

2023-2024 Degree Map Program: Bachelor of Science in Electrical Engineering, Major: Electrical Engineering

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/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 _____ MATH 0803 _____ MATH 1003 _____ MATH 0903 _____ MATH 1113 _____ MATH 1110 _____ MATH 1203 _____ MATH 1914 _____

Sample Schedule		Milestones/Notes	
Semester 1	Hrs.	Grade	Semester 1
ENGL 1013- Comp I (ACTS=ENGL 1013)	3	#	
Fine Arts & Humanities	3		
CHEM 2124/2120- General Chemistry I (ACTS= CHEM 1414)	4		Milestone
MATH 2914- Calculus I (ACTS= MATH 2405)	4	#	
ELEG 1011- Intro. to Electrical Engineering	1		
TECH 1001- Orientation to the University	1		
Total hours	16	GPA	
Semester 2	Hrs.		Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	
COMS 1013- Programming Foundations I	3	#	Co-Req: COMS 1011
COMS 1011- Programming Foundations I Lab	1	#	Lab is Pass/Fail
MATH 2924- Calculus II (ACTS= MATH 2505)	4	#	Milestone
ELEG 2134/2130- Digital Logic Design/ Lab	4		Pre-req: ELEG 1011 -Milestone
Total hours	15	GPA	

Sample Schedule		Milestones/Notes	
Semester 3	Hrs.		Semester 3
COMS 2203- Programing Foundations II	3		SEE NOTE 1: AB2M
PHYS 2114/2000- Calculus-Based Physics I (ACTS= PHYS 2034)	4		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	

Sample Schedule		Milestones/Notes	
Semester 4	Hrs.		Semester 4
PHYS 2124/2010- Calculus-Based 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
STAT 3153 Applied Statistics 1	3		
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 by searching keyword "ACTS" at <https://adhe.edu/>

Fine Arts and Humanities	U.S. History & Government
ART 2123 Experiencing Art (ACTS=ART1003)	HIST 1903 Survey of American History
MUS 2003 Introduction to Music (ACTS=MUSC1003)	HIST 2003 U.S. History to 1877 (ACTS=HIST2113)
TH 2273 Introduction to Theatre (ACTS=DRAM 1003)	HIST 2013 U.S. History since 1877 (ACTS=HIST2123)
ENGL/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)	
PHIL 2003 Introduction to Philosophy (ACTS=PHIL1103)	
PHIL 2053 Introduction to Critical Thinking (ACTS=PHIL 1003)	
1013 from SPAN, FR, GER, JPN, CHIN, or LAT	
1023 from SPAN, FR, GER, JPN, CHIN, or LAT	
LEAD 2003 Ethics in Leadership	

NOTE 1 - Consider Accelerated BSEE Electrical Engineering to MENG Electrical Engineering. See Catalog BEFORE Junior Year.

Sample Schedule		Milestones/Notes	
Semester 5	Hrs.	Grade	Semester 5
ELEG 3003 or MCEG 3003- System Modeling & Analysis	3		Milestone
ELEG 3103- Electronics I	3		Fall Only Course - Milestone
ELEG 3153- Electrical Machines	3		Fall Only Course- Milestone
Technical Elective- Department Approval Required	3		
ELEG Engineering Elective (3000-4000 level)	3		
Total hours	15	GPA	

Sample Schedule		Milestones/Notes	
Semester 6	Hrs.		Semester 6
ELEG 3123- Signals and Systems	3		Spring only
ELEG 3143- Electromagnetics	3		Spring only
ELEG 4103- Electronics II	3		Milestone - Spring Only
ELEG 4202 or MCEG 4202- Engineering Design	2		Milestone
MATH 2703- Discrete Math	3		
Total hours	14	GPA	APPLY FOR GRADUATION

Sample Schedule		Milestones/Notes	
Semester 7	Hrs.		Semester 7
Social Sciences	3		
U.S. History/Government	3		
ELEG 4113-Digital Signal Processing	3		Fall Only
ELEG 4143- Communication Systems I	3		Fall Only
ELEG 4191- Electrical Design Project I	1		
ELEG 4303- Control Systems	3		
Total hours	16	GPA	

Sample Schedule		Milestones/Notes	
Semester 8	Hrs.		Semester 8
ELEG 4122- Electrical Systems Lab	2		Spring only
Fine Arts & Humanities	3		Graduation Requirements:
ELEG 4192- Electrical Design Project II	2		Min. hours 3000-4000 level courses: 40
Technical Elective- Department Approval Required	3		No more than 4 PE activity hours
Electrical Engineering Elective	3		
Total Hours	13	GPA	2.00+ GPA

General Electives: 0

indicates a "C" or better is required (C > required in COMS 1013/1011 only as prereq for COMS 2203)

Social Sciences	
HIST 1503 World History to 1500 (ACTS=HIST1113)	ANTH 1213 Intro. to Anthropology (ACTS=ANTH1013)
HIST 1513 World History since 1500 (ACTS=HIST1123)	ANTH 2003 Cultural Anthropology (ACTS=ANTH2013)
HIST 2003 U.S. History to 1877 (ACTS=HIST2113)	GEOG 2013 Regional Geography of the World (ACTS=GEOG2103)
HIST 2013 U.S. History since 1877 (ACTS=HIST2123)	AMST 2003 American Studies
HIST 1903 Survey of American History	FIN 2013 Personal Finance
POLS 2003 American Government (ACTS=PLSC2003)	LEAD 1003 Introduction to Leadership
ECON 2003 Principles of Macroeconomics (ACTS=ECON2103)	
ECON 2013 Principles of Microeconomics (ACTS=ECON2203)	
SOC 1003 Introductory Sociology (ACTS=SOCI1013)	
PSY 2003 General Psychology (ACTS=PSYC1103)	

University Honors students should consult Course Catalog for appropriate Fine Arts/Humanities, US History/Government and Social Science options for University Honors Curriculum.