2015-2016 Degree Map Program: Bachelor of Science Electrical Engineering, Major: Electrical Engineering With Computer Engineering 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 and Computer engineers design, develop, build, and test computer hardware, software, and systems. Other electrical systems may include robotics, controls, communications systems, and electronic equipment.

#Remedial Courses (if applicable):ENGL 0303____ ENGL 0404____ READ 0103____ MATH 0903____   Prerequisites (if applicable):MATH 1914(ACTS=MATH1305)____   OR MATH 1203(ACTS=MATH1203)____

Sample Schedule — **Milestones/Notes**

Semester 1	Hrs.	Grade	Semester 1
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
ELEG 1012- Intro. to Electrical Engineering	2		
Fine Arts & Humanities	3		
Total hours	16	GPA	

Semester 2	Hrs.		Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	
COMS 2104- Foundations of Computer Programming I	4	#	(COMS 1403/1411 not required)
MATH 2924- Calculus II (ACTS= MATH 2505)	4		Milestone
ELEG 2134/2130- Digital Logic Design/ Lab	4		Milestone
Total hours	15	GPA	

Semester 3	Hrs.		Semester 3
PHYS 2114/2000- General Physics I (ACTS= PHYS 2034)	4		Milestone
COMS 2203- Foundations of Computer Prog II	3		Milestone
MATH 3243- Differential Equations I	3		Milestone
ELEG 2103- Electrical Circuits I	3		Milestone
ELEG 3133- Microprocessor Systems Design	3		
Total hours	16	GPA	

Semester 4	Hrs.		Semester 4
PHYS 2124/2010- General Physics II (ACTS= PHYS 2044)	4		Milestone
MATH 2934- Calculus III (ACTS= MATH 2603)	4		Milestone
ELEG 3173 or MATH 3173- Math Methods	3		Spring only
ELEG 2113/2111- Electrical Circuits II/ Lab	4		Milestone
Total hours	15	GPA	**ELEG ADVISOR ASSIGNED**

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/

Semester 5	Hrs.	Grade	Semester 5
Social Sciences	3		
ELEG 3003 or MCEG 3003- Modeling Design	3		Milestone
ELEG 3103- Electronics I	3		Fall Only
COMS 2903-Discrete Structures	3		
Fine Arts & Humanities	3		
Total hours	15	GPA	

Semester 6	Hrs.		Semester 6
COMS 2213- Data Structures	3		Spring only
COMS 2223- Computer Organization and Prog.	3		Spring only
ELEG 3123- Signals and Systems	3		Spring only
ELEG 3143- Electromagnetics	3		Spring only
ELEG 4103- Electronics II	3		Spring only
Total hours	15	GPA	**APPLY FOR GRADUATION**

Semester 7	Hrs.		Semester 7
ELEG 4113-Digital Signal Processing	3		Fall Only
ELEG 4133- Advanced Digital Design	3		Fall Only
ELEG 4143- Communication Systems I	3		Fall Only
ELEG 4202 or MCEG 4202- Engineering Design	2		Milestone
ELEG 4303- Control Systems	3		
Total hours	14	GPA	

Semester 8	Hrs.		Semester 8
U.S. History/Government	3		**Graduation Requirements:**
COMS 3703- Operating Systems	3		Spring only
ELEG 4122- Electrical Systems Lab	2		Spring only
ELEG 4193- Electrical Design Project	3		No more than 4 PE activity hours
Engineering Elective (3000-4000 level)	3		Min. hours required:120
Total Hours	14	GPA	2.00+ GPA

General Electives: 0

Min. hours 3000-4000 level courses: 40

# indicates a "C" or better is required

Fine Arts and Humanities
ART 2123 Experiencing Art (ACTS=ARTA 1003)
MUS 2003 Intro to Music (ACTS=MUSC 1003)
TH 2273 Intro to Theatre (ACTS =DRAM 1003)
ENGL 2173 Intro to Film
JOUR 2173 Intro to Film
ENGL 2003 Intro to World Literature (ACTS=ENGL 2113)
ENGL 2013 Intro to American Literature (ACTS=ENGL 2653)
ENGL 2023 Honors World Literature
PHIL 2003 Intro to Philosophy (ACTS=PHIL 1103)
PHIL 2043 Honors Introduction to Philosophy

U.S. History & Government
HIST 1903 Survey of American History
HIST 2003 United States History to 1877 (ACTS=HIST2113)
HIST 2043 Honors United States History to 1877
HIST 2013 United States History from 1877 (ACTS=HIST2123)
POLS 2003 American Government (ACTS=PLSC2003)

Social Sciences
HIST 1503 World Civilization to 1500 (ACTS=HIST1113)
HIST 1513 World Civilization since 1500 (ACTS=HIST1123)
HIST 1543 Honors World Civilization to 1500
HIST 2003 U.S. History to 1877 (ACTS=HIST2113)
HIST 2013 U.S. History since 1877 (ACTS=HIST2123)
HIST 2043 Honors U.S. History to 1877
HIST 1903 Survey of American History
POLS 2003 American Government (ACTS=PLSC2003)
ECON 2003 Principles of Economics I (ACTS=ECON2103)
ECON 2103 Honors Principles of Economics I

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