

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). A computer engineering option of the electrical engineering program will be available for enrollment by students in the fall of 2010.

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 and computer 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.

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

Degree Completion Plan Beginning in Spring Semester

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

¹See appropriate alternatives or substitutions in "General Education Requirements" on page 88.

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.

^T Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university

A computer engineering option of the electrical engineering program will be available for enrollment by students in the fall of 2010.

**Bachelor of Science in Electrical Engineering
Computer Engineering Option
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 2104 ^T	4	ELEG 2130	0	Fine Arts ¹	3	ELEG 2111	1
ENGL 1013 ^{1, T}	3	ENGL 1023 ^{1, T}	3	Social Sciences ¹	3	CHEM 2124 ^T	4
MATH 2914 ^T	4	MATH 2924 ^T	4	MATH 3243	3	MATH 2934 ^T	4
Biological Science ^{1, T}	4	COMS 2203 ^T	3	PHYS 2114 ^T	4	PHYS 2124 ^T	4
		Physical Activity ^{1, T}	1			Physical Activity ^{1, T}	1
Total Hours	17	Total Hours	15	Total Hours	16	Total Hours	17
Junior				Senior			
Fall		Spring		Fall		Spring	
ELEG 3103	3	ELEG 4103	3	ELEG 4202	2	ECON 2003 ^T	3
ELEG 3133	3	ELEG 3131	1	Social Sciences ^{1, T}	3	COMS 3703	3
ELEG 3003	3	COMS 2223 ^T	3	ELEG 4143	3	Social Sciences ^{1, T}	3
COMS 2903 ^T	3	ELEG 3123	3	ELEG 4113	3	ELEG 4193	3
MATH 3153	3	COMS 2213 ^T	3	ELEG 4303	3	Engineering Elective ²	3
Humanities ¹	3	ELEG 3143	3	ELEG 4133	3		
Total Hours	18	Total Hours	16	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	CHEM 2124 ^T	4
Fine Arts ^{1, T}	3	ELEG 2130	0	COMS 2203 ^T	3	ELEG 2111	1
ENGL 1013 ^{1, T}	3	ENGL 1023 ^{1, T}	3	Social Sciences ^{1, T}	3	ELEG 2113	3
MATH 2914 ^T	4	MATH 2924 ^T	4	MATH 3243	3	MATH 2934 ^T	4
Biological Science ^{1, T}	4	COMS 2104 ^T	4	PHYS 2114 ^T	4	PHYS 2124 ^T	4
		Physical Activity ^{1, T}	1			Physical Activity ^{1, T}	1
Total Hours	16	Total Hours	16	Total Hours	16	Total Hours	17
Junior				Senior			
Spring		Fall		Spring		Fall	
COMS 2223 ^T	3	ELEG 3103	3	ELEG 4202	2	ELEG 4113	3
ELEG 3133	3	Humanities ¹	3	COMS 3703	3	ELEG 4303	3
ELEG 3123	3	ELEG 3003	3	ECON 2003 ^T	3	Social Sciences ^{1, T}	3
COMS 2903 ^T	3	COMS 2213 ^T	3	ELEG 4103	3	ELEG 4193	3
MATH 3153	3	Social Sciences ^{1, T}	3	Engineering Elective ²	3	ELEG 4133	3
ELEG 3143	3	ELEG 4143	3	ELEG 3131	1		
Total Hours	18	Total Hours	18	Total Hours	15	Total Hours	15

¹See appropriate alternatives or substitutions in "General Education Requirements" on page 88.

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.

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