsorption/desorption, leaching, runoff, microbial, chemical, and photolytic degradation, and plant metabolism, environmental factors that influence these processes.

PSS 8645. Field Applications of Weed Sciences Principles I. (5) (Prerequisite: PSS 6633 and PSS 6813 or consent of instructor). Three hours lecture. Four hours laboratory. Field weed identification; herbicide symptomology; problem solving in cotton, soybean, and vegetables; application equipment calibration.

PSS 8655. Field Applications of Weed Science Principles II. (5) (Prerequisite: PSS 8646 or consent of instructor). Three hours lecture. Four hours laboratory. Field weed identification; herbicide symptomology; problem solving in turf; field corn, rice, sorghum and pastures; application equipment calibration.

PSS 8701-8791. Current Topics in Weed Science. (1) (Prerequisites: Graduate standing, PSS 4813/6813 or consent of instructor). Lecture, discussion and readings in selected areas of current interest in weed science. Maximum total credits in graduate program allowed, 4 hours-M.S.; 6 hours-Ph.D.

PSS 8724. Herbicide Physiology and Biochemistry. (4) (Prerequisites: PSS 4813/6813, BIO 4214/6214 and CH 4513/6513 or consent of instructor). Three hours lecture. Three hours laboratory. Herbicide, plant growth regulator and allelochemical chemistry, mode of action, and effects on plants and plant constituents: fate/ persistence of herbicides in the environment. Fall semester, odd-years.

PSS 8811-8831. Seminar. (1) (Prerequisite: Graduate standing). Review of literature on assigned topics; preparation of formal papers and presentation of them at staff seminars.

PSS 8990. Special Topics in PSS. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PSS 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.
PSY 4343. Clinical Child Psychology. (3) (Prerequisites: PSY 3213; PSY 3313 or PSY 3803). Three hours lecture. Overview of childhood disorders and related interventions.

PSY 4353/6353. Psychology and the Law. (3) (Prerequisite: PSY 1013 and Junior standing). Three hours lecture. Examination of the roles of psychologists in the legal system; application of psychological theory and research to issues in the legal system.

PSY 4403/6403. Biological Psychology. (3) (Prerequisite: PSY 1013). Three hours lecture. Nervous, endocrine, and immune systems of the body as they affect behavior and adjustment. Emphasis upon the role of the central and peripheral nervous systems.

PSY 4423/6423. Sensation and Perception. (3) (Prerequisite: PSY 1013, PSY 4403). Three hours lecture. Survey of basic sensory mechanisms and perceptual phenomena. Sensory mechanisms reviewed will include vision, audition, olfaction, gustation, and touch with emphasis on vision and audition.

PSY 4523/6523. Industrial Psychology. (3) (Prerequisite: PSY 1013). Three hours lecture. Applications of psychological principles and methods to industry emphasizing employee selection, placement, merit rating, training, human relations, and measurement and improvement of employee morale.

PSY 4643/6643. Social Cognition. (3) (Prerequisite: PSY 3623 or consent of instructor). Three hours lecture. Examination of how people perceive, categorize and reason about other people and themselves.

PSY 4653/6653. Cognitive Science. (3) (Prerequisite: CSE 4633/6633 or PSY 4713 or PHI 4143/6143 or AN 4623/6623 or EN 4403/6403). Three hours lecture. The nature of human cognition from an interdisciplinary perspective, primarily utilizing a computational model, including insights from philosophy, psychology, linguistics, artificial intelligence, anthropology, and neuroscience. (Same as CSE 4653/6653).


PSY 4726. Internship in Psychology I. (6) (Prerequisite: Consent of instructor). A minimum of 20 hours per week of professional experience in a human service or other field setting. One hour of seminar and group supervision.

PSY 4733/6733. Memory. (3) Three hours lecture. (Prerequisite: PSY 1013). Introduction to theoretical and practical aspects of memory. Discussion of laboratory memory, computer models of memory, memory self-concepts, everyday memory, and clinical memory problems.

PSY 4736. Internship in Psychology II. (6) (Prerequisite: Consent of instructor). A minimum of 20 hours per week of professional experience in a human service or other field setting. One hour of seminar and group supervision.

PSY 4743/6743. Psychology of Human-Computer Interaction. (3) (Prerequisites: PSY 3713 or CSE 4663/6663 or IE 4113/6113 or consent of the instructor). Two hours lecture. Two hours laboratory. Exploration of psychological factors that interact with computer interface usability. Interface design techniques and usability evaluation methods are emphasized. (Same as CSE 4673/6773 and IE 4123/6123).

PSY 4753/6753. Applied Cognitive Psychology. (3) (Prerequisite: PSY 3713 or IE 4113 or consent of instructor). Three hours lecture. Human perceptual, cognitive and motor capabilities and limitations are described with particular emphasis on the implications of developing effective, user-friendly man-machine systems.

PSY 4903/6903. Seminar in Psychology. (3) (Prerequisite: PSY 1013). In-depth examination of particular topics of current interest to faculty and students. Critical evaluation of current research.

PSY 4983/6983. Psychology of Aging. (3) (Prerequisite: PSY 1013). Three hours lecture. A description and analysis of the development and changes occurring in individuals from early adulthood through late life.

PSY 4990/6990. Special Topics in Psychology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PSY 7000. Directed Individual Study. Hours and credits to be arranged.

PSY 8000. Thesis Research and Thesis. Hours and credits to be arranged.

PSY 8111. Scientist-Practitioner Applications. (1) (Prerequisite: Consent of instructor). Two hours laboratory. A minimum of two hours per week in supervised service delivery and research activities of clinical psychologists.

PSY 8121. Scientist-Practitioner Applications. (1) (Prerequisite: Consent of instructor). Two hours laboratory. A minimum of two hours/week in supervised service delivery and research activities of clinical psychologists.

PSY 8131. Scientist-Practitioner Applications. (1) (Prerequisite: Consent of instructor). Two hours laboratory. A minimum of two hours per week in supervised service delivery and research activities of clinical psychologists.

PSY 8141. Scientist-Practitioner Applications. (1) (Prerequisite: Consent of instructor). Two hours laboratory. A minimum of two hours per week in supervised service delivery and research activities of clinical psychologists.

PSY 8151. Scientist-Practitioner Applications. (1) (Prerequisite: Consent of instructor). Two hours laboratory. A minimum of two hours per week in supervised service delivery and research activities of clinical psychologists.

PSY 8214. Quantitative Methods in Psychology II. (4) (Prerequisite: PSY 3103). Three hours lecture. Three hours laboratory. Advanced experimental design and methods with emphasis on analysis of variance.

PSY 8223. Systems and Theories of Psychology. (3) (Prerequisite: PSY 4323/6323). Three hours lecture. Study of the basic systems and theories relevant to current psychology.

PSY 8313. Developmental Psychology. (3) (Prerequisite: PSY 3803). Three hours lecture. Human growth processes and related developmental tasks in areas such as creative ability, language, social competency, and bodily fitness.

PSY 8322. Psychopathology. (3) (Prerequisites: PSY 3213). In-depth coverage of contemporary systems of psychiatric diagnosis, and biological, psychological, and social theories of the etiology of psychological disorders.

PSY 8333. Systems of Psychotherapy. (3) (Prerequisite: Consent of instructor). Three hours lecture. A comparative introduction to the theories, techniques, and outcomes of major approaches to psychotherapy.

PSY 8354. Intelligence Testing. (3) (Prerequisite: Consent of the instructor). Three hours lecture. Administration, scoring and interpretation of the standard psychometric instruments used in evaluating individual intellectual functioning.

PSY 8364. Personality Appraisal. (4) (Prerequisite: PSY 8323). Three hours lecture. Two hours laboratory. Administration, scoring and interpretation using standard self-report and projective methods of individual personality assessment. Current research is also explored.


PSY 8383. Behavior Therapy. (3) (Prerequisite: Consent of instructor). Three hours lecture. A survey of contemporary literature relating to the theory, techniques, and outcomes of behavior therapy. Emphases placed on systematic desensitization and operant conditioning techniques.

PSY 8454, 8464. Professional Practicum. (4) (Prerequisite: Departmental consent). A minimum of 300 hours per semester of supervised professional psychological experience in an appropriate setting.

PSY 8503. Learning. (3) (Prerequisite: PSY 3343). Three hours lecture. Current theories and learning models; methods and results of experimental studies of human and animal learning.

PSY 8513. Psychological Research. (3) (Prerequisite: PSY 3313). Three hours lecture. Practicum in the techniques of planning and execution of various areas of psychological research.

PSY 8533. Introduction to Clinical Practicum in Psychology. (3) (Prerequisite: Consent of instructor). One hour lecture. Two hours practicum. Intensive introduction to clinical interviewing, as well as the research literature in clinical psychology.

PSY 8573. Psychopharmacology. (3) (Prerequisites: PSY 4403 and PSY 8323). Three hours lecture. Overview of research on pharmacological and combined treatments for psychological disorders. Emphasis is placed on psychological disorders in adulthood.

PSY 8613. Advanced Social Psychology. (3) (Prerequisite: PSY 3623). Three hours lecture. Examination of research and theories of attraction and liking. Emphasis upon reinforcement theory, gain-loss theory, and dissonance theory.

PSY 8703. Personnel Psychology. (3) (Prerequisite: Consent of instructor). Three hours lecture. Study of theories and methods of psychology as applied to work setting design, personnel management, and organizational behavior with special emphasis on personnel psychology.

PSY 8713. Issues and Methods in Cognitive Psychology. (3) (Prerequisite: Graduate Standing). Three hours lecture. Exploration of theoretical issues and research methods in current Cognitive Psychology.

PSY 8723. Cognitive Models of Skill. (3) (Prerequisite: Graduate standing). Three hours lecture. Introduction to cognitive modeling, with a focus on computational models of skill acquisition and expert skill (Same as CSE 8613).
DESCRIPTION of COURSES

PSY 8731. Applied Cognitive Science Research Seminar. (1) One hour seminar. Presentations of research in applied cognitive science.

PSY 8803. Advanced Quantitative Methods for Industrial/Organizational and General Psychology. (3) (Prerequisites: PSY 8214). Three hours lecture. Study of advanced analytic and multivariate quantitative methods applied to contemporary problems and research in industrial/organizational and general psychology.

PSY 8990. Special Topics in Psychology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

PSY 9000. Dissertation Research and Dissertation. (1-13) Hours and credits to be arranged.

RADIO — T.V. — FILM

(See Communication)

READING EDUCATION

(See Elementary Education)

RDG 2990. Special Topics in Readings. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses.


RDG 3313. Practicum: Diagnosis and Remediation of Reading Disability. (3) (Prerequisite: RDG 3213). The supervised diagnostic teaching of reading in a public school setting.

RDG 3413. Middle Level Literacy I. (3) (Prerequisites: RDG 3113 and RDG 3123; Co-requisites: RDG 3423 and EDE 3223). Three hours lecture. Field experience. Literacy teaching and learning for upper elementary and middle school. Emphasis on reading instruction, strategy instruction, and assessment.

RDG 3423. Middle Level Literacy II. (3) (Prerequisites: RDG 3113 and RDG 3123; Co-requisites: RDG 3413 and EDE 3223). Three hours lecture. Field experience. Instructional strategies and materials for teaching literacy in the elementary and middle school. Focus on writing, comprehension and teaching diverse students.

RDG 3513. Developing Reading Strategies in the Secondary School Content Areas. (3) Basic theories and techniques needed by content area teachers for teaching reading to secondary school students. Admission to Teacher Education required.

RDG 4113/6113. Middle Level Literacy Development and Instruction. (3) (Prerequisite: RDG 3113). Three hours lecture. Advanced theory and applied methods, techniques, and analyses of literacy strategies for the middle years learner (ages 9-14)


RDG 4990/6990. Special Topics in Readings. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses.

RDG 8153. Psychology of Reading. (3) Three hours lecture. Analysis of reading skills; conditions favorable and unfavorable to progress in reading skill; the readiness concept; problems of levels. Prevention and correction of reading handicaps.

RDG 8413. Reading in the Public Schools. (3) Three hours lecture. Materials and methods employed in individual and group procedures for the teaching of reading in public schools.

RDG 8453. Research in Reading. (3) Three hours lecture. The function of research in the development of reading programs; contribution of research to reading instruction.


RDG 8573. Diagnosis of Reading Problems. (3) The selection, utilization and interpretation of instruments used to diagnose disability and outline remedial procedures.

RDG 8593. Issues and Innovations in Reading. (3) Issues and innovations related to trends, methodology, and materials in the teaching of reading.


RDG 8713. Teaching Struggling Readers and Writers. (3) Two hours lecture. Two hours laboratory. Practicum experience teaching struggling elementary school literacy learners; identifying literacy learning strengths and difficulties; teaching to improve achievement.

RDG 8990. Special Topics in Readings. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses.

RELIGION

(For departmental information, see PHILOSOPHY and RELIGION.)

REL 1103. Introduction to Religion. (3) Three hours lecture. Religion seen as a human search for meaning in life or response to the holy. Studied through basic structures and modes of expression.

REL 1213. Introduction to the Old Testament. (3) Three hours lecture. A survey of Old Testament literature with attention to archaeological findings and the cultural setting.


REL 2990. Special Topics in Religion. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

REL 3123. Philosophy of Religion. (3) (Prerequisite: Three hours of philosophy). Three hours lecture. A critical inquiry into the rational justification of central theistic beliefs, with emphasis on the traditional philosophical arguments for and against the existence of God. (Same as PHI 3123).


REL 3223. World Religions: Part II. (3) Three hours lecture. A history and comparative study of beliefs and the cultural impact of the great theistic religions of the West.

REL 3453. Hinduism & Buddhism. (3) Three hours lecture. Introduction to and critical-historical survey of significant texts, doctrines, themes, and thinkers in the main indigenous Indian religion traditions.

REL 3473. Islam. (3) A survey of Islamic history, beliefs and practices, law, theology, philosophy, and mysticism.

REL 3540. Archaeological Travel and Participation Program. (1-6) Participation in excavations in the Near East and related lecture program. (Same as AN 3540).

REL 3553. Near Eastern Archaeology. (3) Three hours lecture. Introduction to the contributions made by archaeological research to ancient Near Eastern history and prehistory, with special emphasis on the Syro-Palestinian area. (Same as AN 3553).

REL 3703. The Western Church: Beginning to Reformation. (3) (Prerequisites: Completion of any 100-level course in history or philosophy and religion). Three hours lecture. An examination of the institutions, doctrines, and spirituality of the Western Church and their impact on Western European politics, society, and culture.
REL 4000. Directed Individual Study. Hours and credits to be arranged.

REL 4123/6123. Scandinavian Mythology. (3) (Prerequisite: Junior standing or consent of instructor). Three hours lecture. A survey of the myths and legends of Scandinavia in English translation. (Same as FL 4123/6123).

REL 4143/6143. Classical Mythology. (3) Three hours lecture. Myths and legends of Greece and Rome and their use in literature and the arts through the ages. (Same as FL 4143/6143).

REL 4253/6253. Religion in America. (3) (Prerequisite: HI 1063 or HI 1073). Three hours lecture. Surveys history of religion in America, emphasizing interaction with social and political developments. Same as HI 4253/6253.

REL 4403/6403. The Ancient Near East. (3) (Prerequisite: Completion of any 1000-level history course). Three hours lecture. A study of the origins and development of civilizations in Mesopotamia, Egypt, and Syria-Palestine from prehistoric times to the end of the Persian period. (Same as HI 4403/6403).

REL 4990/6990. Special Topics in Religion. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

REL 7000. Directed Individual Study. Hours and credits to be arranged.

REL 8990. Special Topics in Religion. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

REAL ESTATE and MORTGAGE FINANCING

Office: 326 McCool Hall

(For departmental information, see FINANCE and ECONOMICS)

REM 2990. Special Topics in Real Estate & Mortgage Finance. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

REM 3253. Real Property Evaluation (Appraisal). (3) (Prerequisite: REM 3333 or consent of instructor). Three hours lecture. Methods, evaluation procedures, and techniques of appraising commercial and residential real property under various value-influencing conditions; case problems for appraisal.

REM 3333. Principles of Real Estate. (3) (Prerequisite: Junior standing). Three hours lecture. A survey of the activities involved in the acquisition, transfer, operation, and management of real estate.

REM 3353. Real Estate Finance. (3) (Prerequisites: REM 3333 or consent of instructor). Three hours lecture. Direct investment in real estate. Sources of funds; risk analysis; typical policies and procedures of investing and financing investment real estate.

REM 4000. Directed Individual Study. (1-3) Hours and credits to be arranged with Instructor.

REM 4253. Mortgage Financing. (3) (Prerequisites: REM 3333 or FIN 3123 or consent of instructor). Three hours lecture. Indirect investment in real estate. Institutional sources of funds, mortgage market mechanisms, mortgage derivatives and mortgage underwriting.

REM 4990/6990. Special Topics in Real Estate & Mortgage Finance. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

Department of SOCIOLOGY, ANTHROPOLOGY, and SOCIAL WORK

Office: 200 Bowen Hall

Distinguished Professor: C. Rent

Professors Bartkowski, Cosby, Dunaway, Frese, Gill, Howell, Jones, Levin (Head), Wood and Xu;

Associate Professors Boyd, Parisi, Ray and Unnever;

Assistant Professors Blanchard, Cossman, Hempel, Morrison and Rader

SO 1003. Introduction to Sociology. (3) Three hours lecture. The nature and development of culture; social aspects of personality; analysis of community life, population trends, social classes, institutions, processes, and organization; culture change. Honors section open through invitation only.


SO 1173. Introduction to Gender Studies. (3) Three hours lecture. An introduction to theoretical concepts in Gender Studies. This course will examine the influence of the women’s movement on the academic development of Gender Studies (Same as AN 1173 and WS 1173).

SO 1203. Marriage and Family. (3) Three hours lecture. A study of dating, mate selection, marriage and parenthood, with emphasis on the contemporary American family.

SO 2203. Cultural and Racial Minorities. (3) (Prerequisite: Three hours in an introductory social science). Three hours lecture. Origins of minority groups and racial attitudes. Biological and cultural concepts of race and minority groups; problems of adjustment in interracial and multiethnic societies. (Same as AN 2203).

SO 2990. Special Topics in Sociology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

SO 3003. Social Inequality. (3) (Prerequisite: SO 1003). Three hours lecture. Investigates the nature, causes, and consequences of social inequality and stratification, the relationships among class, race, and gender inequalities in cross-cultural perspective.

SO 3013. Society and the Individual. (3) (Prerequisite: SO 1003). Three hours lecture. A study of interrelationship between society and the individual. Emphasis is placed on the structural aspects of socialization and the social construction of reality.

SO 3053. Organizations in Modern Society. (3) (Prerequisite: SO 1003). Three hours lecture. Examines the nature and types of formal organizations, their impact on, and outcomes for, individuals and society; organizational structures, processes, environments and effectiveness.

SO 3103. Social Theory I. (3) (Prerequisite: Nine hours of sociology, CSE 1013 or equivalent and junior standing). Lecture course. Study of Euro-American and American sociological theory—intellectual antecedents as well as social-cultural context.

SO 3213. Introduction to Social Research. (3) (Prerequisites: Nine hours of sociology and junior standing). Three hours lecture. A survey of the general field of research and methodology, including an examination of the various types of research designs, techniques, and procedures.

SO 3313. Deviant Behavior. (3) (Prerequisite: SO 1103 or its equivalent or consent of instructor). Three hours lecture. Introduction to the social and cultural factors related to human deviance. Special attention is given to the study of various theories of deviance.

SO 3323. Contemporary Woman. (3) Three hours lecture. Introductory course for the Concentration in Women’s Studies. Major topics are women’s heritage, identity, culture, and vulnerabilities.

SO 3333. Society and Religion. (3) Three hours lecture. Religion as an institution. Examines the social origins of religion and its functions, both positive and negative, in social movements, social control and politics. (Same as REL 3333).

SO 3343. Gender, Crime, and Justice. (3) Three hours lecture. Gender differences in criminal behavior, victimization, and criminal justice processing, emphasizing the unique experiences of women in all of these areas. (Same as COR 3343).

SO 3503. Violence in the United States. (3) Three hours lecture. In-depth study of violence, including types of violence, categories of offenders and victims, its social causes, and potential solutions. (Same as COR 3503).

SO 3603. Criminology. (3) (Prerequisites: SO 1103 and 3313 or equivalent or consent of instructor). A study of the causes of crime, disorganized
DESCRIPTION of COURSES

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communities and homes conducive to delinquency, boys’ gangs, organized crime, prison, probation, parole, and crime prevention programs.

SO 4000. Directed Individual Study. Hours and credits to be arranged.

SO 4113/6113. Social Organization and Change. (3) (Prerequisites: SO 1003 and junior standing). Three hours lecture. The study of recent research focusing on the prediction, explanation and control of social change with attention to trends in developing countries.

SO 4213/6213. Poverty Analysis: People, Organization and Programs. (3) (Prerequisites: SO 1003 and junior standing). Three hours lecture. Historical perspectives; problems of definition and measurement; socio-cultural situations contributing to deprivation; delineation of poverty groups; social consequences of poverty; poverty programs and organizations.

SO 4173/6173. Environment and Society. (3) (Prerequisite: AN 1103 or SO 1003 or consent of instructor). Three hours lecture. A study of the interaction between human society and the environment including the social aspects of environmental problems. (Same as AN 4173/6173).

SO 4203/6203. The Family in the United States. (3) (Prerequisite: SO 1203). Three hours lecture. A study of the American family as an institution, with emphasis on change and interrelationships with other institutions.

SO 4223/6223. Comparative Family Systems. (3) (Prerequisite: SO 1203). Three hours lecture. A systematic study of family patterns in selected cultures of the world.

SO 4233/6233. Juvenile Delinquency. (3) (Prerequisite: SO 3603). Three hours lecture. Critical study of problems, causes, ways of handling: attitudes, roles and relationships of persons involved, including youthful offender, social worker, court and law enforcement officials. (Same as COR 4233/6233).

SO 4273/6273. Sociology of Education. (3) (Prerequisites: SO 1003 and junior standing). Three hours lecture. A sociological analysis of education as a social institution, and role in the larger society, the organization of schooling, and the social dynamics of classrooms.

SO 4303/6303. Urban Sociology. (3) (Prerequisites: SO 1003 and junior standing). Three hours lecture. A sociological and ecological study of urban areas emphasizing the processes of population, environment, technology and social organization.

SO 4353/6353. Sociology of Sport. (3) (Prerequisites: SO 1003 and junior standing). Three hours lecture. Examination of sport as a social institution in American society, its contributions to society and to participants.


SO 4423/6423. Health and Society. (3) (Prerequisite: Three hours in sociology). Three hours lecture. Examines health and the health care structure of the United States as it relates to our culture, norms and social institutions.

SO 4433/6433. Sociology of Death and Dying. (3) (Prerequisite: Three hours in sociology). Three hours lecture. Examines death as a social event, the social nature of death, relationships at the end of life, and social structural impacts on death and dying.


SO 4623/6623. Language and Culture. (3) (Prerequisite: AN 1103 or consent of instructor). Three hours lecture. Examination of language as a part of culture, a source of knowledge about other aspects of culture, and a social behavior. (Same as AN 4623/6623 and EN 4623/6623).

