#### SCHOOL OF ENGINEERING | Fall 2010-11

227 Brevard Hall, University, MS 38677 http://www.engineering.olemiss.edu/



# SCHOOL OF ENGINEERING

**Overview** 

Academics & Admissions

**Departments** 

**Programs** 

**Minors** 

Courses

Faculty

**Awards** 

# **Admission Policies**

A. Admission

- 1. General Criteria and Procedures for Admitting Students Students must qualify for general admission to the university.a. Admission of Freshmen There are no special admission requirements for the School of Engineering beyond the university's general admission requirements. However, it is highly recommended that students entering the School of Engineering as freshmen have the four high school units required by the university in mathematics to include the following: Algebra I, geometry, Algebra II, and trigonometry and that the student have four units in natural science selected from biology, chemistry, and physics, with at least one unit laboratory-based.b. Admission of Transfer Students An overall "C" average in course work taken at other approved colleges is required for transfer into the School of Engineering. In unusual cases, the rule may be waived with the approval of the appropriate department chair and the dean.c. Admission of International Students International undergraduate applicants must have received a high-school diploma with a "C" average or better and have completed a minimum of 12 years of primary and secondary education. Those prospective students whose native language is other than English must submit evidence of ability in English by a minimum TOEFL score of 550 (paper) or 80 (Internet-based). Those students transferring from other colleges and universities must have an overall B average or better on all courses taken.
- 2. Policy of the Institution in Admitting Students with Conditions a. Freshman applicants deficient in the above secondary school requirements may be admitted with the provision that these deficiencies be removed during the first year of enrollment. It should be noted that such deficiencies may necessitate additional time required for a candidate to obtain a degree in engineering. Students who fail to meet the requirements shown above will not be admitted to the School of Engineering except through approval of a petition, directed to the dean of the School of Engineering, to be reviewed by an Engineering Admissions Committee. Such a petition should be based on evidence of superior promise, especially in the areas of mathematics and the physical sciences.b. Transfer students who do not meet the minimum overall 2.0 GPA requirement may petition and be admitted to the university and the School of Engineering on probation. The demonstrated performance and capabilities in mathematics, natural sciences, and engineering subject matter will be determining factors in the approval of their petition. To remove the probation status and be admitted in good standing, they must enroll in and complete at least 12 semester hours of course work with a 2.0 GPA during their first semester at the university.c. International students who fail to achieve a TOEFL score of 550 (paper) or 80 (Internet-based) may apply for admission to The University of Mississippi Intensive English Program. This program is designed for students at the intermediate and advanced levels of English proficiency and not for beginners. Applicants may be admitted to the Intensive English Program in one of the following categories: (1) Admission to an academic program with the provision that the intensive English course first be successfully completed with acceptable TOEFL results. (2) Admission to the Intensive English Program (IEP) with a review of admission to the academic program after successful completion of English courses. Successful completion of IEP
- 3. Policy of Engineering School Regarding Admission to Advanced Placement a. Advanced placement for freshmen and 3 semester hours of credit are awarded in American history, art, biology, calculus, chemistry, classics, computer science, English (literature/composition), European history, French, German, mathematics, music, political science, physics, and Spanish to students who participate in the College Entrance Examination Board (CEEB) Advanced Placement Program offered through their high schools, and who earn scores of three or higher on the final examinations.b. International undergraduates who have completed three or more GCE "A" levels in academic subjects or 15 or more hours of university-level academic courses with a "B" average may be awarded transfer credit and will not be required to take the ACT or SAT.c. The assistant dean of engineering and the respective engineering department chairs working in consultation are responsible for the evaluation and acceptance of course credit earned at either this institution or elsewhere by students transferring into programs in the School of Engineering. Information relative to course content is obtained from catalog descriptions, curriculum, and course syllabi, and personal interviews with transferring students. The director of international programs is consulted as to the quality and content of international programs in which students have participated. Particular scrutiny is given to the quality and content of engineering courses that students present for possible transfer.
- 4. Special Admission Requirements for Entry into the Upper Division There are no special admission requirements for entry into the "upper division." A formal upper-division distinction for engineering programs is not made. Entry into individual engineering courses (lower- or upper-level) is based on satisfactory completion of prerequisite mathematics, physical science, and other foundation courses.
- 5. Policies Regarding Admission of Transfer Students to the Engineering Program a. An overall "C" average in course work taken at other approved colleges and universities is required for transfer into the School of Engineering. In unusual cases, the rule may be waived with the approval of the appropriate department chair and dean of engineering.b. International students transferring from other colleges and universities must have an overall "C" average or better in all courses taken.c. Credits of students transferring from approved U.S. colleges are accepted at their original values for credit toward a degree in engineering, subject to the condition that the last grade received in each subject is "C" or better. The Office of Admissions and the Office of the Registrar provide each transfer student with an evaluation of the credits acceptable to the university. The dean of the School of Engineering informs the student the extent to which such credits apply toward the degree sought. Acceptance of junior college work is limited to one-half the total requirements for graduation



