

2025-2026 Degree Map Program- Bachelor of Science in Electrical Engineering, 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 <https://catalog.atu.edu/>

#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	#	
BIOL 1114- Principles of Biology (ACTS= BIOL 1014)	4		
MATH 2914- Calculus I (ACTS= MATH 2405)	4	#	
CHEM 2124/2120- General Chemistry I and lab	4		
ELEG 1011- Intro. to Electrical and Computer Engineering	1		
TECH 1001- Orientation to the University	1		Meet with Career Services
Total hours	17	GPA	

Semester 2	Hrs.	Grade	Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	Draft a résumé and upload it to Handshake
BIOL 2014- Human Anatomy (ACTS=BIOL 2404)	4		
MATH 2924- Calculus II (ACTS= MATH 2505)	4		
CHEM 2134/2130- General Chemistry II and lab	4		
Total hours	15	GPA	

Semester 3	Hrs.	Grade	Semester 3
CHEM 3254/3250- Fundamentals of Org. Chemistry and lab	4		SEE NOTE 1: AB2M
MATH 3243- Differential Equations I	3		Work on resume for internships
PHYS 2114/2000- Calculus-Based Physics and lab	4		Attend career fairs on campus
ELEG 2103- Electric Circuits I	3		
*BIOL 3034- Genetics	4		Recommended for Medical Track
Total hours	14/18	GPA	

Semester 4	Hrs.	Grade	Semester 4
U.S. History/Government	3		
SOC 1003- Introductory Sociology (ACTS = SOCI 1013)	3		
COMS 1013- Programming Foundations I	3		Co-Req: COMS 1011
COMS 1011- Programming Foundations I Lab	1		Pass/Fail
ELEG 2113/2111- Electric Circuits II and lab	4		
*CHEM 3264/3260- Mechanistic Organic Chemistry and lab	4		Recommended for Medical Track
Total hours	14/18	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 ART 2123 Experiencing Art (ACTS=ARTA1003) MUS 2003 Survey of Music History (ACTS=MUSC1003) TH 2273 Introduction to Theatre (ACTS=DRAM 1003) ENGL/JOUR 2173 Introduction to Film 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	U.S. History & Government HIST 1903 Survey of American History HIST 2003 U.S. History to 1877 (ACTS=HIST2113) HIST 2013 U.S. History since 1877 (ACTS=HIST2123) POLS 2003 American Government (ACTS=PLSC2003)
University Honors students should consult Course Catalog for appropriate Fine Arts/Humanities, US History/Government and Social Science options for University Honors Curriculum.	

Possible Careers: Medical Device, Biomechanics, Clinical, Medical Imaging, and Research Engineering

Sample Schedule
Milestones/Notes

Semester 5	Hrs.	Grade	Semester 5
MATH 2703- Discrete Mathematics	3		Meet with faculty advisor about internships
MATH 2934- Calculus III (ACTS= MATH 2603)	4		
PHYS 2124/2010- Calculus-Based Physics II and lab	4		
ELEG 3103- Electronics I	3		Fall Only
*CHEM 3344/3340- Principles of Biochemistry and lab	4		Recommended for Medical Track
			Start applying to internships
Total hours	14/18	GPA	

Semester 6	Hrs.	Grade	Semester 6
ELEG 3123- Signals and Systems	3		Spring only
ELEG 3143- Electromagnetics	3		Spring only
STAT 3153- Applied Statistics 1	3		
ELEG 4103- Electronics II	3		Spring only
ELEG 4122- Electrical Systems Lab	2		Spring only
ELEG/MCEG 4202- Engineering Design	2		
Total hours	16	GPA	APPLY FOR GRADUATION

Semester 7	Hrs.	Grade	Semester 7
PSY 2003- General Psychology (ACTS = PSYC 1103)	3		
ELEG 2134/2130- Digital Logic Design/ Lab	4		
ELEG/MCEG 3003- System Modeling and Analysis	3		
ELEG 4113-Digital Signal Processing	3		Fall Only
ELEG 4143- Communication Systems I	3		Fall Only
ELEG 4191- Electrical Design Project I	1		
Total hours	17	GPA	

Semester 8	Hrs.	Grade	Semester 8
Fine Arts & Humanities	3		Graduation Requirements: Min. hours 3000-4000 level courses: 40 No more than 4 PE activity hours Min. hours required: 122 2.00+ GPA
BIOL 3074- Human Physiology	4		
ELEG 3133- Microprocessor Systems Design	3		
ELEG 4192- Electrical Design Project II	2		
ELEG 4303- Control Systems	3		
*BIOL 4033- Cell Biology	3		Recommended for Medical Track
Total Hours	15/18	GPA	

General Electives: 0

indicates a "C" or better is required

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

* These courses are not required for the Biomedical Option major; however, they are recommended for application to an advanced medical degree program