

2024-2025 Degree Map-Bachelor of Science in Mechanical 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 <https://catalog.atu.edu/>

#Prerequisite Courses: ENGL 0303 ___ MATH 0803 ___ MATH 1003 ___ MATH 0903 ___ MATH 1113 ___
 MATH 1110 ___ MATH 1203 ___ MATH 1914 ___

Possible Careers: Design and Development, Manufacturing and Production, Project Management, Research and Development, Consulting and Technical Sales

Sample Schedule	Milestones/Notes		
Semester 1	Hrs.	Grade	Semester 1
ENGL 1013-Comp I (ACTS=ENGL 1013)	3	#	
Fine Arts & Humanities	3		
MATH 2914- Calculus I (ACTS= MATH 2405)	4	#	Milestone
CHEM 2124/2120- General Chemistry I (ACTS= CHEM 1414)	4		Milestone
MCEG 1011- Introduction to Mechanical Engineering	1		
TECH1001: Orientation to the University	1		
Total hours	16	GPA	

Sample Schedule	Milestones/Notes		
Semester 5	Hrs.	Grade	Semester 5
ELEG 2113- Electrical Circuits II	3		Must be taken in sequence with ELEG 2103
MCEG 3313- Thermodynamics I	3		
MCEG 3413- Fundamentals of Mechanical Design	3		
MCEG 3442- Mechanical Laboratory I	2		
Engineering Elective (3000-4000 level)	3		
Total hours	14	GPA	

Semester 2	Hrs.	Grade	Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	
PHYS 2114/2000- Calculus-Based Physics I (ACTS= PHYS 2034)	4		
MATH 2924- Calculus II (ACTS= MATH 2505)	4	#	
MCEG 1002- Engineering Graphics	2		
MCEG 2203- Computational Methods in Engineering	3		
Total hours	16	GPA	

Semester 6	Hrs.	Grade	Semester 6
MCEG 4202 or ELEG 4202- Engineering Design	2		
MCEG 4403- Mechanics of Fluids and Hydraulics	3		
MCEG 4423- Machine Component Design	3		
MATH Elective	3		departmental approval required
Engineering Elective (3000-4000 level)	3		
Total hours	14	GPA	APPLY FOR GRADUATION

Semester 3	Hrs.	Grade	Semester 3
CHEM 2134/2130- General Chemistry II(ACTS= CHEM1424) OR PHYS 2124/2010- Calculus-Based Physics II (ACTS= PHYS2044)	4		
MATH 2934- Calculus III (ACTS= MATH 2603)	4		
MCEG 2013- Statics	3		
MCEG 2023- Engineering Materials	3		
Total hours	14	GPA	SEE NOTE 1: AB2M

Semester 7	Hrs.	Grade	Semester 7
U.S. History/Government	3		
MCEG 3003 OR ELEG 3003- System Modeling & Analysis	3		
MCEG 4433- Thermodynamics II	3		
MCEG 4442- Mechanical Laboratory II	2		
MCEG 4491: Mechanical Design Project I	1		
Technical Elective	3		departmental approval required
Total hours	15	GPA	

Semester 4	Hrs.	Grade	Semester 4
Social Sciences	3		
ELEG 2103- Electrical Circuits I	3		Must take in sequence with ELEG 2113
MATH 3243- Differential Equations I	3		Milestone
MCEG 2033- Dynamics	3		Milestone
MCEG 3013- Mechanics of Materials	3		Milestone
Total hours	15	GPA	MCEG ADVISOR ASSIGNED

Semester 8	Hrs.	Grade	Semester 8
MCEG 4492: Mechanical Design Project II	2		
ELEG 4303- Control Systems	3		
MCEG 4443- Heat Transfer	3		
Fine Arts & Humanities	3		Graduation Requirements: Min. hours 3000-4000 level courses: 40 No more than 4 PE activity hours Min. hours required:120 2.00+ GPA
Engineering Lab Elective (3000-4000 level)	2		
Engineering Elective (4000 level)	3		
Total Hours	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 by searching keyword "ACTS" at <https://adhe.edu/>

Fine Arts and Humanities	U.S. History & Government
ART 2123 Experiencing Art (ACTS=ARTA1003) MUS 2003 Survey of Music History (ACTS=MUSC1003) TH 2273 Introduction to Theatre (ACTS=DRAM 1003) ENGL/IOUR 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	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.	

General Electives: 0
 # indicates a "C" or better is required

Social Sciences	NOTE 1 - Consider Accelerated BSME Mechanical Engineering to MENG Mechanical Engineering. See Catalog BEFORE Junior Year.
HIST 1503 World History to 1500 (ACTS=HIST1113) HIST 1513 World History since 1500 (ACTS=HIST1123) HIST 2003 U.S. History to 1877 (ACTS=HIST2113) HIST 2013 U.S. History since 1877 (ACTS=HIST2123) HIST 1903 Survey of American History POLS 2003 American Government (ACTS=PLSC2003) 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) 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 FIN 2013 Personal Finance LEAD 1003 Introduction to Leadership