

**2018-2019 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 \_\_\_\_\_ ENGL 0404 \_\_\_\_\_ READ 0103 \_\_\_\_\_ MATH 0803 \_\_\_\_\_ MATH 1003 \_\_\_\_\_ MATH 0903 \_\_\_\_\_ MATH 0900 \_\_\_\_\_ MATH 1110 \_\_\_\_\_ MATH 1203 \_\_\_\_\_ MATH 1914 \_\_\_\_\_

**Sample Schedule**

Semester 1	Hrs.	Grade	Milestones/Notes
ENGL 1013-Comp I (ACTS=ENGL 1013)	3	#	
U.S. History/Government	3		
MATH 2914- Calculus I (ACTS= MATH 2405)	4		#C or > required for Gen Ed. 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		
<b>Total hours</b>	<b>16</b>	<b>GPA</b>	
Semester 2	Hrs.	Grade	Milestones/Notes
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	
PHYS 2114/2000- General 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		
<b>Total hours</b>	<b>16</b>	<b>GPA</b>	

Semester 3	Hrs.	Grade	Milestones/Notes
CHEM 2134/2130- General Chemistry II(ACTS= CHEM1424) OR PHYS 2124/2010- General Physics II (ACTS= PHYS2044)	4		
MATH 2934- Calculus III (ACTS= MATH 2603)	4		Milestone
MCEG 2013- Statics	3		Milestone
MCEG 2023- Engineering Materials	3		
<b>Total hours</b>	<b>14</b>	<b>GPA</b>	

Semester 4	Hrs.	Grade	Milestones/Notes
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
<b>Total hours</b>	<b>15</b>	<b>GPA</b>	<b>MCEG ADVISOR ASSIGNED</b>

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/>

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 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	Hrs.	Grade	Milestones/Notes
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		
<b>Total hours</b>	<b>14</b>	<b>GPA</b>	

Semester 6	Hrs.	Grade	Milestones/Notes
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		
<b>Total hours</b>	<b>14</b>	<b>GPA</b>	<b>APPLY FOR GRADUATION</b>

Semester 7	Hrs.	Grade	Milestones/Notes
Fine Arts & Humanities	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		
<b>Total hours</b>	<b>15</b>	<b>GPA</b>	

Semester 8	Hrs.	Grade	Milestones/Notes
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		
<b>Total Hours</b>	<b>16</b>	<b>GPA</b>	

General Electives: 0

# indicates a "C" or better is required

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 2103 Honors Principles of Economics II (ACTS=ECON 2203)
SOC 1003 Intro Sociology (ACTS=SOCI 1013)
PSY 2003 General Psychology (ACTS=PSYC 1103)
ANTH 1213 Intro to Anthropology (ACTS=ANTH 1013)
ANTH 2003 Cultural Anthropology (ACTS=ANTH 2103)
GEOG 2013 Rgnl Geog of the World (ACTS=GEOG 2103)
AMST 2003 American Studies