

DEPARTMENT OF ELECTRICAL ENGINEERING

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The Department of Electrical Engineering offers a four-year degree program leading to the degree Bachelor of Science in Electrical Engineering (BSEE). This program is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

The mission of the Department of Electrical Engineering at Arkansas Tech University is to maintain an accredited program leading to the Bachelor of Science degree. The Department is committed to providing its students with a positive atmosphere in which to learn the fundamentals of engineering practice including engineering science and design. In order to fulfill its mission, the Department has established the following educational objectives.

Engineers who graduate from Arkansas Tech University with a BSEE degree will be:

1. Intellectuals - with a commitment to ethics, social and environmental responsibility, and lifelong learning.
2. Team Players - communicating, planning, coordinating, and managing projects and personnel with efficiency and effectiveness.
3. Problem solvers - learning new concepts, techniques, skills, and tools to aid in analyzing and designing electrical engineering systems.
4. Professionals - trained and competent in the fundamentals of engineering science, applied mathematics, laboratory practice, and principles of electrical engineering.

The first two years of curriculum contain the needed mathematics, science and engineering science basics to prepare the student for the upper level electrical engineering courses. The junior and senior years include 12 hours of electives which allow students to concentrate their studies in an area of specialization such as electric power, computers, robotics, or communications.

Pre-Professional curriculum

Prior to enrolling in any 3000 or 4000-level engineering courses, students must successfully complete a pre-professional curriculum containing preparatory courses normally taken during the first three semesters. The pre-professional curriculum is composed of the following courses:

ENGL 1013 and ENGL 1023 (or equivalent)
MATH 2914 and 2924
CHEM 2124
PHYS 2114

Satisfactory completion of the pre-professional curriculum is defined as a grade of "C" or better in each course. Students should meet with their advisor during the semester in which they anticipate completing the pre-professional curriculum to complete the procedure for admittance to upper-level engineering courses.

The following curriculum represents the program of study and a suggested sequence for the Bachelor of Science in Electrical Engineering degree. The student should be aware that not all courses are offered each semester and that the ordering of courses is subject to change. In order to minimize scheduling difficulties, each student should schedule a special session with their advisor at the beginning of their junior year to plan the remaining coursework.

Bachelor of Science in Electrical Engineering (BSEE)

Degree Completion Plan Beginning in Fall Semester

Freshman				Sophomore			
Fall	Spring		Fall	Spring			
ELEG 1012	2	ELEG 2134	4	ELEG 2103	3	ELEG 2113	3
COMS 2803	3	ELEG 2130	0	Fine Arts ¹	3	ELEG 2111	1
ENGL 1013 ¹	3	ENGL 1023 ¹	3	MCEG 2013	3	ELEG 3133	3
MATH 2914	4	MATH 2924	4	MATH 2934	4	MATH 3243	3
Biological Science ¹	4	CHEM 2124	4	PHYS 2114	4	PHYS 2124	4
						Physical Activity ¹	1
Total Hours	16	Total Hours	15	Total Hours	17	Total Hours	15
Junior				Senior			
Fall	Spring		Fall	Spring			
ELEG 3103	3	ELEG 4103	3	ELEG 4202	2	Technical Elective ³	3
ELEG 3131	1	ELEG 3143	3	ELEG 4143	3	ELEG 4193	3
ELEG 3003	3	ELEG 3123	3	ELEG 4113	3	Engineering Elective ²	6
MCEG 2033	3	Engineering Elective ²	3	ECON 2003	3	Humanities ¹	3
MATH 3153	3	MCEG 2023	3	ELEG 4303	3		
Physical Activity ¹	1	Social Sciences ¹	3	Social Sciences ¹	3		
Social Sciences ¹	3						
Total Hours	17	Total Hours	18	Total Hours	17	Total Hours	15

Degree Completion Plan Beginning in Spring Semester

Freshman				Sophomore			
Spring	Fall		Spring	Fall			
ELEG 1012	2	ELEG 2134	4	ELEG 2103	3	ELEG 2113	3
COMS 2803	3	ELEG 2130	0	Fine Arts ¹	3	ELEG 2111	1
ENGL 1013 ¹	3	ENGL 1023 ¹	3	MCEG 2013	3	ELEG 3133	3
MATH 2914	4	MATH 2924	4	MATH 2934	4	MATH 3243	3
Biological Science ¹	4	CHEM 2124	4	PHYS 2124	4	PHYS 2114	4
						Physical Activity ¹	1
Total Hours	16	Total Hours	15	Total Hours	17	Total Hours	15
Junior				Senior			
Spring	Fall		Spring	Fall			
ELEG 3003	3	ELEG 3103	3	ELEG 4103	3	Technical Elective ³	3
ELEG 3123	3	ELEG 4143	3	ELEG 4202	2	ELEG 4193	3
MCEG 2033	3	ELEG 4113	3	ELEG 3143	3	ELEG 3131	1
MATH 3153	3	Engineering Elective ²	3	ECON 2003	3	Engineering Elective ²	6
Physical Activity ¹	1	MCEG 2023	3	ELEG 4303	3	Humanities ¹	3
Social Sciences ¹	3	Social Sciences ¹	3	Social Sciences ¹	3		
Total Hours	16	Total Hours	18	Total Hours	17	Total Hours	16

¹See appropriate alternatives or substitutions in "General Education Requirements" on page 83.

²Engineering Elective must be a 3000 or 4000 level Electrical Engineering course.

³Technical Elective must be a course from Engineering, Math or the Sciences excluding courses intended for Education Majors. All electives must have approval of the Department.