SO 4633/6633. Sociolinguistics. (3) (Prerequisites: SO 1003, or consent of instructor). Three hours lecture. Examination of relationship between language and society, and how, when, and why people in speech communities use language variation. (Same as AN 4633/6633 and EN 4633/6633).

SO 4703/6703. Population Problems and Processes. (3) (Prerequisite: SO 1003 or consent of the instructor). Three hours lecture. World population growth and its consequences, population change and national policies, family planning, recent U.S. population trends, basic demographic measurement, the demographic report.

SO 4803. Social Research Practice. (3) (Prerequisite: SO 3213 or equivalent). Three hours lecture. Practical application of sociological analysis and methods conducting social research projects. Includes selection of methods and analytical techniques, data collection, ethics, and report writing.

SO 4713/6713. Methods in Population Research. (3) (Review and evaluation of censuses, vital statistics, and demographic surveys and their uses, with emphasis on measurement, methods, and analytical techniques).

SO 4733/6733. Community: Organization and Relationships. (3) (Prerequisites: SO 1003 and junior standing). Three hours lecture. Rural-urban development; community; types of local societies and community organizations; perspectives in community study.

SO 4900/6900. Special Topics in Sociology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer students in other areas not covered by existing courses. (Courses limited to two offerings under one title within two academic years).

SO 7000. Directed Individual Study. Hours and credits to be arranged.

SO 8000. Thesis Research/Thesis. Hours and credits to be arranged.


SO 8113. Graduate Theory II. (3) Focus on post-19th century theory and antecedents. Delineation of the basic postures in the discipline and relative relationships of these postures to theory development.

SO 8203. Data Management in the Social Sciences. (3) Three hours lecture. Acquisition, management, and manipulation of social science data sources, comprehensive statistical package instructions, basic computation and analysis, and relation between sociological theory and data analysis.

SO 8213. Research Design. (3) (Prerequisite: SO 8274). Three hours lecture. Emphasis on overall design, plan, structure, and strategy. Also limitations of theory, measurement, sampling and statistical testing in research.

SO 8223. Techniques of Survey Research. (3) (Prerequisite: SO 8213). Schedule construction, sampling, field procedures, techniques of analysis, presentation of statistical materials.

SO 8233. Qualitative Analysis. (3) (Prerequisite: SO 8213). Three hours lecture. Qualitative approaches to understanding social behavior. Exposure to all phases of qualitative research: epistemology, design, field work, ethics, and writing research results.

SO 8243. Spatial Analysis of Social Data. (3) (Prerequisite: SO 8284, equivalent or consent of instructor). Three hours lecture. Spatial theories of society; relevant digital databases; procedures for visualizing data; exploratory spatial data analysis; local and global spatial regression models.

SO 8274. Graduate Social Statistics I. (4) (Prerequisite: ST 2113 or equivalent). Three hours lecture. Two hours laboratory. Probability, hypothesis testing, tests of means and proportions, contingency table analysis, analysis of variance, bivariate linear regressions correlation; data analysis and interpretation using current statistical software.

SO 8284. Graduate Social Statistics II. (4) (Prerequisite: SO 8274). Three hours lecture. Two hours laboratory. Hypothesis testing, analysis of variance, multiple linear regression and correlation, causal models, exploratory factor analysis; data analysis and interpretation using current statistical software.

SO 8293. Structural Equations Modeling with Latent Variables in Sociology. (3) (Prerequisites: SO 8284 or equivalent). Three hours lecture. The application of structural equation modeling techniques to sociological problems containing unobserved variables, focusing on estimation and interpretation of model parameters with errors of measurement.

SO 8323. Strategies and Tactics of Planned Change. (3) (Prerequisites: Six hours in the social sciences). Three hours lecture. Study of models of social action: historical bases and types of planned change; case studies in planned change; roles of change agents. Emphasis on application.

SO 8343. Complex Organizations. (3) Theory and research in organizations. Nature and types of organizations; determinants and consequences of organizational growth; organizational effectiveness; production, authority, and control systems in organizations.

SO 8403. Seminar in Race Relations. (3) Three hours lecture. Contributions of anthropology, sociology and psychology to the field of race relations. Critical analysis of recent studies, current racial theories and programs.

SO 8413. Seminar in Social Stratification. (3) Three hours lecture. Critical analyses of theories and research on social class and related social structures. Explores race/gender/class stratification and policies to alter income and wealth inequality.

SO 8423. Seminar in Deviant Behavior. (3) Examination of relation between social conditions, social problems, deviance, and deviant careers. The organization of social control activities, and the social differentiation of deviant populations.

SO 8433. Seminar in Criminology. (3) Exploration of conceptual, methodological, and substantive problems of research in the field of criminology. The classification of criminals and criminal careers receives special emphasis.

SO 8503. Seminar in the Family. (3) An advanced seminar in the family institution, emphasizing theoretical and conceptual frameworks, topics of current concern to family sociology, and major literature in the area.

SO 8523. Symbolic Interaction and Social Structure. (3) Review of classic and current sociological literature in symbolic interaction and development of self as process and product of social structure.
SO 8603. Seminar in Modernization. (3) (Prerequisites: Six hours in social sciences). Three hours lecture. Structural, institutional and behavioral factors and processes affecting the modernization of traditional societies. Evaluation of causal factors and theoretical perspectives.

SO 8673. Seminar in Social Impact Analysis. (3) (Prerequisites: SO 4173/6173 or AN 4173/6173). Three hours lecture. Examination of the requirements of, methodologies for, and issues in, social impact assessment. Attention is given to practical working experience with techniques.

SO 8703. Seminar in Population. (3) (Prerequisite: SO 4703/6703 or equivalent). Study of population dynamics; theories of optimum population; population policies and programs; zero population growth; interrelationship of population phenomena with socioeconomic developments.

SO 8723. Advanced Demographic Analysis and Research. (3) Techniques of population and migration estimations and projections; and methods of estimating basic demographic measures from incomplete data.

SO 8900. Fields of Sociology. (Hours and credits to be arranged up to 3 hours.) A seminar in selected areas of sociological research and practice.

SO 8990. Special Topics in Sociology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

SO 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

STATISTICS

(For departmental information, see MATHEMATICS and STATISTICS.)

ST 2113. Introduction to Statistics. (3) (Prerequisite: ACT Math sub-score 24, or grade of C or better in MA 1313). Three hours lecture. Introduction to statistical techniques: descriptive statistics, random variables, probability distributions, estimation, confidence intervals, hypothesis testing, and measurement of association. Computer instruction for statistical analysis. (Same as MA 2113).

ST 2990. Special Topics in Statistics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ST 3123. Introduction to Statistical Inference. (3) (Prerequisite: ACT Math subscore 24 or grade of C or better in MA 1313). Two hours lecture. Two hours laboratory. Basic concepts and methods of statistics, including descriptive statistics, probability, random variables, sampling distributions, estimation, hypothesis testing; introduction to analysis of variance, simple linear regression. (Same as MA 3123).

ST 4000. Directed Individual Study. Hours and credits to be arranged.

ST 4111/6111. Seminar in Statistical Packages. (1) One hour lecture. Introduction to the statistical computer packages available at MSU.

ST 4211/6211. Statistical Consulting. (1) (Prerequisite: Consent of the department). (May be repeated for credit.) Provides students with the opportunity to participate as statistical consultants on real projects; consultants are required to attend a weekly staff meeting.

ST 4213/6213. Nonparametric Methods. (3) (Prerequisite: An introductory course in statistical methods). Three hours lecture. Nonparametric and distribution-free methods, including inferences for proportions, contingency table analysis, goodness of fit tests, statistical methods based on rank order, and measures of association.

ST 4313/6313. Introduction to Spatial Statistics. (3) (Prerequisite: Grade of C or better in ST 3123 or equivalent). Two hours lecture. Two hours laboratory. Spatial data analysis: kriging, block kriging, cokriging; variogram models; median polish and universal kriging for mean-nonstationary data; spatial autoregressive models; estimation and testing; spatial sampling.

ST 4523/6523. Introduction to Probability. (3) (Prerequisite: MA 2733). Three hours lecture. Basic concepts of probability, conditional probability, independence, random variables, discrete and continuous probability distributions, moment generating function, moments, special distributions, central limit theorem. (Same as MA 4523/6523).

ST 4543/6543. Introduction to Mathematical Statistics I. (3) (Prerequisite: MA 2743). Three hours lecture. Combinatorics; probability, random variables, discrete and continuous distributions, generating functions, moments, special distributions, multivariate distributions, independence, distributions of functions of random variables. (Same as MA 4543/6543).

ST 4573/6573. Introduction to Mathematical Statistics II. (3) (Prerequisite: MA 5453/6543). Three hours lecture. Continuation of ST 4543/6543. Transformations, sampling distributions, limiting distributions, point estimation, interval estimation, hypothesis testing, likelihood ratio tests, analysis of variance, regression, chi-square tests. (Same as MA 4573/6573).

ST 4990/6990. Special Topics in Statistics. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

ST 7000. Directed Individual Study. Hours and credits to be arranged.

ST 8000. Thesis Research/Thesis. Hours and credits to be arranged.

ST 8114. Statistical Methods. (4) (Prerequisite: MA 1313). Three hours lecture. Two hours laboratory. Fall and Spring semesters. Descriptive statistics; sampling distributions; inferences for one and two populations; completely random, block, Latin square, split-plot designs; factorial; simple linear regression; chi-square tests.

ST 8214. Design and Analysis of Experiments. (4) (Prerequisite: ST 8114) Three hours lecture. Three hours laboratory. Offered spring semester. Procedures in planning and analyzing experiments; simple, multiple, and curvilinear regression; factorial arrangement of treatments; confounding; fractional replication; block designs; lattices; split-plots.

ST 8253. Regression Analysis. (3) (Prerequisite: ST 8114 or equivalent). Three hours lecture. Fall and spring semesters. Simple linear regression analysis and related inferences, remedial measures, multiple and polynomial regression, use of indicator variables, variable selection methods, and use of computer.

ST 8263. Advanced Regression Analysis. (3) (Prerequisite: ST 8253). Three hours lecture. Continuation of ST 8253, including variable selection methods, optimization techniques, biased estimation methods such as ridge regression, non-linear regression, model validation methodology, indicator variables, design models.

ST 8313. Introduction to Survey Sampling. (3) (Prerequisite: ST 8114) Three hours lecture. Topics include: design, planning, execution, and analysis of sample surveys; simple random, stratified random, cluster, and systematic sampling; ratio and regression estimation.

ST 8353. Statistical Computations. (3) (Prerequisite: ST 8114). Three hours lecture. Applications of computer packages, including data screening, t-tests and Hotelling’s T2, analysis of designed experiments, regression analysis, contingency table analysis, projects, and report writing.

ST 8413. Multivariate Statistical Methods. (3) (Prerequisite: ST 8253). Three hours lecture. Multivariate normal; multiple and partial correlation; principal components; factor analysis; rotation; canonical correlation; discriminant analysis; Hotelling’s T2; cluster analysis; multidimensional scaling; multivariate analysis of variance.

ST 8423. Multivariate Analysis. (3) (Prerequisites: ST 8413 and ST 8613) Three hours lecture. Theory of multivariate statistical methodology including multivariate normal and Wishart distributions, Hotelling’s T2, classification, multivariate analysis or variance and covariance, canonical correlation, and principal components.

ST 8533. Applied Probability. (3) (Prerequisite: ST 4543/6543). Three hours lecture. An introduction to the applications of probability theory. Topics include Markov Chains, Poisson Processes, and Renewal, Queueing, and Reliability theories. Other topics as time permits.


ST 8603. Applied Statistics. (3) (Prerequisite: ST 8214 and ST 8253 or equivalent). Three hours lecture. Advanced analysis of experimental data. Topics include mixed and random models, incomplete block design, changeover trials, experiments, analysis of covariance, and repeated measures design.

ST 8613. Linear Models I. (3) (Prerequisites: ST 4573/6573). Three hours lecture. Random vectors, multivariate normal, distribution of quadratic forms, estimation and statistical inference relative to the general linear model of full rank, theory of hypothesis testing.

ST 8633. Linear Models II. (3) (Prerequisite: ST 8613). Three hours lecture. Continuation of ST 8613, including generalized inverses; general linear model not of full rank, related inferences, applications; computing techniques; design models, analyses, hypothesis testing; variance-component models.

ST 8853. Advanced Design of Experiments I. (3) (Prerequisite: ST 8603 or ST 8214). Three hours lecture. Noise reducing designs; incomplete block designs; factorial experiments, Yates’ algorithms, confounding systems; fractional replication; pairing of experiments; nested designs; repeated measurement designs; messy data analyses.

ST 8863. Advanced Design of Experiments II. (3) (Prerequisites: ST 8853 and ST 8613) Three hours lecture. Continuation of ST 8853, including analysis of covariance, split-plot designs and variants, applications of the
DESCRIPTION of COURSES

SOCIAL WORK

Office: 207 Bowen Hall
Associate Professor Crudden; Assistant Professor Burson;
Instructors Edwards and Pilkington


SW 2313. Introduction to Social Work/Social Welfare. (3) Three hours lecture. A study of professional social work and the historical and philosophical development of social work and social welfare.

SW 2323. Social Welfare Policy II. (Prerequisite: SW 2313). Three hours lecture. The course provides an analysis and evaluation of social welfare policies as institutional responses to social problems, social justice, and human needs.

SW 2990. Special Topics in Social Work. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

SW 3003. Social Work with At-Risk Populations. (3) Three hours lecture. Examines the role and interaction of social workers with vulnerable groups. Includes concepts of racism, sexism, homophobia, oppression, affirmative action, and xenophobia.

SW 3013. Human Behavior and the Social Environment I. (3) Three hours lecture. Examines biological, psychological, social-structural, and cultural aspects of human development from conception through young adulthood from a social systems perspective, emphasizing diversity and oppression.

SW 3023. Human Behavior and the Social Environment II. (Prerequisite: SW 3013). Three hours lecture. Examines biological, psychological, social-structural, and cultural aspects of human development from middle adulthood to death from a social systems perspective, emphasizing diversity and oppression.

SW 3213. Research Methods in Social Work. (3) (Prerequisite: ST 2113). Three hours lecture. A survey of research methodology in social work practice, including an examination of the various types of research design, techniques, and procedures.

SW 3513. Social Work Practice I. (Prerequisites: SW 2323 and SW 3013). Three hours lecture. The course emphasizes problems solving methods utilizing communication theories and skills working with individuals, families, groups, and communities in preparation for generalist social work practice.

SW 3523. Social Work Practice II. (3) (Prerequisites: SW 3023, and SW 3513). Three hours lecture. The course focuses on processes involved in engaging client systems in data collection, assessment, intervention, evaluation, and termination in preparation for generalist social work practice.

SW 3533. Social Work Practice III. (3) (Prerequisite or Co-requisite: SW 3523). Three hours lecture. The course focuses on processes involved in problem solving with emphasis upon groups and larger systems in generalist social work practice.

SW 4000. Directed Individual Study. (Prerequisites: Six hours of social work, junior standing, and consent of instructor). Hours and credits to be arranged. Independent research of problems related to social work.

SW 4613. Child Welfare Services. (3) (Consent of instructor). Three hours lecture. Assessment of parental and society’s responsibilities in meeting physical, social, psychological, and legal needs of children and examining the delivery, policies, systems, and services.

SW 4623. Social Work with the Aged. (3) (Consent of instructor). Three hours lecture. Assessment of social, psychological, physical, and economic needs of aging persons; their utilization of services, conjoint planning and creation of new community based resources.

SW 4633. Social Work in Health Care. (3) (Consent of instructor). Three hours lecture. Assessment of social work knowledge, values, and skills in understanding psychosocial aspects of illness, medical terminology, recording, discharge planning, ethics, team disciplines, and community resources.

SW 4643. Social Work Services in Schools. (3) Three hours lecture. Assessment of the development, concepts, policies, planning, implementation, and evaluation of social work services in primary and secondary schools.

SW 4713. Social Work Senior Seminar. (3) (Prerequisite: SW 3523). Critical evaluation of current issues in social work practice; examination of career opportunities; and assessment of personal educational preparation for practice.

SW 4990/6990. Special Topics in Social Work. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

SW 4916-4926. Social Work Field Practicum/Seminar I-II. (6) (Prerequisites: SW 4713 and SW 3533). The course provides students opportunities to apply generalist social work practice methods by completing a minimum of 450 supervised hours in a social work agency.

THEATRE

(See Department of Communication)
**INDUSTRIAL TECHNOLOGY**

TKI 1213. Introduction to Industrial Technology. (3). Three hours lecture. Study of fundamental industrial safety and health principles preparing the student for working in industry.

TKI 1223. Wood, Polymer, and Composite Processing. (3). Two hours lecture. Two hours laboratory. The planning, operation, and control of the processing of natural and synthetic polymers and associated composites.

TKI 1813. Basic Industrial Electricity and Electronics I. (3) (Prerequisite: MA 1313). One hour lecture. Four hours laboratory. Study of fundamental direct current industrial electrical and electronic principles with experimentation and project construction.

TKI 2113/ Introduction to PLC/CNC Programming. (3). Three hours lecture. Study of fundamental methods in the programming of industrial PLC and CNC controllers, with regard to language and logic.

TKI 2233. Forging, Welding and Founding. (3) (Prerequisite: Concurrent or credit in TKI 1813). Six hours laboratory. Practice in hand forging; annealing, hardening and tempering of tool steel; casting, gas and electric welding; plasma arc cutting.

TKI 2413. History and Appreciation of the Arterfacts. (3) Three hours lecture. Growth and development of the art/techs through the ages; instructional applications; practical designs; demonstrations and projects in art/metal, leather, ceramics, and other handicraft areas.

TKI 2813. Basic Industrial Electricity & Electronics II. (3) (Prerequisites: MA 1313 and TKI 1813). One hour lecture. Four hours laboratory. Study of fundamental alternating current, industrial, electrical and electronic principles with experimentation and project construction.

TKI 2990. Special Topics in Industrial Technology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

TKI 3043. Industrial Safety. (3) Three hours lecture. Principles and procedures relating to appraisal, organization and administration of safety programs in industrial plants including implementation of occupational safety and health legislation.

TKI 3063. Industrial Human Relations. (3) Three hours lecture. The application of psychological principles to teacher-pupil relationships, employer-employee relationships, and other human relationships in business and industry.

TKI 3103. Advanced Industrial Electricity and Electronics. (3) (Prerequisite: TKI 1813). One hour lecture. Four hours laboratory. Continuation of TKI 1813. Study of and experimentation with industrial electronic, transistor, and integrated circuitry.

TKI 3183. Machine Metal Processing. (3) Six hours laboratory. Machine tool (drill, grinder lathe, mill and shaper) operations; bench metals, precision measurements, calculations, and chipless machining; project construction.

TKI 3223. Industrial Materials Technology. (3) (Prerequisite: CH 1043). Two hours lecture. Two hours laboratory. An investigation of the mechanical and characteristic properties of industrial materials. The influence of these properties on manufacturing and product service requirements.

TKI 3343. CAD/CAM. (3) Two hours lecture; two hours laboratory. Basic to intermediate drafting and design techniques using CAD and CAM software, with special emphasis placed on tolerancing, dimensioning, and manufacturing processing routes and selection.

TKI 3363. Motion and Time Study. (3) (Prerequisite: TKI 3083). Two hours lecture; two hours laboratory. A study of the techniques for analysis of production systems, the design of work stations, and the development of time standards. (for non-I.E. students). (Same as IE 3113).

TKI 3383. Forecasting and Cost Modeling. (3). (Prerequisite: MGT 3114). Two hours lecture. Two hours laboratory. Use of the higher functions of spreadsheet software to undertake costing of manufacturing process routes and to forecast changes in manufacturing scenarios.

TKI 4103. Industrial Control Systems. (3) (Prerequisite: TKI 3103). One hour lecture. Four hours laboratory. Application of basic and advanced industrial electronic principles to industrial control systems and processes.

TKI 4113/6113. Industrial Fluid Power. (3) (Prerequisites: PH 1113 and TKI 3103). One hour lecture. Four hours laboratory. A practical study of fluid power concepts, components, and systems as relates to modern industrial applications and to appropriate scientific principles. Hands-on laboratory activities.

TKI 4203/6203. Automated Systems. (3) (Prerequisite: TKI 4103). Two hours lecture; two hours laboratory. An advanced study of automated systems and applications for the Industrial Technologist.

TKI 4213/6213. Survey of Energy Sources and Power Technology. (3) (Prerequisite: three semester hours physical science or other physics). Three hours lecture. Scientific and applied approaches to energy conversion, trans-
mission, utilization, and conservation. Internal-external combustion, nuclear, fluid, hydroelectric, solar, etc. Current energy problems; lab demonstrations; activities.

TKT 4223/6223. Quality Assurance. (3) (Prerequisites: BQA 2113 and ACC 1203). Three hours lecture. Concepts and procedures to design, plan, assure and audit quality and quality systems.

TKT 4233/6233. Management Maintenance. (3) (Prerequisite: TKT 4223/6223). Three hours lecture. Understanding of the concepts and practices of Total Productive Maintenance Management, to give a proactive production maintenance strategy for the future.

TKT 4263/6263. Manufacturing Technology & Processing. (3) (Prerequisite: TJK 3363). One hour lecture. Four hours laboratory. Interpretation of modern industry duplicates the life cycle of an industrial enterprise in a laboratory environment.

TKI 4303/6303. Industrial Robotics. (3) (Prerequisite: TKI 4103). Two hours lecture. Two hours laboratory. A study of industrial robotics and applications for production supervisors.

TKI 4363/6363. Manufacturing Systems. (3) (Prerequisites: TKI 4223/6223 and MGT 3114). Three hours lecture. Understanding and application of the basic concepts of modern manufacturing process management systems, with regards to quality, just-in-time, lean manufacturing and six sigma.

TKI 4990/6990. Special Topics in Industrial Technology. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

TECHNOLOGY TEACHER EDUCATION

TKT 1273. Computer Applications. (3) Three hours lecture. The process of incorporating computer applications.

TKT 2990. Special Topics in Technology Teacher Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

TKT 3001. Practicum in Vocational Education. (1) Observation of secondary and high school students and participation in classroom activities prior to the directed teaching.

TKT 3153. Teaching Business Technology. (3) (Prerequisite: Admission to teacher education). Three hours lecture. A study of objectives, materials, and teaching methods appropriate for business technology courses.

TKT 3173. Teaching Business Education Skills Subjects. (3) (Prerequisite: Acceptance to teaching internship). Three hours lecture. A study of objectives, materials, and teaching methods appropriate for business education skills subjects.

TKT 3213. Call Center Management. (3) (Prerequisite: TKB 4283 and TKB 4543). Three hours lecture. Presents the strategic, financial and tactical knowledge and skill needed to manage an effective and efficient call center.

TKT 3303. Coordination of Vocational Student Organizations. (3) Three hours lecture. Learning experiences which lead to an understanding of purposes, objectives, and successful operation of vocational student organizations. Emphasis on business and marketing vocational student organizations.

TKT 3463. Computer Repair and Maintenance. (3) (Prerequisite: TKT 1273 or BIS 1012 or CSE 1013 and keyboarding proficiency). Two hours lecture. Two hours laboratory. An exploration into hardware functions, operating system and software installation, diagnostic and troubleshooting techniques, and safety.