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in a given four-year curriculum. Course work completed at international schools, colleges, and universities is carefully evaluated as to its quality and content for equivalency to University of Mississippi courses. Credit is given and recorded on the student's academic record for such equivalent university courses with a grade of "Z."d. The School of Engineering works very closely with community/junior colleges in the state to ensure that articulation problems are eliminated so that students may transfer with a maximum of credit and that content of required courses taken is equivalent to University of Mississippi courses.e. The School of Engineering currently has a Three-Two Transfer Program in effect with Tougaloo College.

# Academic Regulations

# **Program Completion Requirements**

Application for Degree - Early in the final semester prior to completing degree requirements for a particular degree, each student is required to make formal application for that degree. He/she contacts the Office of the Dean of Engineering and is given instructions and the necessary forms for degree application. The Application for Degree form is carefully checked by the staff of the Office of the Dean for completeness and accuracy. It is then forwarded to the appropriate department chair for checking and approval as to whether or not it meets the requirements for the particular degree for which the student is making application. When courses for the final semester are completed and grades are submitted, the assistant to the dean of engineering conducts the final check and computations to assure that the student has met all graduation requirements. The dean's office then certifies that each student has met all requirements and submits an official list to the Office of the Registrar for the granting of the diploma.

#### **General Education Core Curriculum**

The general education requirements of the undergraduate degree programs of the School of Engineering are consistent with The University of Mississippiís tradition of educating engineering leaders through the schoolís strong interaction with the universityís liberal arts programs. Further, these requirements are established to fulfill the schoolís published mission of preparing "students with a broad-based education" intended to develop "leadership skills" and "communication skills."

The core/general education requirements for the School of Engineering include Engl 101, Liba 102 (or Engl 102); Math 261-262; and a minimum of 8 credit hours of laboratory science courses as specified by each department.

In addition, 18 credit hours as described below must be taken, but students should check with the department to learn the specific course requirements for an individual program.

Fifteen credits of liberal arts: Students must complete at least 15 semester hours consisting of social/behavioral sciences, humanities, and fine arts course work. At least 6 credit hours must be in the social/behavioral sciences, and at least 9 credit hours must be in combined humanities and fine arts courses with at least 3 semester hours from each of these areas. For the purpose of these requirements, social/behavioral sciences will include anthropology, economics, Latin American studies, political science, psychology, and sociology; humanities will include classics, English, history, modern languages (200 level and above), philosophy, religion, and Southern studies; and fine arts will include courses in the history, appreciation, and criticism of art, dance, music, and theatre arts. (Courses emphasizing the enhancement of skills and performance are not acceptable.) Honors, African American studies, and gender studies courses may be used to meet these requirements as appropriate, depending upon their topical content.

