

**2014-2015 Degree Map-Bachelor of Science in Engineering Physics**

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: Architectural and Engineering Manager, Validation Engineer, Photonics Engineer, Nanosystems Engineer, Physicist, Engineering Teacher, Solar Energy Systems Designer**

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

**Sample Schedule**
**Milestones/Notes**

Semester 1	Hrs.	Grade	Semester 1
ENGL 1013: Comp I (ACTS=ENGL 1013)	3	#	
PHSC1001: Orientation to Physical Science	1		
MATH2914: Calculus I (ACTS= MATH 2405)	4		#C or > required for Gen Ed. Milestone
COMS2803: Programming in C	3		
CHEM2124/2120: Gen. Chem. I (ACTS=CHEM1414) MILESTONE	4		Milestone
Total hours	15	GPA	

Semester 2	Hrs.	Grade	Semester 2
ENGL 1023: Comp II (ACTS= ENGL 1023)	3	#	
PHSC1011: Orientation to Physical Science II	1		No substitutions allowed.
MATH2924: Calculus II (ACTS= MATH2505)	4		Milestone
MCEG2023: Engineering Materials	3		
CHEM2134/2130: General Chemistry II (ACTS= CHEM 1424)	4		
Total hours	15	GPA	

Semester 3	Hrs.	Grade	Semester 3
Social Sci./Fine Arts/Humanities/Speech	3		
PHYS 2114/2000: General Physics I (ACTS=PHYS 2034)	4		Milestone
MATH2934: Calculus III (ACTS= MATH 2603)	4		
Biological Science	4		
Total hours	15	GPA	

Semester 4	Hrs.	Grade	Semester 4
Social Sci./Fine Arts/Humanities	3		
Social Sci./Fine Arts/Humanities	3		
PHYS 2124/2010: General Physics II (ACTS=PHYS 2044)	4		Milestone
MATH3243: Differential Equations I	3		
General Elective	2		
Total hours	15	GPA	PHYS 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 <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 U.S. History I (ACTS=HIST2113)
TH 2273 Introduction to Theatre (ACTS=DRAM 1003)	HIST 2043 Honors U.S. History I
ENGL 2173 Introduction to Film	HIST 2013 U.S. History II (ACTS=HIST2123)
JOUR 2173 Introduction to Film	POLS 2003 American Government (ACTS=PLSC2003)
ENGL 2003 Introduction to World Literature (ACTS=ENGL2113)	<b>Speech Courses</b>
ENGL 2013 Intro. to American Literature (ACTS=ENGL2653)	SPH 1003 Intro. to Speech Com. (ACTS=SPCH1003)
ENGL 2023 Honors World Literature	SPH 2003 Public Speaking
PHIL 2003 Introduction to Philosophy (ACTS=PHIL1103)	SPH 2173 Business and Professional Speaking
PHIL 2043 Honors Introduction to Philosophy	

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

**Sample Schedule**
**Milestones/Notes**

Semester 5	Hrs.	Grade	Semester 5
Social Sci./Fine Arts/Humanities	3		
ELEG2103: Electric Circuits I	3		
PHYS 3023 Mechanics or PHYS 3213 Modern Physics	3		
PHYS 4113 (Adv. Physics Lab) or *MATH Elec. (3000-4000)	3		Complete both PHYS 4113 & MATH. PHYS 4113 offered in alternating years.
PHYS 4213 Adv Topics or MCEG3013 Mech of Materials	3		
Total hours	15	GPA	

Semester 6	Hrs.	Grade	Semester 6
Social Sci./Fine Arts/Humanities	3		
ELEG 2111 and ELEG 2113: Electric Circuits II and Lab	4		
PHYS 4003 Thermo/Stats Mech or PHYS 3003 Optics	3		
PHYS4013 Quantum Mech or PHYS 3133 Electr. & Magnetism	3		
Total hours	13	GPA	APPLY FOR GRADUATION

Semester 7	Hrs.	Grade	Semester 7
U.S. History & Government	3		
PHYS 3023 Mechanics or PHYS 3213 Modern Physics	3		
PHYS 4113 (Adv. Physics Lab) or *MATH Elec.(3000-4000)	3		Complete both PHYS 4113 & MATH. PHYS 4113 offered in alternating years.
PHYS 4213 Adv Topics or MCEG3013 Mech of Materials	3		
PHYS4991: Spcl Probs. PHYS&Astrmy OR PHYS4951: UG Rsrch in Phys	1		
ELEG/MCEG Elective (3000-4000 level)	3		
Total hours	16	GPA	

Semester 8	Hrs.	Grade	Semester 8
ELEG 4991/MCEG 4991 OR ELEG 4951/MCEG 4951	1		
MCEG4403: Mechanics of Fluids and Hydraulics	3		<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 No more than 12 hours of "D" grades
MCEG4443: Heat Transfer	3		
PHYS4013 Quantum Mech or PHYS 3133 Electr. & Magnetism	3		
PHYS 4003 Thermo/Stats Mech or PHYS 3003 Optics	3		
ELEG/MCEG Elective (3000-4000 level)	3		
Total Hours	16	GPA	

General Electives: 2 hours (1000-4000 level) \*MATH Electives exclude MATH 3003, 3033, 4113

# indicates a "C" or better is required

	Social Sciences
HIST 1503 World Civilization (ACTS=HIST1113)	ECON 2013 Principles of Economics II (ACTS=ECON2203)
HIST 1513 World Civilization II (ACTS=HIST1123)	SOC 1003 Introductory Sociology (ACTS=SOCI1013)
HIST 1543 Honors World Civilization I	PSY 2003 General Psychology (ACTS=PSYC1103)
HIST 2003 U.S. History I (ACTS=HIST2113)	ANTH 1213 Intro. to Anthropology (ACTS=ANTH1013)
HIST 2013 U.S. HISTORY II (ACTS=HIST2123)	ANTH 2003 Cultural Anthropology (ACTS=ANTH2013)
HIST 2043 Honors U.S. History I	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)	
ECON 2003 Principles of Economics I (ACTS=ECON2103)	
ECON 2103 Honors Principles of Economics I	