TKT 3623. Designing Technology Training. (3) (Prerequisite: TKT 1273 or BIS 1012 or CSE 1013 and keyboarding proficiency, TKB 2112, TKB 2122). Three hours lecture. Learning strategies, design and development of technology training programs for organizations.

TKT 4000. Directed Individual Study. Hours and credits to be arranged.


TKT 4103/6103. Delivery of the Vocational-Technical Instructional Program. (3) Three hours lecture. Methods and techniques of instructing vocational-technical students in the classroom and laboratory setting.

TKT 4143/6143. History and Philosophy of Vocational and Technology Education. (3) Three hours lecture. History and development, aims and purposes of vocational education.

TKT 4183/6183. Coordination of Part-Time Education. (3) Three hours lecture. Principles of promotion, organization, and operation of part-time cooperative classes in vocational education: instruction in analyzing needs, preparing schedule of processes, developing instructional materials.

TKT 4213/6213. Teaching Basic Business Subjects. (3) (Prerequisite: Acceptance to teacher education.) Three hours lecture. Objectives, materials, and methods of teaching basic business subjects.


TKT 4253/6253. Evaluation and Measurement of Students in Vocational Education and Technology. (3) Three hours lecture. Construction, selection, interpretation, and uses of cognitive and psychomotor evaluation instruments used in vocational-technical programs.

TKT 4314/6314. Content and Methods of Teaching Technical Discovery. (4) Three hours lecture. Two hours laboratory. The course explores concepts, methods, and techniques for designing and managing materials appropriate for teaching Technology Discovery.

TKT 4323/6323. Content and Methods of Teaching Computer Discovery. (3) Three hours lecture. A study of the objectives, the instructional materials, and methods appropriate for teaching Computer Discovery.

TKT 4333/6333. Content and Methods of Teaching Career Discovery. (3) Three hours lecture. A study of the objectives, the instructional materials, and methods appropriate for teaching Career Discovery.

TKT 4343. Information Technology Project Management. (3) (Prerequisite: TKT 1273 or BIS 1012 or CSE 1013 and keyboarding proficiency). Three hours lecture. Concepts, skills, tools and techniques involved in information technology project management as it applies in today’s contemporary business environment.

TKT 4623. Delivery of Technology Training. (3) (Prerequisite: TKT 3623). Three hours lecture. Advanced design, live and computer-based strategies, development, delivery, and evaluation of technology training programs for organizations.

TKT 4683. Senior Seminar in Information Technology Services. (3) (Prerequisites: TKT 3213, TKT 3463, TKB 4283, TKT 4623, TKT 4633, and senior standing). Three hours seminar. Field experience under supervision of university staff for directed experience and report in end-user support, project management, and training.

TKT 4713/6713. Authoring for Instruction. (3) Three hours lecture. (Prerequisite: TKT 1273 or consent of instructor). An introduction to the application of authoring languages for instructional purposes.

TKT 4733/6733. Managing a Multimedia Learning Environment. (3) Three hours lecture. The course examines the process of designing, managing and maintaining a multimedia learning environment.

TKT 4743/6743. Elements of Electronic Desktop Publishing. (3) (Prerequisites: TKB 2543, 4543 or consent of instructor). Two hours laboratory and two hours lecture. Design applications utilizing electronic desktop publishing technologies.

TKT 4753/6753. Teaching and Presenting with Multimedia. (3) (Prerequisite: TKT 4743/6743 or consent of instructor). Three hours lecture. The course deals with the process of using multimedia applications to present instruction and information.


TKT 4813/6813. Introduction to Instructional Systems. (3) Three hours lecture. An introduction to the field of Instructional Systems and the practice of scholarly writing in the field.


TKT 4873. Professional Seminar in Vocational/Technical Education. (3) (Prerequisites: Admission to Teacher Education and senior standing). Three hours lecture. A seminar dealing with legal, professional, administrative, and curriculum issues as they relate to vocational/technical education.

TKT 4886, 4896. Teaching Internship in Vocational/Technical Education. (6,6) (Both courses to be taken concurrently). (Prerequisites: Admission to Teacher Education and senior standing). Supervised observation and directed teaching in respective fields of endorsement.

TKT 4990/6990. Special Topics in Technology Teacher Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matters. (Courses limited to two offerings under one title within two academic years).
TKT 7000. Directed Individual Study. Hours and credits to be arranged. 

TKT 8000. Thesis Research/Thesis. Hours and credits to be arranged. 


TKT 8193. Improvement of Instruction in Office Procedures and Communications. (3) Three hours lecture. A study of secretarial skills in the office, office systems technology and techniques, and the communicative process. 

TKT 8200. Internship in Vocational Education and Technology. (1-6) Opportunity under supervision of regular university staff for directed experience and reporting in the major area of interest. 

TKT 8213. Content and Methods of Teaching in Career and Technical Education. (3) Three hours lecture. The content of various types of courses in career and technical education; instruction in appropriate techniques and methods. 

TKT 8233. Career Planning and Occupational Decision-making. (3) Three hours lecture. The course examines workforce development, analyzes market trends and considers strategies for gathering occupational data for decision-making. 

TKT 8243. Research Problems in Instructional Systems & Workforce development. (3) Three hours lecture. The course explores issues and problems that impact instructional systems and workforce development and assesses the use of research findings for instructional decision making. 

TKT 8263. Philosophy and Administration of Vocational Education. (3) Three hours lecture. Development of well-rounded, comprehensive programs suitable to various types of schools and communities; correlation with other school programs. 


TKT 8723. Instructional Design for Industry. (3) Three hours lecture. Techniques, strategies, and development of instruction for industry. 

TKT 8733. Telecommunications: Applications in Scholarship. (3) Three hours lecture. The study and application of the telecommunications to professional scholarship and research endeavors; includes data search mechanisms applicable to and in support of graduate program demands. 

TKT 8743. Interactive Media. (3) Two hours lecture. Two hours laboratory. Investigation and development of a variety of computer-interactive instructional media. 

TKT 8753. Technology Issues for School Administrators. (3) Three hours lecture. Investigates the trends and issues in instructional systems that impact school administrators. 

TKT 8763. Seminar in Planning for Instructional Technology. (3) Three hours lecture. An analytical study of techniques and strategies contributing to the establishment and effective operation of functional instructional technology. 

TKT 8773. Teaching and Training with Multimedia. (3) Three hours lecture. The process of developing instructional and training materials including adapting existing materials to fit specific objectives and methods in a multimedia learning environment. 

TKT 8793. Directed Project in Instructional Technology. (3) Design, development, and presentation of a complex, comprehensive instructional product integrating learning theories with contemporary and/or emerging technologies. Evaluation by jury. 

TKT 8803. Design and Evaluation of Instructional Software. (3) Two hours lecture. Two hours laboratory. (Prerequisite: TKT 4273/6273 and hypertext authoring experience). Analysis, synthesis, and evaluation of instructional software designed for and applied to varied learning situations. 

TKT 8813. Issues in Distance Education. (3) Three hours lecture. This course investigates such issues as administration, implementation, instructional challenges, and evaluation in distance education environments including interactive video and online courses. 

TKT 8833. Design and Implementation of Data Networks. (3) Three hours lecture. This course explores the design and implementation of data networking systems that are appropriate for instructional and research environments. 

TKT 8990. Special Topics in Technology Teacher Education. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years). 

TKT 9000. Dissertation Research/Dissertation. Hours and credits to be arranged. 

TKT 9213. Foundations, Trends and Issues in Workforce Development, Technology and Leadership Education. (3) Three hours lecture. This course examines the foundations, trends and issues in workforce, technology and leadership education and their impact on teaching and learning. 

TRANSPORTATION 

Office: 301 McCool 
(For departmental information, see MARKETING, QUANTITATIVE ANALYSIS and BUSINESS LAW.) 

TR 2990. Special Topics in Transportation. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years). 


TR 4000. Directed Individual Study. Hours and credits to be arranged. 


TR 4313/6313. Physical Distribution Management. (3) (Prerequisites: BQA 2113 and MKT 3013). Functions of physical distribution in business management; analysis of shippers, distribution problems in relation to carrier types, services and functions; methods of reducing distribution costs, use of internal and external data in warehouse and factory location; study of rate of structure and rate changes. 

TR 4333. International Supply Chain Management. (3) Three hours lecture. Analysis of supply chains and the importance to the global economy. 

TR 4990/6990. Special Topics in Transportation. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years). 

UNIVERSITY HONORS COURSES 

Director: Dr. Nancy McCarley 
Office: 45 Magruder Street 

Specialized Honors courses are offered under UHP numbers; departmental Honors courses are listed under departmental abbreviations and numbers. The titles of departmental Honors courses clarify their equivalency to regular courses in relation to transfer credits and Core Curriculum and degree requirements. The sections available for honors credit are identified in the MSU Master Schedule each semester. 

UHP 1081-2091. Honors Forum. (1) One hour lecture. Weekly meeting of honors students. Discussion led by faculty and/or students on various topics. 

UHP 2990. Special Topics in UHP. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years). 

The following course, UHP 3183, may be taken only by students who have the consent of the instructor. Since the content of the course will vary from year to year, the student should check with the instructor for more information. 

UHP 3183. Interdisciplinary Seminar in the Humanities. (3) An investigation of an interdisciplinary problem or theme in man's experience. Lectures, readings, discussions, and reports. 

UHP 3193, 3198. Internship. (3,8) (Prerequisites: Junior standing or consent of instructor). Individual work experience in a governmental or public agency, under the guidance of an MSU faculty member. 

UHP 4000. Directed Individual Study. Hours and credit to be arranged. 

ADVANCED PLACEMENT CREDIT. (See Index) may be utilized to earn Phase I or II in the Honors Program. A UHP student may petition to use AP credit for a given subject to meet UHP requirements after successfully completing an MSU honors course in the same subject core area - humanities/life arts, social sciences, natural sciences, or mathematics. For example:
a student with AP credit for Calculus I may petition for six hours of UHP credit after completing Honors Calculus II, or a student with AP credit for history may petition for six hours after completing an honors economics, history, psychology, sociology or political science course.

DEPARTMENTAL HONORS COURSES. Honors sections of department courses are identified by the letter “F” before the section number and/or with the word “Honors” in the title of the course. The course numbers are consistent with those listed in the Core Curriculum Requirements (see Index) and in degree program requirements. Honors sections are identified in both the departmental schedule and in the master schedule of the University Honors Program, listed in alphabetical order on the printed schedule and on the university Web site.

HONORS CREDIT. In a conventional course for which there is not an honors counterpart, usually an upper division course, students may seek the opportunity to do a special project for honors credit. Such initiative yields an agreement between the student and the professor and, ultimately, notification of the successful completion of the project on the student’s transcript.

ANIMAL HEALTH SCIENCES

Office: College of Veterinary Medicine (Wise Center)

VS 1012. Introduction to Veterinary Medicine Careers. (2) Two hours lecture. A survey of careers available to graduate veterinarians.

VS 2033. Diseases of Poultry. (3) (Prerequisite: VS 2014 or course in poultry physiology). Two hours lecture. Two hours lecture-demonstration and laboratory. Survey of cause, effects, diagnosis, prevention, and control of common poultry diseases.

VS 2990. Special Topics in Animal Health Sciences. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years.)

VS 3014. Anatomy and Physiology. (4) Three hours lecture. Two hours laboratory. A survey of structure and function of animal body systems and a study of their interrelationships.

Department of WILDLIFE AND FISHERIES

Office: 109 Thompson Hall

Professors Avery, Burger, D’Abramo, Demarais, Jackson, Kaminski, Leopold (Head), Li, Miranda**, Schramm**, Tucker; Associate Professors Dibble, Jones, Minchew, Vilella and Wise; Assistant Professors Goodwin*, Greenway, Griffin*, Hunt, Jones, Mischke, Minnis, Reinecke*, Riffell and Tietjen (* - adjunct faculty; ** - U.S.D.I.)

WF 1101. Wildlife and Fisheries Profession. (1) (Prerequisite: Freshman or Sophomore standing). One hour lecture. Orientation to the interdisciplinary and applied nature of wildlife and fisheries management and related fields, emphasizing the department, college, and university; student roles and responsibilities; and career opportunities.

WF 1213. Introduction to Wildlife and Fish Conservation. (3) Three hours lecture. A survey of wildlife and forest conservation, stressing biological principles and management practices for renewable resources.

WF 2990. Special Topics in Wildlife & Fisheries. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years.)

WF 3000. Internship in Wildlife, Fisheries or Aquaculture. (1-4) (Prerequisite: Junior standing). Professional work experience with governmental or private agencies. (Hours and credits to be arranged).

WF 3031. Introductory Wildlife/Fisheries Practices. (1) (Prerequisite: Junior standing). Field exercises and practical exposure to research and management of wildlife and fish species and habitats in Mississippi.

WF 3131. Applied Aquatic and Terrestrial Ecology Laboratory. (1) (Co-requisite: WF 3133). Four hours laboratory, alternate weeks. Demonstration of ecological concepts and methodologies in the classroom and in the field.

WF 3133. Applied Aquatic and Terrestrial Ecology. (3) (Co-requisite: WF 3131). Three hours lecture. Four hours laboratory, alternate weeks. The application of ecological principles which serve as a basis for the management of wildlife and fisheries in terrestrial and aquatic habitats.

WF 3141. Seminar in Wildlife and Fisheries. (1) (Prerequisite: Junior standing). One hour lecture. Current topics and job opportunities in the field of wildlife and fisheries.

WF 4000. Directed Individual Study. Hours and credit to be arranged.

WF 4013. Introduction to Aquaculture. (3) Correspondence course introducing basic principles of aquaculture production and management. Designed primarily for extension, education and other professionals and prospective fish producers.

WF 4121. Wildlife and Fisheries Biometrics Laboratory. (1) (Prerequisite: ST 3123; Co-requisite: WF 4122). Four hours laboratory, alternate weeks. Application of basic statistical analytical tools to address wildlife and fisheries management/research questions.

WF 4122 Wildlife and Fisheries Biometrics. (2) (Prerequisite: ST 3123; Co-requisite: WF 4121). Two hours lecture. Application of basic statistical analytical tools to address wildlife and fisheries management/research questions.

WF 4133/6133. Fisheries Science (3) (Prerequisite: ST 3123 or equivalent). Two hours lecture. Four hours laboratory, alternate weeks. Study of the biological parameters of fish populations.

WF 4153/6153. Principles of Wildlife Conservation and Management. (3) Two hours lecture. Four hours laboratory on alternate weeks. Principles of game management; habitat improvement; wildlife techniques; predator relations.

WF 4173/6173. Fish Physiology. (3) Two hours lecture. Four hours laboratory, alternate weeks. Basic anatomy and physiology of major systems in fish: integration of the physiological systems as they function during development, growth and maturation.

WF 4183/6183. Principles and Practices of Aquaculture. (3) Two hours lecture. Four hours laboratory alternate weeks. Principles and practices of aquaculture applied to the farming of marine and freshwater species of fish, crustaceans, and mollusks throughout the world.

WF 4193/6193. Crustacean and Molluscan Aquaculture. (3) Two hours lecture. Four hours laboratory, alternate weeks. General biology and methods associated with the various phases of culture of crustacean and molluscan species grown throughout the world.

WF 4213/6213. Wildlife Damage Management. (3) (Prerequisites: WF 3133/3131 or consent of instructor). Two lectures per week, labs alternate weeks. Principles and practices of wildlife damage management with emphasis on damage identification and damage prevention and control methods.

WF 4221/6221. Limnology Laboratory. (1) (Prerequisite: WF 3133 or consent of instructor; Co-requisite: WF 4222/6222). Four hours laboratory skills required to evaluate freshwater ecosystems.

WF 4222/6222. Limnology. (2) (Prerequisite: WF 3133 or consent of instructor; Co-requisite: WF 4221/6221). Two hours lecture. The physical, chemical and biological processes underlying the function and productivity of freshwater ecosystems.

WF 4243/6243. Wildlife Techniques. (3) (Prerequisite: Junior or Senior standing or consent of instructor). Two hours lecture. Four hours laboratory. Contemporary research and management techniques and tools for wildlife populations and habitats.

WF 4253/6253 Application of Spatial Technologies to Wildlife and Fisheries Management (3) (Prerequisite: Sr. standing or consent of Instructor). Two hours lecture. Four hours laboratory weekly. Practical Application of Global Positioning Systems and Geographic Information Systems to Wildlife and Fisheries Management.

WF 4263/6263. Wildlife Diseases. (3) Two hours lecture. Four hours laboratory, alternate weeks. Effects and management of parasites and diseases in wild bird and mammal populations. (Same as CVM 4263/6263).

WF 4313/6313. Fisheries Management. (3) (Prerequisite: WF 3133 or WF 3131 or consent of instructor). Two hours lecture. Laboratories alternate weeks. Principles of fisheries management and methods for assessment and analysis of fish populations and aquatic habitats.

WF 4323/6323. Wildlife Nutrition and Physiology. (3) Two hours lecture. Four hours laboratory, alternate weeks. Nutrition and physiology of aquatic and terrestrial wildlife, with emphasis on understanding life history strategies and functional adaptations to habitat and environmental variation.

WF 4333/6333. Fish and Shellfish Nutrition. (3) (Prerequisites: CH 2503 and CH 2501 or BCH 3613). Three hours lecture. Fundamental and applied aspects of the nutrition of fish, crustacean, and mollusk species including feeding behavior, nutritional ecology, energetics, and nutrient requirements. (Same as NTR 6333).

WF 4343/6343. Pond and Stream Management. (3) (Prerequisite: Junior or Senior standing or consent of instructor). Two hours lecture. Four hours laboratory alternate weeks. Ecological foundations and management techniques for fisheries in small impoundments and streams.
WF 4353/6353. Fish and Wildlife Policy and Law Enforcement. (3) Prerequisite: Sr. standing or consent of instructor). Three hours lecture. A survey of the major content areas of fish and wildlife policy and law enforcement. Emphasis is on the fundamentals of conservation policies and laws.

WF 4363/6363. Wildlife and Fisheries Administration and Communication. (3) (Prerequisite: Junior standing) Two hours lecture. Three and one-half hours lab, alternate weeks. Administrative and communicational techniques and skills in the workplace and political environments of wildlife and fisheries organizations.

WF 4373/6373. Principles and Practice of Conservation in Agricultural Landscapes. (3) (Prerequisites: WF 1213 or consent of instructor). Two hours lecture. Four hours laboratory, alternate weeks. Introduces theoretical background for ecological conservation in agricultural landscapes with focus on the role of USDA Farm Bill programs in achieving conservation goals.

WF 4383/6383. Wetlands Ecology and Management. (3) Two hours lecture, four hours laboratory, alternate weeks. Four-hour course in hydrology, soils and biogeochemistry of wetlands; structure and function of important wetland types; wetland management for wildlife and fisheries; wetland creation and restoration.

WF 4394/6394. Waterfowl Ecology and Management. (4) (Prerequisites: WF 3133, WF 3131, WF 4153, senior standing, or consent of instructor). Three hours lecture. Four hours laboratory. Annual ecology of North American waterfowl, habitat and population ecology, and management, waterfowl identification, field trips, management plan, and current issues.

WF 4463/6463. Human Dimensions of Fish and Wildlife Management. (3) (Prerequisite: Jr./Sr. standing or consent of instructor). Three hours lecture. Survey of the major content areas of human dimensions. Emphasis on the considerations and implications associated with managing, evaluating and influencing people’s attitudes and behaviors.

WF 4473/6473. Wildlife and Fisheries Practices. (3) (Prerequisite: Senior standing). Two hours lecture. Four hours laboratory. The integration of principles of ecology, wildlife and fisheries techniques and policies for effective planning and implementation of natural resource management.

WF 4483/6483. Seminar in Tropical Biology. (3) (Prerequisites: WF 3133 or consent of instructor). One hour lecture. Four hours laboratory. An introduction to the composition and function of tropical ecosystems of the New World.

WF 4484/6484. Upland Avian Ecology and Management. (3) (Prerequisites: WF 3133 and WF 3131 and WF 4153 and senior standing or consent of instructor). Three hours lecture. Four hours laboratory. The application of ecological principles to management of wildlife populations, focusing on avian species and communities inhabiting upland ecosystems.

WF 4494/6494. Large Mammal Ecology and Management. (3) (Prerequisites: WF 3133/3131 and WF 4153 and senior standing). Three hours lecture. Four hours laboratory, alternate weeks. Ecological principles and applied methods used in the management of large mammals.

WF 4990/6990. Special Topics in Wildlife & Fisheries. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

WF 7000. Directed Individual Study. Hours and credits to be arranged.

WF 8000. Dissertation Research/Thesis. Hours and credits to be arranged.

WF 8134. Research Methods in Wildlife and Fisheries Sciences. (4) (Prerequisites: Graduate standing; ST 8114). Three hours lecture. Four hours laboratory. Graduate level introduction to application of scientific methods to wildlife and fisheries ecology and management.

WF 8144. Theory of Wildlife Population Ecology. (4) (Prerequisite: WF 3133, ST 3133 or consent of instructor.) Three hours lecture. Two hours laboratory, weekly. Theory of wildlife population ecology including population growth, population regulation, predation, and competition. Basic methods of data collection and population sampling.

WF 8154. Quantitative Applications in Wildlife Population Ecology. (4) (Prerequisite: WF 8144, ST 8114 or consent of instructor). Three hours lecture. Four hours laboratory weekly. Application of basic statistical analytical tools to address natural resource management research questions.

WF 8212. Communication Skills in Wildlife and Fisheries. (2) (Prerequisite: Graduate student status in the Department of Wildlife and Fisheries). Two hours lecture. Effective strategies for professional communication to scientific and lay audiences in the fields of wildlife, fisheries, and other natural resources sciences and management.

WF 8223. Management of Impounded River Ecosystems (3) (Prerequisites: WF 6313/4313 or equivalent). A survey of guidance and criteria for managing reservoirs and associated riverine environments to enhance fisheries. Focus is on managing fish and their environment.

WF 8243. Conservation Biology. (3) (Prerequisites: WF 3133, BIO 3103 or consent of instructor). Three hours lecture. Theory and applications of conservation biology, measures of biodiversity, ecological geography, measures and treatments of decline.

WF 8273. Advanced Fisheries Management. (3) (Prerequisites: WF 4133/6133 and WF 4313/6313 or consent of instructor) Three hours lecture. Field exercises during spring break. Advanced treatment of the multidimensional aspects of fisheries management in a global setting with emphasis on setting realistic objectives and establishing appropriate strategy.

WF 8343. Conceptual Ecology and Natural Resource Management. (3) (Prerequisites: WF 8012 or equivalent or consent of instructor). Three hours lecture. A forum to discuss current literature and theory that advances the study of community ecology and its application to natural resource management.

WF 8413. Advanced Fishery Science. (3) (Prerequisites: WF 4133/6133 and ST 3133, or equivalents). Two hours lecture. Two hours laboratory. Estimation and interpretation of vital statistics of fish populations: analysis of fishery data using computers; models for assessment of fish stocks.

WF 8990. Special Topics in Wildlife & Fisheries. (1-9) Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years).

WF 9000. Dissertation Research/Dissertation. Hours and credits to be arranged.

WOMEN’S STUDIES

Office: 224 Allen Hall

WS 1173. Introduction to Gender Studies. (3) Three hours lecture. An introduction to theoretical concepts in Gender Studies. This course will examine the influence of the women’s movement on the academic development of Gender Studies (Same as AN 1173 and SO 1173).