Three credits of additional general education course work: Students must complete an additional 3 semester hours of course work beyond the 15 hours required above. These additional 3 hours are to be composed of any additional fine arts, humanities, or social science course work (as defined above) or any combination of credits from the courses listed below:

Course	Course Title	Credits
AS 301	Air Force Leadership Studies I	3
AS 302	Air Force Leadership Studies II	3
Bus 250	Legal Environment of Business	3
Bus 271	Business Communication	3
Edld 110	Chancellorís Leadership Class I	1
Edld 111	Chancellorís Leadership Class II	1
Edld 120	Introduction to Leadership Studies	3
Edld 220	Foundations of Leadership Studies	3
Engr 400	Leadership and Professionalism in Engineering	1
Mgmt 371	Principles of Management	3
Msl 102	Military Science I: Basic Leadership & Managemen	t 2
Nsc 211	Naval Leadership and Management I	2
Spch 102	Fundamentals of Public Speaking	3
Spch 105	Business/Professional Speech	3

#### College/School-wide Degree Requirements

BACHELOR OF SCIENCE Basic Degree Requirements - All of the curricula of the School of Engineering leading to a Bachelor of Science or Bachelor of Engineering degree are four-year curricula. The curricula requirements for the degrees of Bachelor of Science in Chemical Engineering, Bachelor of Science in Computer Science, Bachelor of Science in Electrical Engineering, Bachelor of Science in Geological Engineering, Bachelor of Science in Mechanical Engineering, and Bachelor of Engineering are listed in their respective sections below. By proper selection of electives, a student also can emphasize certain other optional fields.

Technical Electives - In some programs, students are allowed to choose a coherent group of courses from appropriate areas to permit the student to pursue particular topics in more depth than provided by required courses or to complement the student's major area of study. Selection of these courses should be made in consultation with and approved by the student's department chair/adviser.

Minors - An engineering student pursuing any of the six professional degree programs within the School of Engineering may choose to declare a minor at the



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time of graduation. A minor field may be any discipline that offers a minor at The University of Mississippi with the exception of mathematics, chemistry for chemical engineering students, geology for geological engineering students, and computer science for electrical engineering students pursuing the computer engineering option. The required courses and number of hours for each minor field can be found in the university undergraduate catalog. However, no course required by the engineering degree and cited specially by course number and title as a requirement for that degree may be used toward fulfillment of the minor requirements. No minor is available for students pursuing the Bachelor of Engineering degree.

Basic Curriculum - The curriculum given below is recommended for all freshmen engineering students who have not decided upon a major field of study. The first-year course requirements in the various major degree areas differ from this curriculum only in minor aspects and subsequent schedules may be modified to include any courses missed. Students without sufficient preparation, as shown by results of previous work and aptitude tests, to enter the unified calculus and general chemistry courses will be assigned alternatives such as Mathematics 125 (college algebra/trigonometry) and Chemistry 101 by their advisers 3

#### FIRST YEAR: 33 SEMESTER HOURS

	Seme	ester	
Courses		Hours	
	1st	2nd	
English 101, 102—English Composition	3	3	
Mathematics 261, 262—Unified Calculus and Analytic			
Geometry	3	3	
Chemistry 105, 106, 115, 116—General Chemistry,			
Laboratory	4	4	
Computer Science 251—Programming for Engineering			
and Sciences		3	
Socio-humanistic/fine arts electives		6	

## **Advising**

Each entering freshman and transfer student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to a member of the School of Engineering faculty who acts as the student is assigned to the student is as the student i express a preference for one of the engineering departments as a major field are given an adviser from this department. Those who have not yet reached a decision as to a major are assigned an adviser by the Office of the Dean of Engineering. Each student is scheduled for regular conferences with the adviser. In addition, students are encouraged to confer with their advisers or other faculty members as the need arises at times other than the regularly scheduled conferences. A curriculum check-off sheet is kept by the department in which the student is majoring to assure that students are completing the appropriate required courses in the proper prerequisite order to meet graduation requirements that have been previously specified to meet ABET, the Institutions of Higher Learning (IHL), university, and other criteria.

# **Selecting and Changing Majors**

Students can choose a major in any of the six degree programs in the first semester. Freshmen can also enroll in the curriculum shown above if they have not decided upon a major. A student in good standing can change major at any time, but it is recommended that this be done no later than the sophomore

## **Honor Code Policy**

Honor System - The purpose of the School of Engineering honor system is to inculcate in each student the highest standard of personal integrity and professional responsibility. The honor system makes student honesty both in and out of the classroom the responsibility of the student body. Each year an Honor Council is approved by the ESB executive council to maintain the honor system. This council indoctrinates new students, receives reports of infractions, determines innocence or guilt, and recommends disciplinary action to the dean of the School of Engineering.

