

2022-2023 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 <http://www.atu.edu/catalog/>

Possible careers include: Mechanical engineering is one of the broadest engineering disciplines. Mechanical engineers design, develop, build, and test mechanical and thermal systems. These systems include mechanical devices such as tools, engines, and machines, and thermal devices including steam power plants, heating, ventilation and air-conditioning systems (HVAC), and pumping systems.

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

Sample Schedule

Semester 1		Milestones/Notes		Semester 1	
Hrs.	Grade				
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			
Semester 2		Milestones/Notes		Semester 2	
Hrs.	Grade				
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#			
PHYS 2114/2000- Calculus-Based Physics I (ACTS= PHYS 2034)	4			Milestone	
MATH 2924- Calculus II (ACTS= MATH 2505)	4	#		Milestone	
MCEG 1002- Engineering Graphics	2				
MCEG 2203- Computational Methods in Engineering	3				
Total hours	16	GPA			

Semester 3		Milestones/Notes		Semester 3	
Hrs.	Grade				
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			Milestone	
MCEG 2013- Statics	3			Milestone	
MCEG 2023- Engineering Materials	3				
Total hours	14	GPA			

Semester 4		Milestones/Notes		Semester 4	
Hrs.	Grade				
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

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 <https://www.adhe.edu/students-parents/colleges-universities/transfer-info.-for-students/>

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 2183 Honors Introduction to Film	
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	
PHIL 2053 Introduction to Critical Thinking (ACTS=PHIL 1003)	

Sample Schedule

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

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

Semester 7		Milestones/Notes		Semester 7	
Hrs.	Grade				
U.S. History/Government	3				
MCEG 3003 or ELEG 3003- Modeling and Design	3			Milestone	
MCEG 4433- Thermodynamics II	3				
MCEG 4442- Mechanical Laboratory II	2				
MCEG 4491: Mechanical Design Project I	1				
Technical Elective (departmental approval required)	3				
Total hours	15	GPA			

Semester 8		Milestones/Notes		Semester 8	
Hrs.	Grade				
MCEG 4492: Mechanical Design Project II	2			Milestone	
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			

General Electives: 0

indicates a "C" or better is required

U.S. History & Government	Social Sciences
HIST 1503 World History to 1500 (ACTS=HIST1113)	ECON 2013 Principles of Economics II (ACTS=ECON2203)
HIST 1513 World History since 1500 (ACTS=HIST1123)	SOC 1003 Introductory Sociology (ACTS=SOCI1013)
HIST 1543 Honors World History to 1500	PSY 2003 General Psychology (ACTS=PSYC1103)
HIST 2003 U.S. History to 1877 (ACTS=HIST2113)	ANTH 1213 Intro. to Anthropology (ACTS=ANTH1013)
HIST 2013 U.S. History since 1877 (ACTS=HIST2123)	ANTH 2003 Cultural Anthropology (ACTS=ANTH2013)
HIST 2043 Honors U.S. History to 1877	GEOG 2013 Regional Geography of the World (ACTS=GEOG2103)
HIST 1903 Survey of American History	AMST 2003 American Studies
POLS 2003 American Government (ACTS=PLSC2003)	FIN 2013 Personal Finance
ECON 2003 Principles of Economics I (ACTS=ECON2103)	LEAD 1003 Introduction to Leadership
ECON 2103 Honors Principles of Economics I	