WS 3513. Women and Literature: Selected Topics. (3) (Prerequisite: completion of EN 1103). Three hours lecture. A study of literary works by or about women. Texts are selected according to theme, genre, and/or historical period. (Same as EN 3513).
IV. FACULTY, EMERITI and STAFF
2005-2006

GILES DISTINGUISHED PROFESSORS
Dr. Terry L. Amburgey
Dr. Janice E. Chambers
Dr. Louis R. D’Abramo
Dr. Nancy Duvall Hargrove
Dr. B. Keith Hodges
Dr. Robert L. King
Dr. Edward E. Milam
Dr. J. Elton Moore
Dr. David R. Shaw
Dr. Ratnasingham Shivaji
Dr. W. Glenn Steele
Dr. Joe F. Thompson
Dr. W. William Wilson
JOHN T. GIESEMANN, Extension Professor, Computer Applications, Ed.D., Mississippi State University, 1988
JAMES M. GIESEN, Professor, Psychology, Ph.D., Kent State University, 1973
JOSEPH JOHN GILBERT, Instructor, Geosciences-Distance Learning, M.S., University of Nevada-Las Vegas, 2001
DANIEL A. GILL, Professor & Associate Director, Social Science Research Center, Ph.D., Texas A&M University, 1986
DOUGLAS MATTHEW GILLHAM, Instructor, Geosciences-Distance Learning, M.S., Mississippi State University, 1999
R. H. GILMER, Associate Professor, Finance & Economics, Ph.D., University of Illinois-Chicago, 1982
HERBERT L. GINN, Assistant Professor, Electrical and Computer Engineering, Ph.D., Louisiana State University/A&M, 2002
MICKEY J. GIORDANO, Instructor, Instructional Syst & Workforce Devl, M.S., Mississippi State University, 2003
SUMALEE GIVARUNGSAWAT, Assistant Research Professor, CVM Basic Science Department, Ph.D., Mississippi State University, 1996
DOUG GOODMAN, Assistant Professor, Political Science and Public Adm, Ph.D., University of Utah, 2002
MARK A. GOODMAN, Associate Professor, Communication, Ph.D., University of Missouri, 1993
MARTIAL J. GOOITEE, Professor, Art, M.F.A., Indiana State University, 1985
HARVEY L. GORDON, Extension Instructor, 4-H Youth Development, M.Ed., University of Arkansas, 1984
MICHAEL T. GÓMEZ, Instructor, Marketing/Quant Analysis/Bus Law, M.Ed., Mississippi State University, 1977
CATHY W. GRACE, Professor & Coordinator, Curriculum & Instruction, Ed.D., University of Mississippi, 1979
LAURA A. GRACE, Associate Professor, FWRC-Forestry, Ph.D., Foreign Institution, 1998
TERRENCE E. GREENWAY, Assistant Research Professor, Delta Research Center, Ph.D., Mississippi State University, 1996
STEVEN C. GRADO, Professor, FWRC-Forestry, Ph.D., Penn State-University Park Campus, 1992
ROBERT K. GRALÁ, Assistant Professor, FWRC-Forestry, Ph.D., Iowa State University, 2004
VIRGINIA BRADDOCK GRAY, Lecturer, Food Science, Nutrition & Health Promotion, M.S., Mississippi State University, 2003
DONALD L. GREBNER, Associate Professor, FWRC-Forestry, Ph.D., Virginia Tech & State University, 1992
TERRENCE E. GREENWAY, Assistant Research Professor, Delta Research and Extension Center, M.S., University of Arkansas, 1983
ALLEN G. GREENWOOD, Professor, Industrial Engineering, Ph.D., Virginia Tech & State University, 1994
REBECCA LANE GREER, Assistant Professor, Plant and Soil Sciences, Ph.D., North Carolina State University, 2003
JOHN PETER H. GRILL, Professor, History, Ph.D., University of Michigan, 1975
MARY BETH F. GRIMES, Associate Professor/Ref Libr, General Library, M.S., University of Illinois-Urbana, 1991
PAUL W. GRIMES, Professor and Head, Finance & Economics, Ph.D., Oklahoma State University, 1984
A. W. GROCE, Professor, CVM Office of Special Programs., Ph.D., Michigan State University, 1972
STANISLAW GRZYBOWSKI, Professor, Electrical and Computer Engineering, Ph.D., Foreign Institution, 1984
PHILIP M. GULLETT, Assistant Professor, Civil Engineering, Ph.D., University of California-Davis, 2001
WILLIAM ARNETT GUSTIN, Lecturer, Geosciences, M.A., Indiana State University, 1988
JOHN W. GUYTON, Associate Extension Professor, Coastal Research & Extension Center, Ed.D., Mississippi State University, 1987
STEVEN R. GWALTNEY, Assistant Professor, Chemistry, Ph.D., University of Florida, 1998
JEFFREY S. HABY, Instructor, Geosciences-Distance Learning, M.S., Mississippi State University, 1998
BECKY E. HAGENSTON, Assistant Professor, English, M.F.A., University of Arizona, 1997
MARGAN O. HAGLER, Professor, Electrical and Computer Engineering, Ph.D., University of Texas, 1967
SUSAN L. HALL, Associate Professor/Arch Lib, General Library, M.S., University of Tennessee, 1988
BURNETTE W. HAMIL, Associate Professor, Curriculum & Instruction, Ph.D., University of Southern Mississippi, 1994
YOUSSF HAMMLE, Assistant Research Professor, Center for Advanced Vehicular Syst, Ph.D., Foreign Institution, 2000
CLIFFORD J. HAMPTON, Extension Instructor, Organizational Development, Ed.S., Mississippi State University, 2004
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THOMAS E. HANNIGAN, Instructor, Aerospace Engineering, M.S., Mississippi State University, 1990
ERIC A. HANSEN, Associate Professor, Computer Science and Engineering, Ph.D., University of Massachusetts, 1998
LARRY A. HANSON, Professor, CVM Basic Science Department, Ph.D., University of Southern Mississippi, 1990
TERRILL R. HANSON, Associate Professor, Agricultural Economics, Ph.D., Auburn University, 1998
ZHAIHUA Z. HAO, Professor, Food Science, Nutrition & Health Promotion, Ph.D., Foreign Institution, 1997
JAMES C. HARTEN, Professor and Head, Electrical and Computer Engineering, Ph.D., Texas A&M University, 1985
DAVID K. HARDIN, Professor and Head PPM, CVM Pathobiology/Population Med Dep, DVM, University of Missouri, 1977
JAMES W. HARDIN, Assistant Professor, Philosophy & Religion, Ph.D., University of Arizona, 2001
LAURA ELLEN HARDIN, Assistant Professor, CVM Basic Science Department, Ph.D., University of Missouri, 2001
WILLIAM G. HARTIN, Associate Professor & Chair, Finance & Economics, Ph.D., Georgia State University, 1996
RUSFUS D. HARE, Professor, Curriculum & Instruction, Ph.D., University of North Carolina, 1984
NANCY D. HARGROVE, Professor, English, Ph.D., University of South Carolina, 1970
RICHARD L. HARKES, Associate Professor, Plant and Soil Sciences, Ph.D., Polytechnic University, 1993
ROBERT JOHN HARLAND, Assistant Professor, Foreign Languages, Ph.D., Foreign Institution, 2002
ALITA RENEE HARMON, Lecturer, Meridian Division of Arts & Science, M.S.W., University of Southern Mississippi, 2002
CATHERINE A. HARRIS, Instructor, Communication, M.A., University of Georgia, 1976
FRANK A. HARRIS, Research Professor, Delta Research and Extension Center, Ph.D., Mississippi State University, 1968
JONATHAN G. HARRIS, Instructor, Geosciences, M.S., Mississippi State University, 1996
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BENJAMIN HARVEY, Assistant Professor, Art, Ph.D., University of North Carolina, 2002
JANE L. HAVRILL, Assistant Professor, Mathematics & Statistics, Ph.D., Texas A&M University, 1994
DANA ROLISON HARWELL, Lecturer, Meridian Division of Education, Ed.S., Mississippi State University, 2002
RUTH J. HAUG, Associate Research Professor, Social Science Research, Ph.D., Mississippi State University, 1995
JEFFREY S. HAUP, Associate Professor, Art, M.F.A., Indiana University, 1999
TOMASZ HAUP, Associate Research Professor, Center for Advanced Vehicular Syst, Ph.D., Foreign Institution, 1985
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WILLIAM ANTHONY HAY, Assistant Professor, History, Ph.D., University of Virginia, 2000
WILLIAM S. HAZLETT, Lecturer, Meridian Division of Arts & Science, M.A., University of North Florida, 1984
GEORGE W. HEBURN, Research Professor, Center for PET/Prog Environ, Ph.D., Florida State University, 1981
DAVID WAYNE HELD, Asst Extension/Research Professor, Coastal Research & Extension Center, Ph.D., University of Kentucky, 2003
LYNN M. HEMPEL, Assistant Professor, Sociology, Anthropology & Social Work, Ph.D., Duke University, 2003
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GLEN R. HENDRÉN, Professor, Dean of Education, Ph.D., University of Southern Mississippi, 1974
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CARLENE HENNINGTON, Associate Professor, Counselor Education & Educational Psychology, Ph.D., Texas A&M University, 1991
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WILLIAM P. HENRY, Associate Professor, Chemistry, Ph.D., Carroll College, 1986
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EMERITI FACULTY

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CALVIN T. BISHOP, Associate Professor Emeritus of Landscape Architecture
JOE M. BLACKBOURNE, Professor Emeritus of Educational Leadership
BENJAMIN BLANEY, Professor Emeritus of Foreign Languages
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RICHARD E. FORBES, Professor Emeritus of Mechanical Engineering
ROBERT M. FORD, Professor Emeritus of Architecture
BILL R. FOSTER, Assistant Vice President Emeritus of Student Affairs
WILLIAM R. FOX, Professor of Agricultural and Biological Engineering and Dean Emeritus of Agriculture and Life Sciences
MARY F. FUTRELL, Professor Emerita of Home Economics
JOHN W. FUQUAY, Professor Emeritus of Animal and Dairy Sciences
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JAMES D. GASSAWAY, Professor Emeritus of Electrical and Computer Engineering
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ANDREW T. GEORGE, Professor Emeritus of Curriculum and Instruction and Director Emeritus of The Learning Center
VERNON D. GIFFORD, Professor Emeritus of Curriculum and Instruction
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RANDALL P. RAFFERTY, Associate Professor Emeritus of University
MELVILLE STANTON PRIEST, Professor Emeritus of Hydraulic Engi
JAMES A. PRICE, Assistant Professor Emeritus of Biological Sciences
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HAL M. POLK, Associate Professor Emeritus of Music Education
TRA VIS D. PHILLIPS, Professor Emeritus of Agricultural Economics
ROBERT L. PHILLIPS, JR., Professor Emeritus of English
GUY T. PEDEN, Professor Emeritus of Marketing and Director Emeritus
PAULINE PEARSON-STAMPS, Associate Professor Emerita of Foreign
KENT M. PAYNE, Associate Professor Emeritus of Music Education
JOHN I. PAULK, Professor Emeritus of Nuclear Engineering, Associate
WILLIAM E. PARRISH, Professor Emeritus of History
M. WAYNE PARKER, Professor Emeritus of Plant and Soil Sciences
HIRAM D. PALMERTREE, Director Emeritus, Mississippi Cooperative
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WALLACE A. MURPHREE, Professor Emeritus of Philosophy and Religion
MERLE WENTWORTH MYERS, Professor Emeritus of Geology and Geography
JAMES B. NAIL, Associate Professor Emeritus of Electrical and Computer Engineering
HENRY W. NASH, Professor Emeritus of Marketing and Head Emeritus of Marketing, Quantitative Analysis and Business Law
VICTOR NASH, Professor Emeritus of Agronomy
WILLIAM W. NEEL, Professor Emeritus of Entomology
LYLE ENGNAR NELSON, Professor Emeritus of Agronomy
WALTER B. NEWSOM, Professor Emeritus of Management, College of Business and Industry
BEVERLY R. NORMENT, Professor Emeritus of Entomology and Plant Pathology
RALPH NULL, Professor Emeritus of Floral Design in the Horticulture Department
ELIZABETH A. NYBAKKEN, Associate Professor Emerita of History
EARL CLARENCE ODEN, Professor Emeritus of Chemical Engineering
DENNIS A. O’NAN, Professor Emeritus of Health, Physical Education, Recreation, and Sport
E. C. O’NEAL, Professor Emeritus of Health, Physical Education, Recreation, and Sport
JESE OSWALT, Professor Emeritus of Industrial Engineering
WILL HOYT OWEN, JR., Assistant Professor Emeritus of Accountancy
JOHN K. OWENS, Professor Emeritus of Aerospace Engineering and Professor Emeritus of Electrical Engineering
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WILLIAM E. PARRISH, Professor Emeritus of History
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MARTHA PRATT, Instructor Emerita of Mathematics and Statistics
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JANOS RADVANYI, Professor Emeritus of History
RANDALL P. RAFFERTY, Associate Professor Emeritus of University Libraries
ERNESTINE RAINNEY, Professor Emerita of Curriculum and Instruction
DERO SAUNDERS RAMSEY, Professor Emeritus of Dairy Production
CARLTON D. RANNEY, Head of the Delta Research and Extension Center Emeritus
FREDDIE RASBERRY, Professor Emeritus of Plant and Soil Sciences
BRENDA C. RAY, Professor Emerita of Music Education
DENNIS F. RAY, Professor Emeritus of Management
JERRY REED, Professor Emeritus of Mathematics and Statistics
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ROY D. ROSS, Associate Professor Emeritus of Forestry
KENNETH W. ROY, Professor Emeritus of Entomology and Plant Pathology
ROY H. RUBY, Dean Emeritus of Education and Vice President Emeritus for Student Affairs
ROBERT D. RUNDDEL, Professor Emeritus of Physics and Astronomy
J. WILLIAM RUSH, Associate Dean Emeritus of the College of Business and Industry
ERNEST EVERETT RUSSELL, Professor Emeritus of Geology and Geography and Curator of Dunn-Seiler Museum
AVIS J. RUTHVEN, Professor Emerita of Educational Psychology and Director Emerita of Graduate Education
CLIFFORD G. RYAN, Assistant Professor Emeritus of History
MARVIN L. SALIN, Professor Emeritus of Biochemistry and Molecular Biology
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V. OTHER DIVISIONS, UNITS, AND AGENCIES

A. MAJOR DIVISIONS and STAFFS

ADMINISTRATIVE AFFAIRS

Responsible for Human Resources management; operation and maintenance of the physical plant; campus landscape operations; support services; the operation of auxiliary enterprises, including the laundry, dining services and University-owned faculty and staff housing.

W. Gaddis Hunt, B.S. M.Ed., Chief Administrative Officer

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The Controller and Treasurer’s Office primary mission is to (1) provide financial service to the University community and its customers, (2) protect the University’s financial resources and (3) insure compliance with both internal and external financial regulations, policies and procedures.

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CONTINUING EDUCATION

(For functions, organizations, and programs of the Division of Continuing Education, see PART II. THE COLLEGES and SCHOOLS.)

Mark Binkley, Ph.D., Director of Continuing Education

FOREST and WILDLIFE RESEARCH CENTER

The research center is composed of the Department of Forestry, the Department of Wildlife and Fisheries and the Department of Forest Products. The agency’s base research program involves approximately 275 separate research activities and covers project work in 14 research areas in forestry, forest products, wildlife, and fisheries. This research program serves a diverse number of clients which includes forest landowners, forest-based industries, federal agencies, other state agencies, private agencies and various forest resources user groups. Faculty in the Forest and Wildlife Research Center hold joint appointments for teaching purposes in the College of Forest Resources.

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MISSISSIPPI AGRICULTURAL and FORESTRY EXPERIMENT STATION

The Mississippi Agricultural and Forestry Experiment Station operates under mandates of the U.S. Congress (1862 and 1887) and the Mississippi Legislature (1888) for the purpose of conducting scientific research in agriculture, forestry, and related sciences. The foundation mission of MAES is to improve the state’s agricultural and aquacultural industries and the well-being of all Mississippians.

The success of agricultural research in the first 100 years has resulted in a highly complex food and fiber system that is the envy of the world — but one that is also characterized by the continuing emergence of new problems and opportunities. Thus, the foremost challenge of the Experiment Station is to maintain a commitment of research discovery and education to keep Mississippi’s agricultural producers viable and competitive in a global economy.

Experiment Station Headquarters (MSU Campus) The Leveck Animal Research Center, the Bearden Dairy Research Center, the R.R. Foil Plant Science Research Center and the Black Belt Branch Station at Brooksville provide field laboratories for on-campus scientists and represent all of the important plant and animal commodities produced in the State.

On-campus departments conducting research to meet these needs are: Agricultural Economics, Agricultural and Biological Engineering, Plant and Soil Sciences, Animal and Dairy Sciences, Biochemistry and Molecular Biology, Entomology and Plant Pathology, Food Science and Technology, Human Sciences, Poultry Science, the Social Science Research Center, Veterinary Medicine, and the aquaculture unit of wildlife and fisheries.

Off-campus activities are conducted through four regional research and extension centers and associated branch experiment stations in the various soil and types-of-farming areas of the State. Research efforts involve cooperative projects with scientists from on-campus departments and other branch stations, as well as collaboration with state and federal agencies, private industry sponsors, and private industry sponsors.

Central MS Research and Extension Center: The Brown Loam Branch Station near Raymond carries out an extensive program of beef cattle crossbreeding and management, forage, and field crop studies. At the Coastal Plain Branch Station near Newton, long-standing programs of field crops research blend with studies of nutrient management. The Truck Crops Branch Station at Crystal Springs serve a populous urban-rural area with research on both commercial greenhouses and home garden fruit and vegetable crops and ornamentals.

Delta Research and Extension Center: The Delta Branch Station at Stoneville employs an integrated, multidisciplinary approach to discover, develop, and demonstrate new technologies and improved germplasm for enhanced profitability and productivity of agricultural enterprises in the Yazoo River-Mississippi River Delta. Its research programs on the major crop and animal production systems of the Delta Counties (cotton, rice, soybean and catfish) are recognized nationally and internationally. Both the Southern Regional Aquaculture Center and the National Warm- water Aquaculture Research Center are located here.

North MS Research and Extension Center: The North MS Branch Station at Holly Springs emphasizes research on soil erosion management, and crop production systems using conservation tillage methods suitable for the soils of the region. The Horticulture Research & Education Unit at Verona conducts cultivar evaluations and cultural practices studies with vegetable, ornamental, and medicinal herbs crops. The Northeast MS Branch Station at Verona conducts conservation agriculture systems research and variety evaluations for the major field crops of the region. The Pontotoc Ridge-Flatwoods Branch Station at Pontotoc emphasizes sweet potato production, peaches and other fruits, and field crops. The Prairie Research Unit at Prairie emphasizes forages in the economic and efficient production of beef, with emphasis on herd health management and conception and nutrition.

Extensive collaborative relationships with other state and federal agencies enhance the productivity and applicability of MAES’ research programs on-campus and off-campus. Representative participants include USDA/Agricultural Research Service (Small Grain Nurseries, Pasture Research Laboratory, Forage Research Unit, Corn Research Unit, Small Fruits Research Station, Southern Field Crop Insect Management Laboratory, Cotton Physiology and Genetics Research Unit, Southern Weed Science Laboratory, Field Crops Mechanization Research Unit, Soybean Production Research Unit, U.S. Cotton Ginning Laboratory, Soil Sedimentation Laboratory and Soil Weevil Research Laboratory); USDA/Natural Resources Conservation Service (Artificial Wetlands and Global Change Monitoring Station); NOAA/National Weather Service; MS Department of Agriculture and Commerce; MS Department of Wildlife, Fisheries, and Parks; USDA/APHIS Animal Damage Control Unit; USDA/Forest Service (Southern Hardwoods Laboratory); Tennessee Valley Authority; Mississippi Power Company; U.S. Army Crops of Engineers; and U.S. Department of Commerce (National Marine Fisheries Service).

Research programs of MAES are both basic and applied. Basic research deals with long-range fundamental opportunities or problems in agriculture and the development of new knowledge. Applied research is directed toward early solution of problems of immediate concern facing farmers, processors and marketers of agricultural products, and all citizens of the state, whether urban or rural.
Research facilities to support the broad scope of research conducted by MAFFES include chemical, biological, engineering, and computer laboratories; greenhouses and growth chambers; land for crops, orchards, and forests; pastures and building facilities for beef and dairy cattle, sheep, hogs, and poultry; ponds and related facilities for aquaculture; and the farm machinery and other equipment required to enable our scientists to conduct effective research programs. In addition, facilities and personnel of ARS, USDA and other federal and state agencies are strategically co-located to augment the total research effort.

While the primary mission of MAFFES is agricultural and aquacultural research for the State, its presence on the campus adds strength to both the teaching and extension programs. Most department heads and many other staff members have joint appointments involving teaching, research, and/or extension activities, and teach or administer instructional programs in agriculture, engineering, and art and sciences. Agriculture students at Mississippi State University have the opportunity to observe and participate in research, and MAFFES provides graduate research assistantships and other part-time employment for many students.

MAFFES operates on state and federally appropriated funds supplemented by income from sales of products from the research projects. Grants and contracts from private industry and from other sources provide additional funds.

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Tracy Brown, Facilities Manager
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Ted T. Goddon, Risk Management/Loss Control Manager
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Randy Saunders, B.S., Facilities Coordinator

Northeast Mississippi Branch Experiment Station, Verona
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Mark Harrison, B.S., M.S., Research Associate II

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Prairie Research Unit, Prairie

John Huston, B.S., M.S., Facilities Coordinator
** MAES/MCES
*** Joint appointment of Food Science
**** MCES
***** Mississippi Department of Agriculture EPA
******Coop NREAA, U.S. Department of Commerce

MISSISSIPPI STATE UNIVERSITY EXTENSION SERVICE

The Mississippi State University Extension Service provides research-based educational programs and information in agriculture and natural resources, 4-H youth development, family and consumer education and enterprise and community resource development to improve the economic, social, and cultural well-being of all Mississippians.

The Smith-Lever Act of 1914 established the Cooperative Extension System, a publicly funded, informal educational system that links the United States Department of Agriculture, the land-grant university system, and individual counties. As the off-campus educational arm of Mississippi State University, Extension provides current research and educational information in all 82 counties. Mississippi State University Extension Service is also a cooperating partner with Alcorn State University, the 1890 land-grant institution in Mississippi.

Extension’s overall purpose is education-education that will empower people to make intelligent decisions relating to their vocations, their families, and their environment. Extension’s unique interdisciplinary perspective enables the organization to make a real difference in the lives of Mississippians.

Mississippi State University Extension Service is, and will continue to be, a leader for positive change for individuals, families, and communities by: providing research and education in a practical and applicable way; using the lastest technology and teaching techniques to serve clients; collaborating and using volunteers to help disseminate programs and information; cooperating with other groups and agencies; and maintaining a culturally diverse staff responsive to the needs of various audiences at all socio-economic levels.

The educational efforts of the Extension Service are conducted primarily through local Extension agents in each county supported by a network of specialized area agents serving multiple counties. They use a variety of educational methods and techniques and the most current delivery technology, such as the World Wide Web, in disseminating research-based information.

