

**2016-2017 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/academics/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.

#Remedial Courses (if applicable): ENGL 0303 \_\_\_\_\_ ENGL 0404 \_\_\_\_\_ READ 0103 \_\_\_\_\_ MATH 0903 \_\_\_\_\_

**Sample Schedule**

Semester 1	Hrs.	Grade	Milestones/Notes	Semester 1
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	Semester 2
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 2023- Engineering Materials	3			
<b>Total hours</b>	<b>16</b>	<b>GPA</b>		

Semester 3	Hrs.	Grade	Milestones/Notes	Semester 3
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 2203- Computational Methods in Engineering	3			
<b>Total hours</b>	<b>14</b>	<b>GPA</b>		

Semester 4	Hrs.	Grade	Milestones/Notes	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	
<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**

ART 2123 Experiencing Art (ACTS=ARTA 1003)  
 MUS 2003 Intro to Music (ACTS=MUSC 1003)  
 TH 2273 Intro to Theatre (ACTS=DRAM 1003)  
 ENGL 2173 Intro to Film  
 JOUR 2173 Intro to Film  
 ENGL 2003 Intro to World Literature (ACTS=ENGL 2113)  
 ENGL 2013 Intro to American Literature (ACTS=ENGL 2653)  
 ENGL 2023 Honors World Literature  
 PHIL 2003 Intro to Philosophy (ACTS=PHIL 1103)  
 PHIL 2043 Honors Introduction to Philosophy

**U.S. History & Government**

HIST 1903 Survey of American History  
 HIST 2003 United States History to 1877 (ACTS=HIST2113)  
 HIST 2043 Honors United States History to 1877  
 HIST 2013 United States History from 1877 (ACTS=HIST2123)  
 POLS 2003 American Government (ACTS=PLSC2003)

Prerequisites (if applicable): MATH 1914 (ACTS=MATH1305) \_\_\_\_\_ OR MATH 1203 (ACTS=MATH1203) \_\_\_\_\_

**Sample Schedule**

Semester 5	Hrs.	Grade	Milestones/Notes	Semester 5
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	Semester 6
Fine Arts & Humanities	3			
MATH Elective (department approval required)	3			
MCEG 4403- Mechanics of Fluids and Hydraulics	3			
MCEG 4423- Machine Component Design	3			
Engineering Elective (3000-4000 level)	3			
<b>Total hours</b>	<b>15</b>	<b>GPA</b>	<b>APPLY FOR GRADUATION</b>	

Semester 7	Hrs.	Grade	Milestones/Notes	Semester 7
Fine Arts & Humanities	3			
MCEG 3003 or ELEG 3003- Modeling and Design	3		Milestone	
MCEG 4202 or ELEG 4202- Engineering Design	2			
MCEG 4433- Thermodynamics II	3			
Technical Elective (departmental approval required)	3			
MCEG 4491: Mechanical Design Project I	1			
<b>Total hours</b>	<b>15</b>	<b>GPA</b>		

Semester 8	Hrs.	Grade	Milestones/Notes	Semester 8
MCEG 4492: Mechanical Design Project II	2		Milestone	
MCEG 4442- Mechanical Laboratory II	2			
MCEG 4443- Heat Transfer	3			
ELEG 4303- Control Systems	3			
Engineering Lab Elective (3000-4000 level)	2			
Engineering Elective (4000 level)	3			
<b>Total Hours</b>	<b>15</b>	<b>GPA</b>	<b>Graduation Requirements:</b> Min. hours 3000-4000 level courses: 40 No more than 4 PE activity hours Min. hours required:120 2.00+ GPA	

General Electives: 0

# indicates a "C" or better is required

HIST	SOCIAL SCIENCES
HIST 1503 World Civilization to 1500 (ACTS=HIST1113)	ECON 2103 Honors Principles of Economics I
HIST 1513 World Civilization since 1500 (ACTS=HIST1123)	ECON 2013 Principles of Economics II (ACTS=ECON 2203)
HIST 1543 Honors World Civilization to 1500	SOC 1003 Intro Sociology (ACTS=SOCI 1013)
HIST 2003 U.S. History to 1877 (ACTS=HIST2113)	PSY 2003 General Psychology (ACTS=PSYC 1103)
HIST 2013 U.S. History since 1877 (ACTS=HIST2123)	ANTH 1213 Intro to Anthropology (ACTS=ANTH 1013)
HIST 2043 Honors U.S. History to 1877	ANTH 2003 Cultural Anthropology (ACTS=ANTH 2013)
HIST 1903 Survey of American History	GEOG 2013 Rgnl Geog of the World (ACTS=GEOG 2103)
POLS 2003 American Government (ACTS=PLSC2003)	AMST 2003 American Studies
ECON 2003 Principles of Economics I (ACTS=ECON2103)	AGBU 2063 Prin Agri Macroeconomics
ECON 2103 Honors Principles of Economics I	AGBU 2073 Prin Agri Microeconomics