

2017-2018 Degree Map Program: Bachelor of Science in Electrical Engineering, Major: Electrical Engineering With Biomedical Option

This map is a term-by-term sample course schedule. The milestones listed to the right of each term are designed to keep you on course to graduate in four years. The Sample Schedule serves as a general guideline to help you build a full schedule each term. See course descriptions and prerequisites at <http://www.atu.edu/academics/catalog/>.

Employment Information: Electrical engineers design, develop, build, and test, electrical and electronic devices and systems. These systems include robotics, controls, electric motors, radar and navigation systems, communications systems, electronic equipment, and power generation and distribution devices and systems including renewable energy applications.

#Prerequisite Courses: ENGL 0303 _____ ENGL 0404 _____ READ 0103 _____ MATH 0803 _____ MATH 1003 _____ MATH 0903 _____ MATH 0900 _____ MATH 1110 _____ MATH 1203 _____ MATH 1914 _____ COMS 1003 _____

Sample Schedule	Milestones/Notes	
Semester 1	Hrs.	Grade
ENGL 1013- Comp I (ACTS=ENGL 1013)	3	#
CHEM 2124/2120- General Chemistry I (ACTS= CHEM 1414)	4	
MATH 2914- Calculus I (ACTS= MATH 2405)	4	#C or > required for Gen Ed. Milestone
TECH1001- Orientation to the University	1	
ELEG 1011- Intro. to Electrical Engineering	1	
BIOL1114: Principles of Biology (ACTS= BIOL 1014)	4	
Total hours	17	GPA
Semester 2	Hrs.	Grade
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#
CHEM2134/2130: General Chemistry II (ACTS= CHEM 1424)	4	
MATH 2924- Calculus II (ACTS= MATH 2505)	4	Milestone
U.S. History/Government	3	
PSY 2003- General Psychology (ACTS = PSYC 1103)	3	
Total hours	17	GPA

Sample Schedule	Milestones/Notes	
Semester 3	Hrs.	Grade
CHEM3254/3250: Fundamentals of Org. Chemistry	4	
PHYS 2114/2000- General Physics I (ACTS= PHYS 2034)	4	Milestone
MATH 3243- Differential Equations I	3	Milestone
ELEG 2103- Electrical Circuits I	3	Milestone
BIOL 3034: Genetics (optional see note)	4	# Recommended for Medical Track
Total hours	14/18	GPA

Sample Schedule	Milestones/Notes	
Semester 4	Hrs.	Grade
PHYS 2124/2010- General Physics II (ACTS= PHYS 2044)	4	Milestone
MATH 2934- Calculus III (ACTS= MATH 2603)	4	Milestone
ELEG 2113/2111- Electrical Circuits II/ Lab	4	Milestone
CHEM3264: Mechanistic Organic Chemistry (optional see note)	4	Recommended for Medical Track
Total hours	12/16	GPA

The Arkansas Course Transfer System (ACTS) is designed to assist in planning the academic progress of students. This system contains information about the transferability of courses within Arkansas public colleges and universities. The Arkansas Course Transfer System can be accessed at <http://acts.adhe.edu/>

Fine Arts and Humanities	U.S. History & Government
ART 2123 Experiencing Art (ACTS=ARTA1003)	HIST 1903 Survey of American History
MUS 2003 Introduction to Music (ACTS=MUSC1003)	HIST 2003 United States History to 1877 (ACTS=HIST2113)
TH 2273 Introduction to Theatre (ACTS=DRAM 1003)	HIST 2043 Honors United States History to 1877
ENGL 2173 Introduction to Film	HIST 2013 United States History from 1877 (ACTS=HIST2123)
JOUR 2173 Introduction to Film	POLS 2003 American Government (ACTS=PLSC2003)
ENGL 2003 Introduction to World Literature (ACTS=ENGL2113)	
ENGL 2013 Intro. to American Literature (ACTS=ENGL2653)	
ENGL 2023 Honors World Literature	
PHIL 2003 Introduction to Philosophy (ACTS=PHIL1103)	
PHIL 2043 Honors Introduction to Philosophy	

Sample Schedule	Milestones/Notes	
Semester 5	Hrs.	Grade
BIOL2014: Human Anatomy (ACTS=BIOL 2404)	4	#
SOC 1003- Introductory Sociology (ACTS = SOCI 1013)	3	
ELEG 3103- Electronics I	3	Fall Only Course - Milestone
COMS 2104- Foundations of Computer Programming I	4	# (COMS 1403/1411 not required)
CHEM3344: Principles of Biochemistry (optional see note)	4	Recommended for Medical Track
Total hours	14/18	GPA

Sample Schedule	Milestones/Notes	
Semester 6	Hrs.	Grade
ELEG 3173 or MATH 3173- Math Methods	3	Spring only
ELEG 3123- Signals and Systems	3	Spring only
ELEG 3143- Electromagnetics	3	Spring only
ELEG 4103- Electronics II	3	Milestone - Spring Only
ELEG 4122- Electrical Systems Lab	2	Spring only
COMS 2203- Foundations of Computer Prog II	3	
Total hours	17	GPA

Sample Schedule	Milestones/Notes	
Semester 7	Hrs.	Grade
ELEG 2134/2130- Digital Logic Design/ Lab	4	
ELEG 4191- Electrical Design Project I	1	
ELEG 3003 or MCEG 3003- Modeling Design	3	Milestone
ELEG 4143- Communication Systems I	3	Fall Only
ELEG 4113-Digital Signal Processing	3	Fall Only
ELEG 4202 or MCEG 4202- Engineering Design	2	Milestone
Total hours	16	GPA

Sample Schedule	Milestones/Notes	
Semester 8	Hrs.	Grade
ELEG 3133- Microprocessor Systems Design	3	
ELEG 4303- Control Systems	3	
ELEG 4192- Electrical Design Project II	2	
BIOL3074: Human Physiology	4	
Fine Arts & Humanities	3	
BIOL4033: Cell Biology (optional see note)	3	Recommended for Medical Track
Total Hours	15/18	GPA

General Electives: 0

indicates a "C" or better is required (C > required in COMS 2104 only as prereq for COMS 2203)

Social Sciences
ECON 2013 Principles of Economics II (ACTS=ECON2203)
SOC 1003 Introductory Sociology (ACTS=SOCI1013)
PSY 2003 General Psychology (ACTS=PSYC1103)
ANTH 1213 Intro. to Anthropology (ACTS=ANTH1013)
ANTH 2003 Cultural Anthropology (ACTS=ANTH2013)
GEOG 2013 Regional Geography of the World (ACTS=GEOG2103)
AMST 2003 American Studies