The county staff is supported by a team of state and area specialists who are responsible for gathering, interpreting, and disseminating the latest research and technology developed by Mississippi Agricultural and Forestry Experiment Station(MAFES), Forest and Wildlife Research Center(FWRC), College of Veterinary Medicine(CVM), USDA research agencies, and other legitimate research institutions across the nation. In performing these functions, the subject matter specialists are in constant contact with research scientists to ensure that they are current on the lastest research findings and technology.

We believe that agriculture and its related enterprises are of major economic importance in Mississippi, and we will direct programs and resources to reflect this importance. We also believe that quality of life is affected by the reciprocal relationship between people and their environment will continue to emphasize environmental issues. We recognize the critical need for human resource development and will continue to search for ways to assist individuals, families, youth and communities cope with an ever-changing society.
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Beverly R. Howell, B.S., M.A., Ph.D., State Program Leader, Family & Consumer Sciences; Professor, Human Sciences
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Kyle Touchstone, B.A., Extension Associate I and Government Training Officer

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Bobby R. Stokes, B.S., M.B.I.S., Registrar  

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Kathy I bendahl, Business Manager  
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Wildlife and Fisheries  
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Katherine Jacobs, Fisheries Extension Associate  
Benjamin West, B.S., M.S., Ph.D., Assistant Extension Professor  
Jonathan Peeples, Associate Extension Professor  
* CVM  
** MAFES/MSU  
*** MAFES/CVM  
**** FWR/MSU  
***** CALS/MSU  

COUNTY PERSONNEL  
Each of the 82 counties has a core Extension Staff to address 4-H youth development and community needs. In addition, there are program assistants working in targeted nutrition programs. The total number of professional and paraprofessional employees in county and area agent positions is 216.

UNIVERSITY LIBRARIES  
The University’s major library collections and functions are housed in the Mitchell Memorial Library, which occupies a central location on the campus. In addition to providing more than 2,051,615 volumes selected to support the teaching and research efforts of students and faculty, the library subscribes to more than 18,103 periodicals. The Special Collections Department contain materials of historical value, including 491 manuscript collections, church and business records. The Congressional and Political Research Center houses the papers of a number of public figures important to Mississippi - most notably those of U.S. Senator John C. Stennis. The Archives of the University includes papers of the University’s presidents and other officers, college, division and departmental records, faculty papers, records of committees and university-related organizations. The Library provides an environment for education technology activities and a learning center of techniques related to digital multimedia in the Instructional Media Center. The Library’s Computer Commons lab is open until 2 a.m., Sunday through Thursday, and until 8 p.m. on Friday and Saturday.

The College of Architecture and the College of Veterinary Medicine maintain their own library holdings but operate as branches of Mitchell Memorial Library.

Frances N. Coleman, Dean of Libraries  
Susan Hall, Architecture Librarian  
Kathrin Dodds, Jackson Center Librarian and Information Specialist  
Melanie Thomas, Meridian Campus Librarian and Information Specialist  

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Lisa G. Holloway, Student Information Systems Coordinator  
Amy W. Adkerson, B.A., Curriculum and Publications Specialist  
Cynthia D. Hill, B.S., M.A.T., Ed.S., Assistant Coordinator for Articulation and Degree Audit  

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INFORMATION TECHNOLOGY SERVICES  
The mission of Information Technology Services (ITS) is to enhance learning, service, and research through an advanced information technology environment. The mission is fulfilled through the four operational units within ITS - Systems & Networks, User Services, Information Systems, and Telecommunications. ITS supports and operates the University's voice, data, video and wireless networks and provides a broad array of computing and information technology resources and services for students, faculty, and staff, including Internet and Internet2 access. The ITS Help Desk is available to answer questions and help with computer-related problems. A comprehensive suite of workshops is offered to aid faculty and staff in learning new hardware and software. See www.its.msstate.edu for more information.

Mike Rackley, B.S., M.S., Head, Information Technology Services  
Deborah Fulton, B.S., M.S., Director, ITS Information Systems  
Timothy Griffin, B.S., Director, ITS Systems & Networks  
Tom Lindsay, B.P.A., C.P.A., Director, ITS Telecommunications  
Matt Raven, B.S., M.S., Ph.D., Director, ITS User Services  

OFFICE OF INSTITUTIONAL RESEARCH  
The Office of Institutional Research collects, analyzes, and reports information needed for orderly planning and provides background information for the formulation of policy decisions to the President, Vice Presidents, and others.

The office analyzes and prepares reports for the President, Vice Presidents, Deans and others, relevant to evaluating faculty workload, student credit hours produced and departmental data that are vital in the allocation of university resources.

The office assists the university community through its research, consulting, and survey activities. A major component of these activities is the Evaluation and Test Service. This service, utilizing optical scanning equipment, scores and analyzes more than 150,000 faculty-constructed tests and processes an equal number of questionnaires and student evaluation of instruction each year.

The office is a primary contact with State and Federal agencies, educational groups, other institutions of higher education, and individuals for the purpose of information and data exchange. A major activity of the office is maintaining a responsive and productive relationship with these external entities.

Dr. Gary Pike, Director  
Julie C. Fulgham, Associate Director  
Kathy A. Huffman, Coordinator of Reports and Analyses  
Elaine Turner, Project Coordinator - Communication  
Johanna Bettis, Data Analyst  
Tiffany Culver, Data Analyst  
Mary Hankins, Data Analyst  
Jenny Hartness, Data Analyst  
Vanessa McTaggart, Evaluation Assistant  
Lydia May, Administrative Assistant  

POLICE DEPARTMENT  
It is the mission of the Police Department to support the university and its community by providing effective and efficient services that assist in establishing a safe and secure environment.

The department is staffed 24 hours a day with highly trained officers to enforce the laws, and university rules and regulations. Additionally, police officers actively work with the campus community in providing crime prevention information and addressing crime, safety, and security issues.

C. RESEARCH UNITS  
OFFICE of the VICE PRESIDENT for RESEARCH and GRADUATE STUDIES  
Office: 617 Allen Hall  
The Office of Research is the administrative unit for the coordination of all basic and applied research of the University in the areas of Architecture, Biological and Physical Sciences, Education, Engineering, Business and Economics, Humanities and the Social Sciences. It is composed of the following: Intellectual Property and Technology Licensing,
Laboratory Animal Veterinarian, Radvanyi Chair in International Studies, Regulatory Compliance Office, Sponsored Programs Administration, the Mississippi State Chemical Laboratory, and Centers and Institutes: Center for Advanced Energy Conversion, Center for Advanced Vehicular Systems, Center for Educational and Training Technology, Center for Safety and Health, Center for Science, Math and Technology, Electron Microscope Center, GeoResources Institute, Institute for Neurocognitive Science and Technology, Research and Curriculum Unit, Science and Technology Research Center, Social Science Research Center (Mississippi Alcohol Safety Education Program), T.K. Martin Center for Technology and Disability, Transportation Research Center.

In addition, there are separately organized research units in the various schools and colleges: College of Architecture, Art, and Design (Architecture Research-Small Town Center, Jackson Community Design Center), College of Arts and Sciences (Biological and Physical Sciences Research Center, Cobb Institute of Archaeology, Institute for the Humanities, University/Industry Chemical Research Center), College of Business and Industry (Division of Business Research, Bureau of Business Services, Center for Insurance Loss Control), Technology Resource Institute for Business and Engineering, College of Education (Bureau of Educational Research and Evaluation, Center for Educational Partnerships, Rehabilitation Research and Training Center for Blindness and Low Vision, Writing-Thinking Institute), College of Engineering (Diagnostic Instrumentation and Analysis Laboratory, Engineering Research Center, Global Center for Desiccant Technology, High Voltage Laboratory, Industrial Assessment Center, Microsystems Prototyping Laboratory, Mississippi Energy Research Center, Raspet Flight Research Laboratory).

Interdisciplinary research is promoted and coordinated by the Office of Research. Teams are assembled and proposals, projects, and programs are developed for research opportunities. The Directors for Centers and Institutes and Sponsored Programs Administration serve to help assemble teams of experts in broad areas.

Mississippi State University is a participating institution of the Mississippi-Alabama Sea Grant Consortium, a consortium of Mississippi and Alabama universities and the Gulf Coast Research Laboratory. It is a member institution of the Oak Ridge Associated Universities, the South-eastern Universities Research Association, and the Mississippi Academy of Sciences.

With a core of excellent scientists, engineers, and economists, aided by numerous graduate research assistants, Mississippi State University has contributed to the economic and industrial growth of the State. Extensive resources are available to assist economic, industrial, and governmental organizations desiring help in discovery, design, and the development of new products. Research, graduate education, and undergraduate education become the three segments of learning pursued in a university.

Each of these contributes to the other, making possible a balanced program which provides the State with research oriented graduates as well as new basic knowledge necessary for growth. The Office of Research and the Mississippi Agricultural and Forestry Experiment Station work together and exchange ideas and information in the performance of their missions to do basic and applied research contributing to the total industrial and agricultural development of Mississippi.

Colin G. Scanes, Ph.D., Vice President for Research & Graduate Studies

Jonathon W. Pote, Ph.D. Associate Vice President for Research
Sandra H. Harpole, Ph.D., Interim Associate Vice President for Research
J. Donald Trotter, Ph.D., Vice President for Strategic Initiative
William A. Person, Ph.D., Director, Graduate Studies

OAK RIDGE ASSOCIATED UNIVERSITIES (ORAU)

Since 1949, students and faculty of Mississippi State University have benefited from its membership in Oak Ridge Associated Universities (ORAU). ORAU is a consortium of 85 colleges and universities and a contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help its missions and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members.

Through the Oak Ridge Institute for Science and Education, the DOE facility that ORAU operates, undergraduates, graduates, postgraduates, as well as faculty, have access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines including business, earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointment and program length range from one month to four years. Many of these programs are especially designed to increase the numbers of underrepresented minority students pursuing degrees in science and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found in the ORISE Catalog of Education and Training Programs which is available at http://www.orau.gov/orise/regd.htm, or by calling either of the contacts below.

ORAU’s Office of Partnership Development seeks opportunities for partnerships and alliances among ORAU’s members, private industry, and major federal facilities. Activities include faculty development programs, such as the Ralph E. Powe Junior Faculty Enhancement Awards, the Visiting Industrial Scientist Program, and various services to chief research officers.

For more information about ORAU and its programs, contact:
Jonathon W. Pote, Ph.D., ORAU Counselor for MSU (662-325-3570)
Monnie E. Champion, ORAU Corporate Secretary (423-576-3306); or visit the ORAU Home Page (http://www.orau.gov)

INTELLECTUAL PROPERTY and TECHNOLOGY LICENSING (IPTL)

Office: 403 Bost Extension Building

The mission of the Office of Intellectual Property and Technology Licensing is the identification, protection, marketing, and licensing of intellectual properties developed by Mississippi State University faculty, staff, and students. This mission originates from Public Law 96-517, better known as the Bayh-Dole Act, which stipulates that inventions developed under sponsorship from the federal government and assigned to the university must be actively transferred to the private sector for the benefit of the general public.

Charles Rivenburgh, M.B.A., Director

LABORATORY ANIMAL VETERINARIAN (LAV)

Office: 8A Morgan Street

Laboratory Animal Veterinarian is a University-wide resource that provides compliance monitoring, veterinary care, technical support, and program planning for animals used in biomedical and some agricultural teaching, testing, and research. The research, overseen by the Vice President for Research, is advised by the University Institutional Animal Care and Use Committee and conforms with local, state, and Federal regulations and guidelines for animal care and use.

John E. Harkness, D.V.M., Univ. Laboratory Animal Veterinarian

RADVANYI CHAIR in INTERNATIONAL STUDIES

Office: 55 & 57 Magruder

On June 11, 1996, the endowed Chair in International Security and Strategic Studies was established with Dr. Janos Radvanyi as the first chair holder. On June 22, 1998, Dr. Malcolm Portera, President, Mississippi State University, named the Chair in Dr. Radvanyi’s honor, the Radvanyi Chair in International Studies. The Chair manages the Center for International Security and Strategic Studies (CISS) which devotes full attention to vital global problems, with special emphasis on the complex security issues of the post-communist Era. It alerts to America’s vulnerability by not having a reliable defense against hostile missile attacks. The Chair is studying U.S. counter terrorism policy and is monitoring German-European and American relations and the insight of the workings of the European Union and Asian Security issues. The Chair, through its Executive Lecture Forum (ELF) provides a unique outreach program, hosting internationally respected speakers from around the globe to address the membership. Its publications reach government agencies, think-tanks, and major libraries. This exclusive lecture forum counts as its members Mississippi business executives, academicians, and state government representatives, and meets on a regular basis, several times a year. Through the Chair, both students and faculty are provided with a wide range of opportunities to gain awareness of international, political, economic, and cultural issues.

Janos Radvanyi, Ph.D., Chair
REGULATORY COMPLIANCE OFFICE (RCO)

The Regulatory Compliance Office is responsible for regulatory compliance matters that affect the research, instruction, and extension programs of the institution. Primary emphasis is on facilitation of the following: Biosafety, Radiological Safety, Hazardous Waste Management, Human Use in Research (IRB), Animal Care and Use (IACUC), and Research Misconduct allegations and investigations. Each area has a compliance officer and/or coordinator to assist and provide information to researchers regarding regulatory issues for research activities, facilitate committee reviews, and monitor compliance.

Tracy S. Arwood, Director
Franklin R. Champlain, Biosafety Officer
Jonathan E. Miller, IRB Coordinator
Terry Coggins, Radiological Safety Officer
Del Rendon, Hazardous Waste Officer
Trina Smith, IACUC Coordinator

SPONSORED PROGRAMS ADMINISTRATION

Office: 133 Etheredge Hall
Sponsored Programs Administration (SPA) is the component of the Office of Research responsible for the administration of external proposals, activities, and pre-award and post award contractual negotiations of fiscal and administrative matters. Services provided by Sponsored Programs include: Disseminate funding information; assist faculty in locating potential funding opportunities; assist faculty in contacting funding agencies; assure compliance with proposal guidelines; provide proposal budget cost analysis; facilitate in obtaining appropriate departmental and collegiate approvals; coordinate institutional compliance with government regulation; act as administrative liaison with the administrative officers of external sponsors; and, assist faculty and staff in administrative problem-solving associated with their sponsored projects.

Marc McGee, Director
Robyn B. Remotigue, CRA, Administrator
Kacey Strickland, CRA, Administrator
Mary Ann Richardson, Administrator
Mary Ann Latham, Associate Administrator
Natalie N. Eaves, Assistant Administrator
Tina R. Hood, Assistant Administrator
Tina D. Sweeten, Assistant Administrator

MISSISSIPPI STATE CHEMICAL LABORATORY

Office: 1145 Hand Lab
The State Chemical Laboratory was established in 1892 with the control of fertilizer quality as its primary responsibility. Subsequent legislation added duties in the areas of animal feed control, pesticide control, food control, paint and varnish control, and petroleum products control.

In 1970 the Legislature redefined and clarified the purpose and operations of the Mississippi State Chemical Laboratory. Four divisions were established: the Chemical Regulatory Division, the Petroleum Products Division, the Agricultural Services Division, and the Research Division. Operation of the first two divisions was continued practically unchanged from the practice of many years. The Industrial and Agricultural Services Division and the Research Division are an expansion of services formerly performed by the Chemical Regulatory Division.

The Chemical Regulatory Division carries out regulatory control programs in food, animal feeds, fertilizers, economic poisons, and paints and varnishes.

The Petroleum Products Division conducts regulatory control testing on petroleum and related products.

The Industrial and Agricultural Services Division provides application and engineering consultation to industries and individuals residing in or doing business in the State. Charges are assessed for major projects such that they will be self-supporting but nonprofit. The guiding principle in such services shall be that they contribute to the economic growth of Mississippi or to the welfare of its citizens.

The Research Division conducts self-supported, grant, or contract research having immediate or potential influence on the economic growth and prosperity of agriculture or industry in Mississippi, on improvement of the Laboratory’s analytical capabilities.

Kevin L. Armbrust, Ph.D., State Chemist; Associate Professor of Chemistry
Paul J. Brignac, Ph.D., Associate State Chemist; Director of Quality Assurance
Patricia B. Reeves, B.S., Director, Chemical Regulatory Division
Reba L. Ingram, M.S., Director, I.A.S. Division
Fay Y. Hutto, M.S., Director, Petroleum Products Division
William E. Holmes, B.S., Director, Advanced Instrumentation

CENTERS and INSTITUTES

CENTER for ADVANCED ENERGY CONVERSION

The Center for Advanced Energy Conversion, established in 2001, is a multidisciplinary organization formed to address alternative energy fuels and energy Conversion systems of the future. The mission of CAEC is to research and develop alternative energy technologies that will address the energy needs of the future. Energy Technology for Tomorrow’s World.

The center enlists faculty from across the Science and Engineering Colleges to address its cross-disciplinary research problems. The Center also forms strategic alliances and/or industrial organizations.

The research efforts of the Center will provide state-of-the-art capabilities for various alternative energy technologies and advanced enabling technologies. This along with strategic initiatives and industrial partnerships will lay the ground work for Mississippi industries to address the country’s future energy needs. The Center will also be an informational resource on alternative energy for Mississippi industry.

CENTER for ADVANCED VEHICULAR SYSTEMS (CAVS)

The State of Mississippi, while recruiting Nissan to build a manufacturing facility in central Mississippi, committed to the establishment and continued operation of the Center for Advanced Vehicular Systems (CAVS) at Mississippi State University (MSU) with a branch of CAVS to be located near the Nissan plant. The CAVS Research facility located at MSU and the CAVS Extension facility located at Canton opened in December 2003.

The mission of CAVS is to research and develop (R&D) manufacturing and design means and methods for producing vehicles of superior quality with advanced features and functions at reduced costs and shorter product development times, exploiting the underlying technologies for broader industrial use. The mission also includes engineering extension, education, and workforce training outreach for industry.

In Starkville, CAVS research and development activities are based on three factors: industrial needs and priorities; opportunities for CAVS to provide added value; and opportunities to build on the state’s investment by securing external funding related to broadening the reach of technologies. The CAVS Extension Center at Canton provides direct engineering support for Nissan and its major suppliers; engineering extension work for Mississippi’s manufacturers; workforce development, education, and training; and business systems and information technologies. Significantly, CAVS technologies are not restricted to the automotive industry but also are applicable to other industrial sectors, supporting a university and state goal of increased competitiveness and more jobs for all Mississippians. By developing superior computational and information technologies for Mississippi industry, the center’s goal is to provide the state a strong competitive advantage.

Randall M. German, Director, Center for Adv Vehicular Systems
C. Dean Norman, Ph.D., Director, Center for Advanced Vehicular Systems – Extension
Mark F. Horstemeyer, Ph.D., CAVS Chair, Computational Manufacturing and Design; Professor, Mechanical Engineering
Zachery Rowland, M.S., Thrust Leader, Human and Systems Engineering
Michael Mazzola, Ph.D., Thrust Leader, Alternative Power; Professor, Electrical and Computer Engineering
Wayne Causey, Ph.D., Manager, Commercialization

CENTER for EDUCATIONAL and TRAINING TECHNOLOGY

Office: 309 Bost, 512 Russell Street
The Center for Educational and Training Technology was created in 1996 to provide for the development and implementation of innovative technologies through an interdisciplinary approach involving a wide
The GeoResources Institute (GRI) was created at Mississippi State University to integrate academic and operational campus units active in research and educational activities in resource management through the use of geospatial technologies (e.g. Earth remote sensing, geographic information systems). Initially GRI’s focus was in agriculture, forestry, water resources, information technology, visualization of complex datasets, and computational modeling, but recently expanding to include geospatial applications in any suitable domain, such as climate, weather, and oceanography to support state and local government issues, and economic development.

The GeoResources Institute currently supports the research efforts of faculty from 22 departments within 6 Colleges/units within Mississippi State University, and collaborates with other public and private research institutions.

The mission of the Institute is to understand Earth’s natural and managed systems to provide comprehensive solutions for socioeconomic and environmental requirements. Its vision is to be a world leader in advancing the state-of-the-art in development and integration of spatial technologies and resource management.

The objectives of the Institute are to:
- Increase the fundamental understanding of Earth’s natural and managed resource systems through the use of geospatial technologies.
- Develop resource management capabilities and visualization techniques that enhance computationally-intensive decision support systems.
- Increase the productivity and profitability of renewable resources through the application of science and advanced technologies.
- Develop management strategies to enable sustainable economic development, human and natural community viability, and resource conservation.
- Develop advanced computational systems capable of knowledge discovery and accurately simulating and visualizing geospatial environments.
- Utilize research and technologies to improve local, regional, and national socioeconomic development.
- Develop and maintain an informed public receptive to the use of geospatial information.

The GeoResources Institute is managed by a team of science professionals having diverse backgrounds in technology development and academic achievement. Dr. David Shaw serves as Director of the GeoResources Institute.

David R. Shaw, Ph.D., Director
Jon H. Arvik, Ph.D., Associate Director, GRI-Stennis
Jeffrey A. Ballweber, J.D., Associate Director for Policy
Charles L. Hill, M.S., Associate Director for Applications
Robert J. Moorhead, Ph.D., Director, Visualization Analysis and Imaging Laboratory
Lori M. Bruce, Ph.D., Associate Professor
John D. Byrd, Jr., Ph.D., Extension/Research Professor
William H. Cooke, III, Ph.D., Associate Extension Professor
James Corbin, M.S., Research Scientist
Qian Du, Ph.D., Assistant Professor
David L. Evans, Ph.D., Associate Professor
Patrick Fitzpatrick, Ph.D., Associate Research Professor
Jim Fowler, Ph.D., Associate Professor
W. Daryl Jones, Ph.D., Assistant Research Professor
Roger L. King, Ph.D., Professor
QiQi Lu, Assistant Professor
John D. Madsen, Ph.D., Assistant Research Professor
James L. Martin, Ph.D., Professor
William H. McAnally, III, Ph.D., Research Professor
Georgy Mostovoi, Ph.D., Assistant Research Professor
Charles G. O’Hara, Ph.D., Associate Research Professor
Kambhram R. Reddy, Ph.D., Research Professor
Daniel B. Reynolds, Ph.D., Professor
Scott A. Samson, Ph.D., Associate Extension Professor
Erdem Topasakal, Ph.D., Assistant Professor
Jayaram Veenamony, Ph.D., Assistant Research Professor
Gerald W. Wilkerson, Ph.D., Assistant Professor
Nicolas H. Younan, Ph.D., Professor

RESEARCH and CURRICULUM UNIT for WORKFORCE DEVELOPMENT and VOCATIONAL and TECHNICAL EDUCATION
Office: 601 Hogan Street
The Research and Curriculum Unit for Workforce Development and Vocational and Technical Education (RCU) is jointly sponsored by the Mississippi Department of Education, Office of Vocational and Technical Education, and the Office of Research of Mississippi State University.

The mission of the RCU is to provide leadership in state workforce development efforts and coordinate those efforts with secondary and community/junior college vocational technical education curriculum development. The RCU cooperates with other state agencies in uniting and coordinating workforce development efforts. It provides instructional leadership in vocational and technical education activities, working with statewide curriculum frameworks and initiatives. Professional development activities are provided for educators across the state, enhancing their ability to provide optimal utilization and implementation of materials and research findings for the classroom. Research activities include assistance with state-wide vocational-technical assessments, reporting and innovations. The RCU staff works with personnel from local school systems, community/junior colleges, state universities, the Mississippi Department of Education, the U.S. Office of Education, and other agencies and organizations.

Patricia Abraham, Ed.D., Director and Research Professor, Coordinator for Professional Development
James S. McCull, Ph.D., Research Professor, Coordinator for Agriculture and Special Initiatives, and Assistant Professor, Agricultural Information Science and Education
Lemond Irvin, Ed. D., Assistant Research Professor, Coordinator for Workforce Development
Cindy Morgan, Ph.D., Associate Research Professor, Coordinator for Curriculum, Research and Assessment

SCIENCE and TECHNOLOGY RESEARCH CENTER
Office: John C. Stennis Space Center
The Science & Technology Research Center (STRC) has been located at The John C. Stennis Space Center (SSC) in Hancock County, MS., since the mid sixties. It provides research coordination and fact-finding assistance as a liaison office to all MSU faculty with European State Agencies at SSC and elsewhere on the Mississippi Gulf Coast. Additionally, STRC coordinates research projects through the Mississippi Research Consortium (MRC) for MSU, UM, JSU, and USM.

Jon H. Arvik, Ph.D., Director
Jim H. Corbin, Research Scientist

SOCIAL SCIENCE RESEARCH CENTER
Office: 1 Research Blvd., Suite 103
The Social Science Research Center (SSRC) was established at Mississippi State University in 1950 to promote, enhance and facilitate social science research and related scholarly activities. The Center is organized with university-wide responsibilities and reports to the Vice President for Research and the Vice President for Agriculture, Forestry and Veterinary Medicine. housed in the Mississippi Research and Technology Park adjacent to the MSU campus, the Center offers a superior research environment with an impressive array of research opportunities and options, state-of-the-art facilities, laboratories, and support units that enhance and expand both the scope and quality of social science research. The SSRC fosters a rigorous independent research environment to ensure objective, relevant and unbiased analyses.

The success of the SSRC relies primarily on the expertise, talents and entrepreneurial skills of its scientists. Individual scientists, or self-organized teams of researchers, provide the impetus and direction of funded research projects. They determine their research agendas and benefit from the SSRC facilities as they so choose. Research fellows and research associates, supported by an administrative staff and graduate and undergraduate research assistants, conduct both sponsored and unsponsored research projects. The Center often becomes a place where social scientists team with colleagues from agriculture, engineering, and other disciplines. The SSRC also forms partnerships, strategic alliances and collaborative agreements with entities such as state agencies, off-campus national-level research organizations, and professional groups. These various interdisciplinary research enterprises provide a steady stream of innovative projects and creative investigations. Funding for projects comes from a variety of sources including federal and state agencies, foundations, MSU units, and other public and private entities.

The Social Science Research Center is committed to conducting objective, rigorous and unbiased research on social, economic, political, human resource, and social-environmental problems facing the state, nation and world; to providing a support system for the university to plan, develop, secure funding for, and conduct social research on problems of interest to the scientific community and to consumers of research findings; to maintaining a mechanism whereby existing social science research capabilities in the university can be matched with funding sources; to contributing to the university’s graduate and undergraduate program by involving students in research projects through assistantships and other work arrangements; and to offering a vehicle for unique social research and public service programs that do not fit more traditional academic structures. The Center also recognizes as part of its mission the importance of combining the expertise and capacities of multiple institutions, disciplines and professions in addressing complex problems. The Center seeks to develop perspectives and approaches that lead to effective cooperative investigations. The SSRC follows the land grant tradition by serving Mississippi and the nation through research, education and public service.

Arthur G. Cosby, Ph.D., Director of SSRC, Director of Mississippi Health Policy Research Center, Executive Director of the Rural Health, Safety and Security Institute, and Research Fellow
Elisabeth Wells-Parker, Ph.D., Associate Director of Cognitive and Behavioral Research; Co-Director of Cognitive and Behavioral Research of the Rural Health, Safety and Security Institute; Professor and Research Fellow
Martin L. Levin, Ph.D., Co-Director of Sociological and Organizational Research of the Rural Health, Safety and Security Institute, Research Fellow
R. Gregory Dunaway, Ph.D., Coordinator, Crime and Justice Research Unit, Professor and Research Fellow
Wolfgang Frese, Ph.D., Coordinator, Survey Research Unit; Research Professor and Research Fellow
Jennifer O. Flannagan, B.S., Coordinator of Administrative and Research Services
Duane A. Gill, Ph.D., Associate Director for Research on Society and the Environment, Co-Cordinator, Unit for Community and Environmental Studies, Professor and Research Fellow
Ruth J. Haug, Ph.D. Coordinator of the General Research Program; Associate Research Professor and Research Fellow
William E. Henderson, MBA, M.Ed., MASEP Operations Coordinator
Domenico Parisi, Ph.D., Co-Cordinator, Unit for Community and Environmental Studies; Associate Professor and Research Fellow
Jarryl Ritchie, B.A., Coordinator, Monitor Laboratory; Research Associate and Research Fellow
Liesel A. Ritchie, M.A., Coordinator, Decision Support Laboratory, Scientist, and Research Fellow
Stephen D. Shaffer, Ph.D., Coordinator, Mississippi Poll, Professor and Research Fellow
Ronald W. Snow, Ph.D., Coordinator, MASEP Program Development and Research, Associate Research Professor and Research Fellow
Linda Southward, Ph.D., Coordinator, Family and Children Research Unit, Research Professor and Research Fellow

T.K. MARTIN CENTER for TECHNOLOGY and DISABILITY
Office: T.K. Martin Center
The T.K. Martin Center for Technology and Disability at Mississippi State University was created in 1994 as a unique entity which provides direct clinical service in assistive technology for individuals with disabilities in an environment that promotes application and research.
The T.K. Martin Center for Technology and Disability works with individuals to provide evaluation, prescription and training of a variety of assistive technologies, from design and fabrication of mechanical devices to computer based technologies. The Center collaborates with other University Centers, Institutes and Departments on research issues involving new technologies and technology integration issues.

The T.K. Martin Center for Technology and Disability is located adjacent to the Longest Student Health Center.

Janie Cirlot-New, M.S., CCC/SLP, Director
Laurie Craig, M.A., CCC-SLP, Speech Pathologist
Chid Gates, OTR/L, Occupational Therapist
Judy G. Duncan, M.S., Case Manager
Jill T. Ethridge, OTR/L, Occupational Therapist
Lucinda McMaster, M.Ed, Special Educator
Wes Perry, M.S., M.B.E., ATP, Rehabilitation Engineer
Bac Shelton, B.F.A., Art Instructor
Christian Toney, M.S., CCC-SLP, Speech Pathologist
Andrew G. Whistone, M.S., BME, ATP, Rehabilitation Engineer
Danielle Wheat, B.S., Dance Instructor

TRANSPORTATION RESEARCH CENTER
Office: 235 Walker Hall

The Transportation Research Center (TRC) was established in 1997. The primary function of TRC is to conduct scholarly research designed to advance the current state of technologies in the State of Mississippi, and to provide educational opportunities to the Mississippi Department of Transportation (MDOT) personnel for the advancement of their professional careers. The TRC acts in coordination with the MDOT Division of Research to screen proposals submitted to TRC and jointly awards the research contracts. TRC provides on-campus administration of the research projects, and provides credit and non-credit instructional programs as requested by MDOT.

Thomas D. White, Ph.D., Director

FOREST and WILDLIFE RESEARCH CENTER
SPATIAL INFORMATION TECHNOLOGIES LAB

The term “Spatial Information Technologies” (SIT) describes any information collection and/or manipulation technologies used to determine the physical characteristics and spatial relationships of objects (e.g. trees, stands, soil types, woodlands, wildlife food plots, lakes, streams, roads, buildings). SIT includes the disciplines of: Remote Sensing (Satellite Data, Aerial Imagery), Global Positioning Systems (GPS), and Geographic Information Systems (GIS).

The Spatial Information Technologies Laboratory (SITL) is located in the College of Forest Resources/Forest and Wildlife Research Center (CFR/FWRC). It fulfills a broad commitment to excellence in research and teaching in SIT. The SITL has computer facilities that make it unique for forestry research in Mississippi. The Lab computing environment includes high-performance Unix workstations, PCs, color printers and plotters. The SITL supports a complete array of GIS, image analysis, and statistics software packages. GPS units and accompanying software are also used for collection of location data in the field.

This powerful combination of computer hardware and integrated software gives faculty, staff, and students at the CFR/FWRC unprecedented capabilities for natural resource mapping, assessment, and monitoring. Researchers are applying these facilities to answer resource availability questions by using them for vegetation mapping and assessment and economic analysis of forest resources. Data available at the SITL for this work include: a complete GIS of Mississippi obtained from the Mississippi Automated Resource Information System (MARIS), digital satellite data coverage of the entire state, and an archive of recent and historic aerial photography and maps of large parts of the state. Research projects include: use of satellite imagery in forest inventory systems, combining high-resolution imagery with LIDAR data for forest tract assessment, and classifying forest stands using digital frame camera imagery.

The SITL supports resident instruction offered by the Department of Forestry through transfer of research results into courses such as Spatial Technologies in Natural Resource Management, Remote Sensing Applications, and GIS for Natural Resource Management. Graduate programs are offered that lead to Masters and Doctor of Philosophy degrees with concentration in SIT.

For more information on the SITL, research, or academic programs, contact:
Dr. David L. Evans, Department of Forestry

SCHOOLS and COLLEGES

COLLEGE OF ARCHITECTURE, ART, and DESIGN

SCHOOL of ARCHITECTURE RESEARCH

Office: 240 Giles

As architecture combines aspects of both science and art, research within the School of Architecture is more than either basic research or creative expression. Research in the discipline of architecture aims to improve the quality of life and range from the development of new materials or building components which make buildings more efficient, safer, less expensive, or more durable to the design of prototypical communities that are environmentally sensitive, energy efficient, and economically viable. The research program of the School of Architecture includes the Carl Small Town Center (CSTC), the Jackson Community Design Center (JCDC), the Design Research and Informatics Lab, and the Educational Design Institute (EDI).

Established in 1979, the Carl Small Town Center seeks to initiate theoretical and applied research, and to serve as a national focus for the collection, storage, dissemination, and application of information pertinent to issues of special interest in small towns. The Carl Small Town Center activities include graphic and photographic documentations and computer imaging of the small-town scene. The CSTC has participated in design case studies, environmental impact studies, and economic and marketing analyses. The CSTC provides research and service assistance to towns through the redevelopment of downtowns and the implementation of other comparable community improvement initiatives. Assistance projects may include: organizing for community improvement, community design, economic diversification, town planning, conservation of architectural and historic resources, affordable housing design and technology, and other activities that affect quality of life in the community.

Jackson Community Design Center activities include interdisciplinary studies of urban living and working environments. Studies focus on environmental factors associated with crime prevention, history, social behavior, building material and land use-feasibility analysis for urban revitalization efforts. The JCDC endeavors to provide technical, educational, design, and research assistance to neighborhoods and groups within the Jackson urban community in order to facilitate their revitalization initiatives. Assistance projects include: affordable housing design, urban public space-improvement design, programming and cost estimating, educational seminars, identification of and research on historically significant structures, and feasibility studies to encourage new development.

The work of the Design Research and Informatics Lab aims to apply state-of-the-art visualization technology to problems that yield significant improvements in the quality of life for the present and beyond. Located in Giles Hall, it is a state-of-the-art laboratory for the creation of multi-media productions, including video tape and CD-ROM, as well as for the development of new graphics and visualization software. Graduate and undergraduate students participate in projects that apply visualization technology to a range of multi-disciplinary problems. Work ranges from design studies of buildings and facilities on the MSU campus through master planning and visualization work for major facilities within the state, to a variety of projects of national and international scope that bring together such disciplines as archaeology, anthropology, history and the sciences.

The Educational Design Institute is a collaborative initiative between the College of Education and the School of Architecture. The EDI is charged with exploring the changes in educational delivery and with rethinking how schools envision, plan, design, manage, and use their educational facilities. The EDI is conducting surveys of educational facilities and preparing design guidelines and documents for school-facilities design. To achieve the goals of establishing the EDI as both a collaborative partner for educational-facility planning and a leader in educational-design innovation in the South, the Institute is pursuing collaborative projects and initiatives with local school districts, the Small Town Center, the Mississippi Department of Education, and private foundations.

Other research activities within the School of Architecture focus on humanities and technology studies. Humanities include such work as new methodologies for programming, planning and design, anthropometric modeling and evaluation, architecture theory and history research, visual imagery and its impact, post-occupancy evaluation of buildings by their user, etc. Technology studies include technological evaluation of building materials and methods, energy design evaluation, solar energy equipment, construction, and testing.
James L. West, M. Arch., A.I.A., Dean
Jane Britt Greenwood, M.Arch., A.I.A., Interim Associate Dean and Director of Research
Larry R. Barrow, D. Des., A.I.A., Director, Digital Research and Imaging Laboratory
Kimberly A. Brown, M. Arch., A.I.A., Director, Carl Small Town Center
David Perkes, M. Arch., Director, Jackson Community Design Center
John Garner, Ph.D., Co-Director, Educational Design Institute

COLLEGE OF ARTS AND SCIENCES

BIOLOGICAL and PHYSICAL SCIENCES RESEARCH INSTITUTE

Office: 208 Allen Hall

Support for research activities in the biological and physical sciences comes both from the University and from outside sources, including state and federal agencies, private industry, and foundations. Some projects are carried out by staff members working independently or with graduate students, while other projects are multidisciplinary in nature and are conducted in cooperation with staff members from other colleges in the University, the Mississippi Agricultural and Forestry Experiment Station and the Mississippi State Chemical Laboratory. Staff members also participate in multi-institutional projects in cooperation with personnel from the University of Mississippi, the University of Southern Mississippi and Gulf Coast Research Laboratory.

The results of the research efforts are published in appropriate scientific journals and, in the case of graduate student participation, become the basis of theses and dissertations.

The research staff of 21 consists of faculty and staff members from the departments of Biological Sciences, Chemistry, Geosciences, Mathematics and Statistics, and Physics and Astronomy.

Philip B. Oldham, Ph.D., Dean, College of Arts and Sciences

CENTER for COMPUTATIONAL SCIENCES

Office: 2 Research Boulevard

The Center for Computational Sciences (CCS) is part of a coalition of member centers and groups housed at the ERC (formerly known as the Engineering Research Center) that share a common core objective of advancing the state-of-the-art in computational science and engineering using high-performance computing; a common approach to research that embraces a multi-disciplinary, team-oriented concept; and a commitment to a full partnership between education, research, and service.

The mission of CCS is to enhance the applicability and usability of simulations involving interacting physical, chemical, biological, computer science and engineering phenomena by developing integrated computational environments and crosscutting tools that synergistically couple information technology with computational science and engineering. One of the main goals of the CCS is educating both undergraduate and graduate students in computational science and cybersecurity. The availability of such a program of study for students will lead to a better-educated populace and work force in the State of Mississippi. Students are encouraged to participate in multidisciplinary research. These areas of research typically cut across both departmental and college boundaries. This provides the student with a broad education and tool set that will enable them to succeed in using computational science and cybersecurity methodologies in applied research, basic research, or industrial settings.

Mark A. Novotny, Ph.D., Director

THE COBB INSTITUTE of ARCHAEOLOGY

Office: Cobb Institute Building

The Cobb Institute of Archaeology was founded in July, 1971, at Mississippi State University by Mr. Cully A. Cobb (Class of 1908) and Mrs. Lois Dowdle Cobb, for instruction and research in Archaeology with emphasis upon the origins of Western European Civilization and the Indians of the South, particularly Mississippi. The Institute was endowed by the Cobbs to complement the university's activities in archaeological instruction, research and service.

The Institute provides active support for the instructional program in archaeology offered through the Department of Sociology, Anthropology and Social Work and the Department of Philosophy and Religion. Research and field work are actively pursued, primarily in the Middle East and the Southeastern United States. The Institute actively supports an archaeological field school offered in alternate summers in the Middle East and Mississippi. The Institute is housed in two specially designed archaeological buildings which include classrooms, archaeological laboratories, environmentally controlled artifact storage areas, and a museum in which archaeological exhibits are made available to students and the public.

S. Homes Hogue, Ph.D., Physical Anthropologist
Paul F. Jacobs, Ph.D., Middle Eastern Archaeologist
John W. O’Hear, M.A., North American Archaeologist
Janet L. Rafferty, Ph.D. North American Archaeologist
Joe D. Seger, Th.D. Director and Middle Eastern Archaeologist
Evan Peacock, Ph.D., North American Archaeologist
James W. Hardin, Ph.D., Middle Eastern Archaeologist

ENGINEERING RESEARCH CENTER

Office: 2 Research Boulevard

See entry for ERC under College of Engineering. See also Center for Computational Sciences under College of Arts & Sciences.

INSTITUTE for the HUMANITIES

Office: 209 Allen Hall

In order to organize the scholarly activities in the area of the humanities, the Institute for the Humanities (IH) has been established. Support for scholarly work in the humanities has been obtained from the National Endowment for the Humanities, from the Mississippi State University Development Foundation, and from private sources. Staff members have been authors of books and articles and have presented papers at meetings of learned societies.

The research staff consists of four faculty members from the departments of Art, Communication, English, Foreign Languages, History, and Philosophy and Religion.

Donald J. Mabry, Ph.D., Director

THE JOHN C. STENNIS INSTITUTE of GOVERNMENT

Office: The Depot Building

The John C. Stennis Institute of Government performs a threefold mission; (1) to enhance the efficiency and effectiveness of Mississippi State and local government through basic and applied research, training, technical assistance and service; (2) to provide technical assistance and research for both rural development in Mississippi and regional activities in the Southeast; and (3) to promote civic education and citizen involvement in the political process. The Stennis Institute’s programs relating to state and local government include the State Executive Development Institute for key state officials; the Governing Institute for Mayors, and technical assistance to state agencies and local governments. The Institute’s research on rural development includes an assessment of local officials’ perceptions of state economic development activities. The Stennis Institute’s civic education programs include participation in the Congressional Insight program, as well as a variety of state and national programs.

Funds for The Stennis Institute of Government come partially from interest on more than $1.7 million that has been raised by the Mississippi State University Development Foundation as a memorial to Senator John C. Stennis, but primarily from grants and contracts from outside sources.

W. Martin Wiseman, Ph.D., Director
Philip S. Pierce, M.P.P.A., Research and Development Coordinator
Judith Phillips, M.B.A., Research Associate I
Keith A. Smith, Research Associate I
James Markham, M.P.P.A., Research Associate I
Joe T. Adams, Ph.D., Research Associate I
Jon Canfield, B.S., Research Associate I
Wynda J. Cole, M.S., Project Director
Ben Collins, M.S., Research Associate I
Judy F. Fulghum, Business Manager
Philip D. Hardwick, M.B.A., Project Coordinator
C. Denise Keller, M.S., Research Associate I
R. Stephen Williams, M.S. Research Associate I
COLLEGE of BUSINESS and INDUSTRY

DIVISION of BUSINESS RESEARCH and SERVICES (DBRS)

Office: 240 McCool Hall

The Division of Business Research and Services is an integral part of the College of Business and Industry. Recently reorganized, this office is comprised of four distinct and varied units. The Division of Business Research (DBR) is one of the major research organizations of the University. It was established in 1939 as the Bureau of Business and Economic Research to study scientifically the business, economic and governmental problems of the state under the direction of the College of Business and Industry. Continued growth of the Bureau led to the eventual establishment of the Division of Business Research with several distinct responsibilities. First, the Division participates in contracted research, cooperating with interested organizations that have specific problems requiring investigation. Second, the Division serves as the coordinating center of funded research for the College of Business and Industry and offers services to faculty. Third, the Division works with the MSU Office of Research in seeking grants for faculty members and to arrange feasibility studies before binding contracts are written.

Keith T. Mead, Director
Charles U. Pittman, Ph.D., Research Director

UNIVERSITY/INDUSTRY CHEMICAL RESEARCH CENTER

Office: 1115 and 3338 Hand Lab

The University/Industry Chemical Research Center (UICRC) began doing contract work for industries in 1982. The UICRC has the following major goals: 1) to assist Mississippi industry by performing chemical research to aid in their product development, 2) to work on chemistry related problems for any industry, 3) to teach graduate and undergraduate students techniques of industrial chemistry, 4) to help attract chemical based industry into the state, and 5) to help train B.S., M.S., and Ph.D. Chemists and attract visiting scholars and postdoctoral fellows for specific functions for industry.

The UICRC conducts grant and contract research and can work with most industries to develop mutually satisfactory agreements involving any necessary secrecy arrangements. It is also possible to work on short or long term projects and to arrange feasibility studies before binding contracts are written.

Keith T. Mead, Director
Charles U. Pittman, Ph.D., Research Director

COLLEGE of EDUCATION

BUREAU of EDUCATIONAL RESEARCH and EVALUATION

Office: 328 Allen

The Bureau of Educational Research and Evaluation (BERE) was authorized by the Board of Trustees in the Spring of 1966. This research organization is an integral part of the College of Education and is a cooperating unit of the MSU Office of Research.

The major functions of the Bureau are:
1. To engage in basic and applied research pertaining to all phases of education.
2. To consult with faculty and students about problems of research design and analysis.
3. To provide aid in dissemination of research findings.
4. To assist faculty/staff in the development of proposals for research and program development in the College of Education.

Iva. B. Ballard, Research Associate I

CENTER for EDUCATIONAL PARTNERSHIPS (CEP)

400 Morrill Road

The Center for Educational Partnerships is an integral part of the College of Education, functioning as a facilitator of technical and support services to the public school districts of Mississippi.

Major functions of the Center include:
1. Providing administrative support for the Program for Research and Evaluation of Public Schools, Inc (PREPS, Inc.) PREPS is a private nonprofit consortium composed of 88 public school districts.
2. Providing administrative support for the Mississippi Writing/Thinking Institute. The Institute is a state-wide project chartered by the National Writing Project.
3. Providing administrative support for the World Class Teaching Project. The Project is a state-wide initiative intended to support the certification of Mississippi teachers through the National Board of Professional Teaching Standards.
4. Providing administrative support for the America Reads - Mississippi Project. This project is intended to support and enhance the reading performance of elementary students in participating schools located in the State’s 14 Level 1 accredited school districts.
5. Providing administrative support for the Educational Design Institute. This project focuses on improving the educational design of education facilities and offering educational planning consultation and other services to school districts.
6. Administering the Mississippi Superintendent Mentor Program. The Mentor program provides training and consultation for newly selected Mississippi school superintendents.
7. Providing assistance in the development of a National Center for the Community College.

Cynthia Ward, Ed.D., Executive Director
Lisa Anderson, Project Director
John Garner, Ed.D., Project Director
Sarah Howard, M.S., Project Coordinator
Kim Patterson, Ed.D., Director, Writing/Thinking Institute
Theresa Hall-Brown, M.A., Sr. Regional Coordinator

REHABILITATION RESEARCH and TRAINING CENTER on BLINDNESS and LOW VISION

Office: 150 Industrial Education Building

The Rehabilitation Research and Training Center (RRTC) on Blindness and Low Vision was established in 1981 at Mississippi State University to serve all states and territories of the U.S. It is cooperatively sponsored by the National Institute on Disability and Rehabilitation Research (NIDRR) and the College of Education. The mission of this National Center is to enhance employment and independent living outcomes for individuals who are blind or visually impaired through research, training, education, and dissemination. The programs of the RRTC are based on the two following assumptions:

1. All blind and severely visually impaired people have a right to work at a wage comparable with non-disabled persons and in careers which provide satisfaction and opportunity for advancement;
Many persons who are blind or visually impaired may obtain satisfying gainful employment through the utilization of research and training programs.

RESEARCH PROGRAM: We are involved in a variety of research activities relating to the employment and independent living needs of persons who are blind and visually impaired and persons who are aging with hearing and vision loss. NIDRR-funded projects include investigations of disability-related legislation (i.e., Social Security Administration’s Ticket to Work Program, the Rehabilitation Act Amendments, and the Americans with Disabilities Act); analysis of several national datasets; identification of best practices in overcoming environmental barriers to employment; needs assessment of State Business Enterprise Programs; evaluation of the use and accessibility of assistive technology; and development of strategies to improve communication systems, transportation, and job placement. We also conduct program evaluation research for a number of national and state rehabilitation agencies and organizations. We actively collaborate with major stakeholder organizations including national consumers groups, other RRTCs, and other private and public organizations throughout the US.

TRAINING PROGRAM: The RTC is linked to the blindness field through its training program the goal of which is to influence employment of persons who are blind or severely visually impaired by facilitating use of the most current rehabilitation and education research and service delivery techniques. This goal is accomplished through development of materials that make research findings readily usable by professionals, the dissemination of these materials, and the training of rehabilitation and education service providers. Both pre-service and in-service training are provided through the Center and Mississippi State University.

The RTC conducts in-service training programs throughout the United States. Center staff are heavily involved in training programs sponsored and cosponsored by other agencies within the blindness field. Additionally, the Center conducts specially designed training programs on a contractual basis for various rehabilitation and education agencies.

Pre-service training is conducted in two ways. First in cooperation with the MSU Department of Counseling, Education Psychology, and Special Education, RTC staff members teach courses designed to specifically prepare new rehabilitation professionals to work with persons who are blind or severely visually impaired. Second, the RTC sponsors graduate assistantships, which enable students to acquire special skills necessary for teaching and counseling persons who are blind and severely visually impaired. New research has been promoted through student dissertations and theses, as well as the Anne Sullivan Macy Fellowship and the Jennings Randolph Research Awards Program.

J. Elton Moore, Ed.D., CRC, Director and Professor of Counselor Education
Brenda Cavenaugh, Ph.D., CRC, Research Director and Associate Agency Professor
B.T. Kimbrough, M.A., Training Director

COLLEGE of ENGINEERING
CENTER FOR DoD PROGRAMMING ENVIRONMENT and TRAINING (PET)
Office: 2 Research Boulevard
The Programming Environment and Training (PET) activity is responsible for gathering and deploying the best ideas, algorithms, and software tools emerging from the national high performance computing infrastructure into the DoD user community as part of the DoD High Performance Computing Modernization Program. MSU is the prime contractor for a university/industry team in this effort which falls under the Service portion of MSU’s tripartite mission.

The PET contract marshals bold and innovative university/industry/government expertise to provide the essential user support that is necessary to address the wide variety of research and development demands arising from the science/technology and test/evaluation programs supporting DoD’s weapons development and war fighting support systems.

MSU’s leadership partner in the PET effort is the Ohio Supercomputer Center. Other members of the MSU-led coalition include the Ohio State University, the University of Texas, the University of Tennessee, the University of Alabama at Birmingham, the University of Hawaii, Jackson State University, Computer Sciences Corp, and SAIC.

Joe Thompson, Ph.D., Director

DIAGNOSTIC INSTRUMENTATION and ANALYSIS LABORATORY (DIAL)
Office: 205 Research Boulevard
The Diagnostic Instrumentation and Analysis Laboratory (DIAL) at Mississippi State University is a multidisciplinary group of scientists and engineers focused on solving important problems in energy, the environment, industrial processes, and infrastructure.

Since its inception in 1979, DIAL has established a tradition of excellence in characterization science and engineering. From the beginning, DIAL’s mission has been to enhance its customers’ performance through characterization - measurement and testing. DIAL performs this mission for a diverse group of customers ranging from the US Department of Energy to NASA, from industrial giants like Dow Chemical to small companies like Mississippi Ethanol.

A research unit within the College of Engineering, DIAL is located in the Mississippi Research and Technology Park. DIAL’s professional and support staff are housed in a state-of-the-art 58,000 square foot facility containing 16 laboratories, and a High-Bay area that supports testing at up to pilot-plant scale. An additional high-bay area has recently been completed that will support additional large-scale testing. DIAL has a highly capable analytical lab that supports DIAL’s own projects as well as solving difficult analytical problems for clients in industry and government.

DIAL is a leader in development of inexpensive, sensitive, yet robust instrumentation to characterize difficult real-world environments. DIAL is at the forefront of using fiber optic components, and advanced optical and imaging technology. This spans in-situ characterization of boilers at power generation facilities to moisture sensing in the Smithsonian. DIAL can characterize industrial technologies or processes either at its own facilities or at its customers’ locations. It offers students non-traditional educational experiences such as working with directly with industry to solve its problems.

M. John Plodinec, Ph. D., Director
Charles A. Waggoner, Ph. D., Deputy Director

ENGINEERING RESEARCH CENTER (ERC)
Office: 2 Research Boulevard
The Engineering Research Center was created in 1990 by the University and the National Science Foundation as an interdisciplinary research center within the College of Engineering. Its primary mission was to enhance global competitiveness of United States industry by reducing the time and cost necessary for complex field simulations for engineering analysis and design. Such problems were among the computational grand challenges of the nation’s High Performance Computing and Communication Program and were cited by DoD and DoE as critical technologies for the 1990’s and beyond. Only a close collaboration among computational engineers, computer scientists and engineers, mathematicians and application engineers can achieve the necessary advances. The ERC was formed to provide such a cross disciplinary environment to support this research.

With the growth of research in the Engineering Research Center, computational science and engineering was identified in 2000 as a priority area of the University. In 2001, the mission of the Engineering Research Center was revised and expanded into a multi-college institute named the ERC.

The ERC is a coalition of member centers and groups that share a common core objective of advancing the state-of-the-art in computational science and engineering using high-performance computing; a common approach to research that embraces a multi-disciplinary, team-oriented concept; and a commitment to a full partnership between education, research, and service.

The ERC is currently comprised of the following five independent centers and groups. These centers and groups and their missions are as follows:

Center for Advanced Vehicular Systems: to research and develop manufacturing and design means and methods for producing vehicles of superior quality with advanced features and functions at reduced costs and shorter product development times by exploiting the underlying technologies for broader industrial use. The mission also includes engineering extension, education and workforce training outreach for industry. See entry for Center for Advanced Vehicular Systems under Centers and Institutes.

Center for Computational Sciences: to enhance the adaptability and usability of simulations involving interacting physical, chemical,
biological, computer science and engineering phenomena by developing integrated computational environments and crosscutting tools that synergistically couple information technology with computational science and engineering. See entry for Center for Computational Sciences under College of Arts and Sciences.

**Center for DoD Programming Environment and Training:** to gather and deploy the best ideas, algorithms, and software tools emerging from the national high performance-computing infrastructure into the DoD user community as part of the DoD High Performance Computing Modernization Program (HPCMP).

**Computational Simulation and Design Center (SimCenter):** to serve Mississippi State University, U.S. government and industry through research and development of advanced computational modeling, simulation and design of physical systems to solve real world problems. See entry for Computational Simulation and Design Center under College of Engineering.

**GeoResources Institute:** to understand Earth’s natural and managed systems and provide comprehensive solutions for socioeconomic and environmental requirements, leading to improved quality of life. Its vision is to be a world leader in advancing the state-of-the-art in spatial technologies and resource management. See entry for GeoResources Institute under Centers and Institutes.

The ERC mission is to serve the University, State, and Nation through excellence in computational science and engineering. Our goal is to become the nation’s premier interdisciplinary high-performance computing research facility.

David Marcum, Ph.D., Director, Computational Simulation and Design Center

Randall German, Director, Center for Advanced Vehicular Systems
Mark Novotny, Ph.D., Director, Center for Computational Sciences
Joe F. Thompson, Ph.D., Director, Center for DoD Programming Environment and Training

David Shaw, Ph.D., Director, GeoResources Institute

**ERC COMPUTATIONAL SIMULATION and DESIGN CENTER (ERC SimCENTER)**

Office: 2 Research Boulevard

The mission of the ERC Computational Simulation and Design Center (ERC SimCenter) is to serve Mississippi State University, U.S. government and industry through research and development of advanced computational modeling, simulation and design of physical systems to solve real world problems.

The ERC SimCenter was formed in July of 2000 as part of the Engineering Research Center (ERC) within the College of Engineering at MSU. The ERC SimCenter was formerly the Computational Fluid Dynamics Laboratory at MSU’s National Science Foundation Engineering Research Center (NSF ERC). Its research advanced the NSF ERC mission by reducing the time and cost required for complex field simulations of increased fidelity and scope for practical engineering analysis and design problems using high-performance computing. This achievement was made possible by advances in unstructured grid generation, accurate solution algorithms, scalable parallel computing, large-scale solution visualization, design optimization algorithms, user interfaces, and fully integrated simulation and design systems.

The ERC SimCenter has conducted modeling and simulation demonstrations of this advanced technology for design and analysis of submarines, surface ships, rotary and fixed-wing aircraft, launch vehicles, tactical missiles, automobiles, turbomachinery and blood pumps for sponsors such as DoD, NASA, Nissan and many others. The ERC SimCenter has a critical mass of computational research, development, and application specialists who comprise a focused multidisciplinary team. This team will continue to leverage basic and applied research and education in computational engineering to develop new enabling technology for computational modeling, simulation, analysis and design.

David Marcum, Ph.D., Director
Montgomery Hughson, Ph.D., Deputy Director

**EMERGING MATERIALS RESEARCH LABORATORY (EMRL)**

Office: 412 Simrall Engineering Building

The Emerging Materials Research Laboratory (EMRL), a unit within the Department of Electrical and Computer Engineering, was established to serve as a center of development in the State of Mississippi in the field of wide-bandgap semiconductor technology. This exciting field is where the next generation of advanced semiconductor devices will be developed, and EMRL will ensure that the State of Mississippi plays an active role in this important field of research.

The Emerging Materials Research Laboratory is housed in a class 10,000 clean room with class 1,000 work stations. The principal equipment of EMRL is a high-temperature, RF-induction-heated Chemical Vapor Deposition (CVD) system for growing state-of-the-art single-crystal silicon carbide. Materials characterization capabilities include electrical characterization and photoluminescence spectroscopy.

Michael S. Mazzola, Ph.D., Director

**GLOBAL CENTER for DESICCANT TECHNOLOGY (GCDT)**

Office: 210 Carpenter Engineering Building

The Global Center for Desiccant technology is a partnership of equipment manufacturers, users, utilities, and academe to foster research, development, validation, design, and applications of gas-fired desiccant technology. The Center will pursue desiccant topics collectively funded by affiliates and will make such information available to the HVAC industry. Additionally, research into topics of a proprietary nature and equipment testing with confidentially maintained are possible by contract with individual sponsors.

B. Keith Hodge, Ph.D., Director
Carl James, Ph.D., Associate Director

**HIGH VOLTAGE LABORATORY (HVL)**

Office: 115 Simrall Engineering Building

The Mississippi State University High Voltage Laboratory is a part of the Department of Electrical and Computer Engineering and serves as an independent, non-industrial, university center for high voltage engineering. The mission of the High Voltage Laboratory includes the following: research, evaluation/testing, and education activities. The principal objective of this multi-purpose laboratory is to meet the research and evaluation/testing needs of industry, utilities, and government, and to provide the necessary environment for an academic program associated with high voltage engineering.

The main laboratory of the High Voltage Laboratory has a floor area of 33.5m by 24.5m and a minimum ceiling height of 15.2m. This is the largest high voltage laboratory among North American universities. This unique laboratory is comparable in size to many industrial facilities and is equipped with the following energy sources: 3000kV, 57kJ lightning/switching impulse generator; 60Hz, 1000kV, 1000 kVA conventional test transformer, 100kV, 150kV and 250kV transformer test sets; a 1050kV, 7kW dc test set; and a portable IMJ current generator that can deliver a 2.00-kA lightning impulse.

Current research projects in the area of high voltage engineering include: lightning protection of electrical power transmission and distribution lines and substations; an electrical breakdown mechanism in high voltage polymer insulation; lightning impulse performance of composite insulation; electrical degradation of high voltage polymer insulators; and lightning protection of marine vehicles.

The High Voltage Laboratory frequently offers short courses in the area of high voltage engineering. The lecturers at the various short courses are recognized as outstanding experts in their field of high voltage engineering. They are from the U.S. as well as internationally recognized institutions and industries.

G. Marshall Molen, Ph.D., Director

**INDUSTRIAL ASSESSMENT CENTER (IAC)**

Office: 210 Carpenter Engineering Building

The primary mission of the Industrial Assessment Center is to serve the energy-related needs of small and medium-sized manufacturers within a geographic radius of approximately 150 miles of the Mississippi State University Campus. This is accomplished by analyzing the operating characteristics and energy requirements of manufacturing facilities to identify and recommend specific opportunities to conserve energy and/or utilize alternate energy sources, to improve productivity and minimize waste production, and to report the findings to the manufacturer together with estimates of their implementation costs, payback periods, and returns on investment. The Center fulfills its mission through site visits to plants which are carried out by the Center director or student teams under the supervision of the assistant director.
MISSISSIPPI CENTER for ADVANCED SEMICONDUCTOR PROTOTYPING (MCASP)

Office: 103 Edwards Laboratory

The Mississippi Center for Advanced Semiconductor Prototyping (MCASP), a unit within the Center for Advanced Vehicular Systems, was established in 1999 to serve as a prototyping laboratory serving both government and private industry for wide-bandgap semiconductor devices. Mississippi State University is a leader in wide-bandgap Silicon Carbide technology, and MCASP helps to move this important new semiconductor technology from the research laboratory to the military and commercial sectors.

MCASP is temporarily housed in the Edwards Laboratory, a standalone facility on the east side of the MSU campus, while a new facility is being constructed in the Mississippi Research and Technology Park, just north of the MSU campus. The principal equipment of MCASP is a Chemical Vapor Deposition system for growing state-of-the-art epitaxial semiconductor layers, Lam 9900 Plasma Enhanced Chemical Vapor Deposition System, Lam 9400 Inductively Coupled Plasma Etching System, Varian E-Beam Deposition System, Hitachi 808C Electron Microscope, a GCA 630B Wafer Stepper, and a fully automated Keithley Semiconductor Test and Characterization system. MCASP maintains active collaborations with industry, government, and academia worldwide. Further information is available at www.mcasp.msstate.edu or by calling 662-325-2500.

Michael Mazzola, Ph.D., Director and Professor of Electrical and Computer Engineering
Doug Seale, Laboratory Manager

MISSISSIPPI ENERGY RESEARCH CENTER (MERC)

Office: 210 Carpenter Engineering Building

Sponsored by the Division of Energy within the Mississippi Economic and Development Authority, the purpose of the Mississippi Energy Research Center is to develop, implement and coordinate energy and energy related research programs in Mississippi. This mission is accomplished by developing appropriate policies and procedures (a) for identification of priority research problems; (b) for collaborating with local and state government agencies, utilities, industry, other universities, federal government agencies and the Legislature in the formation of their research programs; (c) for selection of projects to be funded; and (d) for the transfer of technology which is produced by the research.

B. Keith Hodge, Ph.D. Director

RASPET FLIGHT RESEARCH LABORATORY (RFRL)

Office: Starkville Airport, 114 Airport Road

The Raspet Flight Research Laboratory (RFRL) is one of the premier university flight research facilities in the country. Established at Mississippi State University over 50 years ago by Dr. August Raspet, this aeronautical research laboratory possesses a rich heritage in full-scale flight vehicle development and test, advanced composites development and fabrication, computer controlled manufacturing, and test of prototype composite applications. The RFRL is an integral part of the Department of Aerospace Engineering. In addition to externally funded research, the RFRL has historically made significant contributions to the educational goals of the department and the University as a superior training ground and research facility for MSU students at the graduate and undergraduate level. Among universities engaged in aeronautical research, the RFRL is distinguished as one of the very few with the capability to design, build, and test prototypes of full-scale manned and unmanned aircraft. The RFRL has engaged in a broad spectrum of composite prototyping and flight test activities over the past years to include development and fabrication of the first turbine powered composite aircraft, the XV-11A (1959), the development of a Kevlar STOL wing for the XV-11A (1981), a Kevlar towed RPV for Socom (1984), a graphic wing and horizontal tail for a Beech A-36 (1986), the first all-graphite turbofan business jet (Honda UA-5 1989), a close range UAV for Westinghouse (1990), a one-third-scale mock-up of X-30 National Aerospace Plane (NASP) (1992) and a series of LoFlyte wind tunnel models (1994). Currently RFRL is focusing on the Unmanned Aerial Vehicle (UAV) area and is developing an Ultra Light UAV sensor platform.

B. Keith Hodge, Ph.D. Director

D. SERVICE UNITS

AGRIBUSINESS INSTITUTE

100 Lloyd-Ricks Building

The Agribusiness Institute has as its primary responsibility the coordination of teaching, research, and service activities in the broad area of agribusiness. Its mission is to assist agribusinesses through teaching, research, and service. The Agribusiness Institute is a joint venture between the Colleges of Agriculture and Life Sciences and Business and Industry. Association with the Institute is available to faculty and professional staff of the university who are actively engaged in agribusiness instruction, research, and service. Adjunct affiliation with the Institute is available to individuals involved in both private and public sector agribusiness activities external to Mississippi State University.

The major functions of the Institute are as follows:

1. To provide the operational vehicle for administering appropriate academic programs in agribusiness jointly conducted by the College of Agriculture and Life Sciences, the College of Business and Industry, and the Graduate School.
2. To stimulate, develop, and coordinate regional, national and international research and service programs in agribusiness management.
3. To seek external support from agribusiness firms and governmental agencies to advance research, internships, and continuing education programs in agribusiness management.
4. To assist faculty members associated with the Institute in broadening research support in agribusiness.
5. To serve as a vehicle of communication for students, staff, industry, and government agencies with interest in agribusiness management.

M. Darren Hudson, ABI Coordinator

DIVISION of AGRICULTURE, FORESTRY, and VETERINARY MEDICINE

BIOMEDICAL RESEARCH CENTER

The Biomedical Research Center, established in FY 1994 focuses on use of animal models for new and advanced areas of technology; such as, for bone regeneration and repair, for testing dietary fiber substitutes, for active compounds for human dietary substitutes, for periodontal disease, and for osteoporosis. The Center also collaborates in its research efforts with major biomedical and pharmaceutical firms developing and evaluating new products and technology for human health care. This research will lead to the commercialization of drugs that contribute to the quality of life for middle-age and geriatric people. In addition, the BRC has tested dietary substitutes that have anti-cancer and cardiovascular benefits. Appropriate new animal models are developed and standardized in the area of drug evaluation.

J. Greg Boring, DVM, Director

CENTER for ENVIRONMENTAL HEALTH SCIENCES

Office: r102 Wise Center

The Center for Environmental Health Sciences provides a focus for university activities directed towards maintaining and improving the quality of environmental health in Mississippi, the nation, and the world. Its goal is to facilitate the development, implementation, and administration of focused and of multidisciplinary efforts in research, training, and service in the areas of environmental health, with primary consideration of human health impacts. One of the primary focus areas in environmental health is discerning the effects of environmentally relevant chemicals on organisms, and, conversely, the effects that organisms have on these chemicals. The Center provides an interdisciplinary mechanism for uniting researchers from different MSU administrative units to work on common problems which require interdisciplinary solutions. Participants have appointments in the College of Veterinary Medicine, the College of Arts and Sciences, the Mississippi Agricultural and Forestry Experiment Station, and the Bagley College of Engineering. Major disciplines represented are biochemical toxicology, neurotoxicology, immunotoxicology, analytical chemistry, pharmacology, water quality, computational toxicology, and food safety. The Center unites MSU faculty members with appropriate expertise into teams which can respond to environmental health issues when general or specific needs arise.

Janice E. Chambers, Ph.D., D.A.B.T., Director
FLOW CYTOMETRY FACILITY
Office: Wise Complex, Room R2217

The Flow Cytometry Facility is a University-wide facility supported by the College of Veterinary Medicine. The facility has a two-fold purpose of providing flow cytometry support of scientists at Mississippi State University and consultation on research problems involving flow cytometry. The facility is staffed by two trained technicians.

Lesya Pinchuk, M.D., Ph.D., Director

OTHER UNITS

FOOD SCIENCE INSTITUTE

Mississippi State University has an active program of research, teaching and extension in the broad area of Food Science, Human Nutrition, Health Promotion and Food Safety. Research in Animal and Dairy Science, Poultry Science, Microbiology, Biochemistry and Molecular Biology, Biotechnology, Dairy Manufacturing, Human Nutrition, Agricultural Economics, Meats Processing, Seafood and Catfish Processing, Sensory Analysis, Agricultural and Biological Engineering, Horticultural Products Processing, Enology, and Food Engineering has been in progress for several years. Since 1966, Mississippi State has had an undergraduate teaching program and a Master of Science program in Food Science and Technology. In 1975 the doctorate in this area was approved. The name of the Food Science and Technology Department was changed to Food Science Institute in 1994 to reflect its activities in Food and Fiber Center, and Health Promotion) have joined the new department. Both undergraduate programs are interdisciplinary and currently involve the departments of Food Science, Nutrition and Health Promotion, Animal and Dairy Sciences and Poultry Science.

Since the research and teaching programs are interdisciplinary in nature, their effectiveness depends upon good coordination and cooperation. The Food Science Institute was authorized by the Board of Trustees of the Institutions of Higher Learning in the spring of 1968, and given the responsibility of coordinating research and teaching programs in the general and related areas of Food Science. The major functions of the Institute are as follows:

1. To stimulate and coordinate new or expanded research and extension programs;
2. To assist faculty and staff members in broadening the base of research support in the general area of food sciences;
3. To serve as the central vehicle of communication at MSU for students, staff, industry and government agencies with an interest in food science and related areas.

The Food Science Institute has been designated the “flag-ship” for food related matters in Mississippi. The general area of Food Science, including human nutrition, health promotion and food safety, is one of the five core areas of interest within the Division of Agriculture, Forestry and Veterinary Medicine. The Board of Trustees of Institutions of Higher Learning, the University, the Division of Agriculture, Forestry, and Veterinary Medicine, the faculty and staff of the Food Science Institute, the departments of Food Science, Nutrition and Health Promotion, the Food and Fiber Center of the Extension Service, and the other cooperating departments are all committed to making the Food Science, Nutrition and Health Promotion program one of the excellent ones in the U.S.

Benjy Mikel, Ph.D., Director
Robert W. Rogers, Ph.D., Director Emeritus
Darren Hudson, Ph.D., Agricultural Economics and Professor Emeritus ADS and FST
Menghe H. Li, Ph.D., Delta Research & Extension
Thomas G. Althen Ph. D, Animal and Dairy Science
Bruce Manning, Ph.D., Delta Research & Ext.
Linda S. Andrews, Ph.D., Cstl Research & Ext.
Douglas Marshall, Ph.D. Food Science, Nutrition & Health Promo.
Harri Bailey, Ph.D., Veterinary Science
Mike Martin, Ph.D. Animal and Dairy Science
David Burage, Ph.D., Cstl Research and Extension
Benedict Posadas, Ph.D., Cstl Research & Ext.
Sylvia Byrd, Ph.D., Food Science, Nutrition & Health Promotion
Edwin Robinson, Ph.D., Delta Research & Extension
T. C. Chen, Ph.D., Poultry Science
Brian Rude, Ph.D., Animal and Dairy Science
Yo Shen Chen, Ph.D., Food Science, Nutrition & Health Promotion

Wes Schilling, Ph.D., Food Science, Nutrition & Health Promotion
Jane Clary, Ph.D., Food Science, Nutrition & Health Promotion
Yvonne Thaxton, Ph.D., Poultry Science
Patti Coggins, Ph.D., Food Science, Nutrition & Health Promotion
Craig Tucker, Ph.D., Delta Research & Ext.
Stewart Dean, Food and Fiber Center
Filip To, Ph.D., Agricultural & Biological Engr.
Brent Fountain, Ph.D., Food Science, Nutrition & Health Promo.
Chingling Wang, Ph.D., Veterinary Medicine
Zahurul Haque, Ph.D., Food Science, Nutrition & Health Promo.
Charles White, Ph.D., Food Science, Nutrition & Health Promotion
Bill Herndon, Ph.D., Agricultural Economics
J. Byron Williams, Ph.D., Animal & Dairy Science
Anna Hood, Ph.D., Food Science, Nutrition & Health Promotion

THE MISSISSIPPI QUARTERLY
Office: 213 Lee Hall

The Mississippi Quarterly is a publication of the College of Arts and Sciences and the Office of Research. Founded in 1948, it is a refereed, scholarly journal which publishes articles on the life and culture of the South, past and present. In addition to the four regular issues, the journal publishes an online “Checklist of Scholarship on Southern Literature.”

Noel Polk, Ph.D., Editor
Jerry T. Williams, B.A., Associate Editor
Gordon M. Garretson, Jr., M.A., Technical Editor
Robert M. West, Ph.D., Associate Editor

OFFICE of the STATE CLIMATOLOGIST
Office: 201 Hilbun Hall

A State Climatologist for Mississippi was appointed in the Department of Geosciences at MSU in 1983. The State Climatologist serves as the focal point for climatic information and analysis within the state. The State Climatologist communicates data and information, performs research, and monitors current climate conditions and places events in historical perspective. The State Climatologist in Mississippi has the distinction of being an American Association of State Climatologists-Recognized State Climate Office.

Charles L. Wax, Ph.D., State Climatologist for Mississippi

MISSISSIPPI DEPARTMENT of AGRICULTURE and COMMERCE - BUREAU of PLANT INDUSTRY
Office: Mississippi Department of Agriculture and Commerce Building on Stone Boulevard

The Bureau of Plant Industry is a division of the Mississippi Department of Agriculture and Commerce.

The Bureau is established under the Mississippi Plant Act, Sections 69-25-1 through 69-25-47, Mississippi Code 1972, and is responsible for protecting the agricultural and horticultural interests of the state from the introduction into and dissemination within the state of injurious insects and plant diseases. The Bureau of Plant Industry is the Plant Protection and Quarantine Division of the Mississippi Department of Agriculture and Commerce. An Advisory Board is established by law to advise the Commissioner of Agriculture on matters regarding the Bureau, especially in adopting rules and regulations.

The Bureau of Plant Industry Advisory Board is composed of the following: the State Chemist; the head of the Department of Entomology and Plant Pathology, Mississippi State University; the head of the Department of Plant and Soil Sciences, Mississippi State University; Director of Agriculture and Applied Sciences; Alcorn State University; and for a period of two years, the following: one Soil Conservation District Commissioner appointed by the Commissioner; two residents of Mississippi who engage in the production of any crop, appointed by the Commissioner; one resident of Mississippi who is a commercial pesticide applicator licensed by the Bureau of Plant Industry, appointed by the Commissioner; one resident of the state of Mississippi who is a restricted use pesticide registrant or an employee of such person, appointed by the Commissioner, one resident of the state of Mississippi who is either a wholesale or retail horticulturist, appointed by the Commissioner, and one resident of the State of Mississippi who is a licensed landscape contractor appointed by the Commissioner.

The Bureau is responsible for administration and enforcement of statutes as follows:
The Mississippi Boll Weevil Act - This statute provides for methods and procedures to be used for boll weevil suppression, pre-eradication and eradication programs; to define certain terms; to certify a statewide Cotton Growers Organization which will represent cotton growers in defining boll weevil management regions and types of boll weevil management programs desired; to provide for a referendum in each region to determine whether the majority of cotton growers within the region wish to participate in such management programs; to authorize assessments on cottongrowers in the regions which have approved by referendum such assessments and boll weevil management programs; to authorize the Department of Agriculture and Commerce to collect such assessments and to impose penalties for failure to pay assessments; to authorize the Department of Agriculture and Commerce to promulgate regulations to effectuate the purposes of this Act; and for related purposes.

2. Mississippi Bee Disease Act - This statute provides for inspection of apairies in order to prevent the introduction into and dissemination within the state of infectious and contagious diseases and parasites to honey bees. Under this program, apairies are inspected for American foulbrood, other serious bee diseases, and parasites. Migratory beekeepers, queen breeders, and producers of package bees are required to have inspection certificates for shipment of honey bees and used beekeeping equipment.

3. Mississippi Soil and Plant Amendment Law - This statute requires registration of all feed manufacturing facilities. All feed registrants are required to report tonnage sold and pay inspection fees to the department. Under this program feed and feed ingredients are inspected and samples are collected and tested to determine if they meet label requirements and guarantee in order to protect users of feed from losses due to inferior products.

4. Mississippi Pure Seed Law - This statute requires the license of all sellers of seed in and into the state. It also provides for the operation of the State Seed Testing Laboratory to test official samples of seed sampled to confirm label guarantees. The seed regulatory official also cooperates in enforcement of the Federal Seed Act.

5. Crop Spraying and Licensing of Aerial Applicators - Sections 69-23-1 through 69-37-33.


8. Mississippi Insecticide, Fungicide, and Rodenticide Act. Without this applicator certification, no person may be employed to apply any of the above-mentioned mentioned products to be licensed by the Bureau in order to protect the citizens of this state from fraudulent practices. People engaged in these professions are required to meet professional standards through training and/or experience, exhibit a knowledge of the profession through examination, and in some cases be required to meet bond and/or insurance requirements to guarantee faithful performance of services.

9. Mississippi Pure Seed Law - Sections 69-3-1 through 69-3-27.

10. Mississippi Fertilizer Law, - Sections 75-47-1 through 75-47-39.


12. Other statutes and laws regulating the activities of the Department of Agriculture and Commerce are the Mississippi Pure Seed Law, - Sections 69-24-1 through 69-24-27; the Mississippi Soil and Plant Amendment Law, - Sections 69-24-1 through 69-24-27; and the Mississippi Agricultural Liming Materials Act, - Sections 69-39-1 through 69-39-19.
MISSISSIPPI STATE CLIMATOLOGY LABORATORY

Office: 314 Hilbun Hall

The MSU Climatology Laboratory (MSUCL) was created in 1987 to supply the university and the surrounding area with real-time weather information. The Climatology Laboratory is also the focal point of the Broadcast Meteorology Program (BMP) and the Professional Meteorology Program within the Department of Geosciences.

The Climatology Laboratory is equipped with state-of-the-art meteorological hardware and software systems in support of the teaching, research, and service missions of the department. The Laboratory includes four WSI Weather Producer workstations and four Weather Central Genesis workstations used for the production of television and radio weathercasts, 15 Celeron PC workstations, and a Baron Radar system featuring FasTrac/NexTraf and VIPER which processes near-real time radar data from Columbus (MS), Jackson (MS), Memphis (TN), and Birmingham (AL). An Automated Weather Systems instrument group provides instantaneous weather conditions and video of the current weather from atop Hilbun Hall. The Climatology Laboratory also houses our Broadcast Studio, fully equipped with linear and non-linear digital editing equipment for the production of television weathercasts.

The MSUCL also serves as a base of operations for the North Mississippi Severe Storms Intercept Team (NOMISSIT). NOMISSIT members conduct the continuing forest resources survey for the mid-south states. The Wood Products Insect Research Unit personnel conduct research programs to provide increased crop production with greater efficiency by developing cropping systems, pest resistant strains with improved agronomic traits, and decision-making models to reduce costs and conserve natural resources.

The MSU Climatology Laboratory provides a valuable resource for undergraduate and graduate students, as well as off-campus students through the Division of Continuing Education, in support of the education and training as operational meteorologists. Graduates of our program go on to careers in broadcast meteorology, private industry, or government service.

Daily weather forecasts developed in the Climatology Laboratory are provided to the public through the Bulldog Forecast Line (662-325-2915); radio station WMSV (FM 91.1); through television broadcasts on Bulldog Weather (MSU), and WOBV-TV (Starkville); and through live “webcasts” on the World Wide Web.

Research supported by the Climatology Laboratory includes topics in Broadcast Meteorology, human biometeorology, synoptic meteorology, tropical meteorology, severe local storms, and influences of mesoscale land-surface-atmosphere interactions on deep convection. The Lab also supports the Office of the State Climatologist and is open on a limited basis to tour groups.

MISSISSIPPI STATE SEED TESTING LABORATORY

The State Seed Testing Laboratory is a facility operated by the State Department of Agriculture in cooperation with Mississippi State University. Its primary function is to test official seed samples submitted by inspectors of the State Department of Agriculture in connection with the enforcement of the Mississippi Pure Seed Law. The laboratory also serves as the official testing laboratory for the Mississippi Seed Improvement Association.

In addition, the laboratory operates as a service department for farmers and seed merchants. Seeds submitted for analysis are tested for purity, germination and noxious weeds. Seed merchants are charged a nominal fee. Resident farmers are entitled to have one sample of each kind tested free in any calendar year, but for each additional sample a small fee is charged.

The State Seed Testing Laboratory is in the Mississippi Department of Agriculture and Commerce Building on the west side of Stone Boulevard along with the Division of Plant Industry.

Fabian Watts, B.S., M.S., Director/Seed Division  
Keith Ferguson, B.S., Greeneville  
Robert Oakley, B.S., Starkville  
Bruce Jackson, B.S., Decatur  
Carl Jones, B.S., Grenada  
Mark Kelley, B.S., Tupelo  
Charles Wilson, B.S., M.S., Hattiesburg  
David Farley, B.A., Regulatory Inspector  
Kyle Lewis, B.S., USDA Records Inspector  
Keith Pouhey, B.S. Noxious Weed Specialist  
Tim Lockley, B.S., M.S., Gulfport  
Keith Ferguson, B.S., Greeneville  
Robert Oakley, B.S., Starkville

MISSISSIPPI AGRICULTURAL RESEARCH SERVICE

Southern Insect Management Research Unit

The mission of the Integrated Pest Management Research Unit is to expand the knowledge of the biology of various cotton insects and turn this knowledge into sound, profitable technology for detecting, estimating, suppressing or eradicating populations of pest species. The technology developed, a major emphasis is placed on alternative control methods that avoid dependence on pesticides alone. The current program is in keeping with the ARS position on Integrated Pest Management.

Eric J. Villavaso, B.S., M.S., Ph.D., Research Entomologist

CROP SCIENCE RESEARCH LABORATORY

In the Crop Science Research Laboratory of the U.S. Department of Agriculture basic and applied research is conducted by scientists representing many scientific disciplines. The major objectives of the research programs are to provide increased crop production with greater efficiency by developing cropping systems, pest resistant strains with improved agronomic traits, and decision-making models to reduce costs and conserve natural resources.

Major research lines include corn root plant resistance, genetics and precision agriculture, waste management and forage research.

Johnie N. Jenkins, B.S., M.S., Ph.D., Director  
Thomas D. Brooks, B.S., M.S., Ph.D., Geneticist  
Michael J. Clements, B.S., M.S., Ph.D., Geneticist  
Timothy Fairbrother, B.S., M.S., Ph.D., Animal Scientist  
Leigh K. Hawkins, B.S., M.S., Ph.D., Plant Physiologist  
Jack C. McCarty, Jr., B.S., M.S., Ph.D., Agronomist  
James M. McKinion, B.S., M.S., Ph.D., Electronics Engineer  
Michael R. McLaughlin, B.S., M.S., Ph.D., Plant Pathologist  
Dana Miles, B.S., M.S., Chemical Engineer  
Robert G. Pratt, B.A., M.S., Ph.D., Plant Physiologist  
John J. Read, B.S., M.S., Ph.D., Agronomist  
Dennis E. Rowe, B.S., M.S., Ph.D., Geneticist  
Sukumar Saha, B.S., M.S., Ph.D., Geneticist  
Haile Tewolde, B.S., M.S., Ph.D., Agronomist  
Jeffrey L. Willers, B.S., M.S., Ph.D., Entomologist  
William P. Williams, B.S., M.S., Ph.D., Plant Geneticist  
Gary L. Windham, B.S., M.S., Ph.D., Plant Pathologist

SOUTHERN RESEARCH STATION

Two research units of the Southern Research Station, U.S. Department of Agriculture, Forest Service, are located in the Forestry Sciences Laboratory, 201 Lincoln Green, in the southwest portion of the campus, and one in the Forestry Building. Basic and applied research on the physiology and technology of forest tree species is conducted by the staff of the Tree Seed Project. The Forestry Inventory and Analysis Unit Personnel conduct the continuing forest resources survey for the mid-south states. The Wood Products Insect Research Unit personnel conduct basic and applied research on termites.

Center for Bottomland Hardwoods Research - Seed Research  
J.A. Vozzo, B.S., M.S., Ph.D., Plant Physiologist  
Jillian B. Donahoo, Biological Technician  
Forest Inventory and Analysis  
David V. Few, B.S., Supervisory Forester  
David M. Morgan, B.S., Forest  
Victor A. Rudis, B.S., M.S., Research Forester  
Research Support Services  
Charlene Walker, Purchasing Agent  
Forest Inventory and Analysis
Wood Products Insect Research
Terence L. Wagner, B.S., M.S., Ph.D., Supervisory Research Entomologist; Project Leader
Joseph E. Mulrooney, B.S., M.S., Ph.D., Research Entomologist
Chris J. Peterson, B.S., M.S., Ph.D., Research Entomologist
Thomas G. Shelton, B.S., M.S., Ph.D., Research Entomologist
Blossie Boyd, B.S., Biological Science Technician
Don I. Fye, B.S., Biological Science Technician
Earnest L. Scruggs, B.S., Biological Science Technician
Sarah D. Uharriet, Support Services Specialist
Stephanie S. Pitts, Office Automation Assistant

USDA SOUTH CENTRAL POULTRY
RESEARCH LABORATORY

The South Central Poultry Research Laboratory of the U.S. Department of Agriculture was dedicated May 29, 1965. Located on the west side of the campus on Spring Street, it is a center for the study of disease, environmental, and waste management factors that affect the poultry industry. Research facilities include the office-laboratory building, environmental chambers, disease isolation units and seven poultry research houses. The research is being conducted by specialists in the fields of Engineering, Molecular Biology, Poultry Science, and Veterinary Science of Agricultural Research Service, U.S.D.A., in cooperation with Mississippi State University and other interested universities.

Scott L. Branton, D.V.M., M.S., Ph.D., Veterinary Medical Officer; Research Leader
Stephanie D. Collier, B.S., M.S., Ph.D., Molecular Biologist
Jeff D. Evans, B.S., M.S., Ph.D., Molecular Biologist
William B. Roush, B.S., M.S., Ph.D., Poultry Management

USDA/APHIS/WS NATIONAL WILDLIFE RESEARCH CENTER

103 Scales Building

The National Wildlife Research Center (NWRC) is the research arm of the Wildlife Services program of the U.S. Department of Agriculture/Animal and Plant Health Inspection Service. NWRC is the U.S. federal organization responsible for conducting research to resolve conflicts between humans and wildlife. The NWRC Mississippi field station was established by Congressional mandate in 1988 to develop methods for reducing bird depredations at aquaculture farms in the southern United States. Personnel at the NWRC Mississippi field station study the biology, impact, and management of a variety of captive and free-ranging avian species, including cormorants, pelicans, and wading birds.

Scott Werner, Ph.D., Project Leader/Supervisory Wildlife Biologist (Research)
D. Tommy King, M.S., Research Wildlife Biologist
Susan C. Smith, B.S., Program Support Assistant
Brian S. Dorr, M.S., Biological Science Technician (Wildlife)
Paul B. Fioranelli, B.S., Biological Science Technician (Wildlife)
Billy Scott Woodruff, B.S., Biological Science Technician (Wildlife)

USDA/APHIS/WILDLIFE SERVICES

200 Thompson Hall

The U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services (WS) program is legislatively mandated to provide assistance in the prevention and control of wildlife damage. WS programs are directed toward the protection of agriculture, property, industrial resources, and public health and safety, and natural resources. Services include technical assistance or direct operational control. Technical assistance consists of advice, recommendations, training, information transfer, or materials provided to others for the resolution of problems. In contrast, direct operational control activities are conducted by WS personnel through cooperative wildlife damage management programs. These two types of assistance are available upon request to individuals or government agencies.
**MISSISSIPPI STATE UNIVERSITY ENROLLMENT SUMMARY**

**ENROLLMENT SUMMARY**

Non-Duplicated Enrollment - Starkville Campus Only

Fall and Spring Semesters 2004-2005

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<th></th>
<th>Men</th>
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<tr>
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<td>87</td>
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<tr>
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<tr>
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<td>51</td>
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<tr>
<td>Juniors</td>
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<td>52</td>
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<td>Seniors</td>
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<td>78</td>
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<tr>
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<td>Juniors</td>
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<tr>
<td>Seniors</td>
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<tr>
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<tr>
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<td>370</td>
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<tr>
<td>Freshmen</td>
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<tr>
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<td>5</td>
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<tr>
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<td>36</td>
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<tr>
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**DISCLOSURE STATEMENT - Student Right-to-Know Act (P.L. 101-542)**

Graduation Rate of Entering Freshmen

Mississippi State University provides the following information regarding our institution’s graduation/completion rates in compliance with the Higher Education Act of 1965, as amended. The rates reflect the graduation status of students who enrolled during the 1997-98 school year and for whom 150% of the normal time-to-completion has elapsed. During the 1997-98 school year, 2,016 first-time, full-time, degree-seeking undergraduate students entered Mississippi State University. After six years (as of August 31, 2004), the proportion of students who had graduated from our institution or completed their programs was 57 percent.

While reviewing this information, please understand: (1) The graduation/completion rate is based on 6 years of attendance; that equates to 150% of our longest programs; (2) Since we are a four-year institution, our primary mission is to award earned degrees not to prepare students to transfer to other institutions. Therefore, we have elected not to report our transfer-out rate; (3) The graduation/completion rate does not include students who left the University to serve in the armed forces, on official church missions, or in the foreign service of the federal government; and (4) Students who died or were totally and permanently disabled were also excluded. This information will be updated once annually and will be presented via our Web system at http://www.msstate.edu/dept/registrar/php/index.php and in our annual Bulletin of Mississippi State University.

Questions related to this report should be directed to the University Registrar, Mississippi State University, P.O. Box 5268, Mississippi State, MS 39762; (662) 325-2663; registrar@registrar.msstate.edu.

**Other Right-to-Know Information**

The information Mississippi State University is required by federal law to provide can now be found at the Web addresses below:

 University Policies Relating to Students and Student Records* - http://www.msstate.edu/dept/audit/mainindex.html

*All MSU students are responsible for knowing and abiding by these policies.

Consumer Information Regarding Student Financial Aid - http://www.sfa.msstate.edu/policies/


**This report includes statistics for the previous 3 years concerning reported crimes that occurred on campus; in certain on-campus buildings or property owned and controlled by MSU; and on public property within, or immediately adjacent to and accessible from the campus. This report also includes institutional policies concerning campus security, such as alcohol and drug use, crime prevention, the reporting of crimes, sexual assaults, and other matters.

If you have questions or wish to have a paper copy of any of the above information, please contact the Dean of Students Office at 662-325-3611.
### SOUTHEASTERN STATES

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### UNITED STATES - OUTSIDE THE SOUTHEAST

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**Total University** | 7,082 | 8,142 | 15,224
Offices to Assist You

(All postal addresses are Mississippi State, Mississippi 39762.)

General Information about the University: Director of Enrollment Services, P.O. Box 6334; 662-325-3076

Admissions (requirements and application forms): Director of Admissions, P.O. Box 6305; 662-325-2224

Graduate Admissions: Director of the Office of Graduate Studies, P.O. Box G; 662-325-7400

Student Financial Aid (loans, grants, College Work-Study Program, scholarships): Director of Student Aid, P.O. Box 6035; 662-325-2450

Student Housing and Residence Life: Director of Housing and Residence Life, P.O. Box 9502; 662-325-3557

Orientation programs for new students and parents: Director of Enrollment Services, P.O. Box 6334; 662-325-3076

Student Registration and Records: University Registrar, P.O. Box 5268; 662-325-2022, 325-2662

The Career Center: Director of the Career Services Center, P.O. Box P; 662-325-3344

Vice President for Student Affairs, P.O. Box DS; 662-325-3045

Provost and Vice President for Academic Affairs, P.O. Box BQ; 662-325-3742

Vice President for Research, P.O. Box 6343; 662-325-3570

Continuing Education (non-credit and credit courses; independent and correspondence study); Dean of Continuing Education, P.O. Box 5247; 662-325-3473

Meridian Campus, 1000 Hwy 19 North, Meridian, MS 39307; 662-325-2100

Privacy Act

Notification to Students of Their Privacy Rights under the Family Education Rights and Privacy Act (General Education Provisions Act, Sec. 438, Pub. L. 90-247, Title IV, as Amended) by Mississippi State University.

The purpose of this notification is to inform eligible students at Mississippi State University about the University’s policy concerning the privacy rights of students under the stated Act. Specifically, this notification (1) informs students of their rights under the Act, (2) defines directory information and the conditions for its release, and (3) specifies the location on campus of the policy statement and how copies of it may be obtained.

I. Subject to limitations specified in the Act, eligible students are assured the following rights pertaining to their educational records.

A. The right to inspect and review their records, to request reasonable explanations and interpretations of them, and to obtain copies of them at their own expense, the actual charges not to exceed the cost to the University for reproducing them.

B. The right to seek correction of the records through a request to amend them or through a formal hearing.

C. The right to control the disclosure of personally identifiable information from their records.

D. The right to file complaints with the Family Educational Rights and Privacy Act Office (FERPA), Department of Health, Education and Welfare, 330 Independence Ave. S. W., Washington, DC 20201, concerning alleged failures by Mississippi State University to comply with the requirements of Section 438 of the Act.

II. Directory Information is treated as general information and will be released upon request unless a written request that it not be released is received by the University Registrar (278 Garner Hall or P. O. Box 5268, Mississippi State, MS 39762) within thirty (30) days from the beginning of any period of registration.

III. The information about eligible students treated as Directory Information is defined in Academic Operating Policy (AOP) 12-13 Academic Records (November 8, 2000 / Revised May 22, 2002). This document also contains the University’s policy concerning the privacy rights of students and the procedures for implementing this policy and available on the University’s Web site at: http://www.msstate.edu/dept/audit/mainindex.html
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