

2021-2022 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/catalog/>

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

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

Sample Schedule	Milestones/Notes		
Semester 1	Hrs.	Grade	Semester 1
ENGL 1013- Comp I (ACTS=ENGL 1013)	3	#	
PHSC 1001- Orientation to Physical Science	1		
MATH 2914- Calculus I (ACTS= MATH 2405)	4	#	#C or > required for Gen Ed. Milestone
COMS 2803- Programming in C	3		
CHEM 2124/2120- Gen. Chem. I (ACTS=CHEM1414)	4		Milestone
Total hours	15	GPA	

Semester 2	Hrs.	Grade	Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	
PHSC 1011- Orientation to Physical Science II	1		No substitutions allowed.
MATH 2924- Calculus II (ACTS= MATH2505)	4		Milestone
MCEG 2023- Engineering Materials	3		
CHEM 2134/2130- General Chemistry II (ACTS= CHEM 1424)	4		
Total hours	15	GPA	

Semester 3	Hrs.	Grade	Semester 3
Social Sci/Fine Arts/Humanities/Comm	3		
PHYS 2114/2000- Calculus-Based Physics I (ACTS=PHYS 2034)	4		Milestone
MATH 2934- 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- Calculus-Based Physics II (ACTS=PHYS 2044)	4		Milestone
MATH 3243- 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 <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 since 1877 (ACTS=HIST2123)
JOUR 2173 Introduction to Film	POLS 2003 American Government (ACTS=PLSC2003)
ENGL 2183 Honors Introduction to Film	Communication Courses
ENGL 2003 Introduction to World Literature (ACTS=ENGL2113)	COMM 1003 Intro to Speech Comm
ENGL 2013 Intro. to American Literature (ACTS=ENGL2653)	COMM 2003 Public Speaking
ENGL 2023 Honors World Literature	COMM 2173 Business and Professional Speaking
PHIL 2003 Introduction to Philosophy (ACTS=PHIL1103)	
PHIL 2043 Honors Introduction to Philosophy	
PHIL 2053 Introduction to Critical Thinking (ACTS=PHIL 1003)	

Sample Schedule	Milestones/Notes		
Semester 5	Hrs.	Grade	Semester 5
Social Sci/Fine Arts/Humanities	3		
ELEG 2103- 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 MCEG 3013- Mech of Materials	3		
Total hours	15	GPA	

Semester 6	Hrs.	Grade	Semester 6
Social Sci/Fine Arts/Humanities	3		
ELEG 2113/2111- Electric Circuits II and Lab	4		
PHYS 4003- Thermo/Stats Mech or PHYS 3003- Optics	3		
PHYS 4013 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 MCEG 3013- Mech of Materials	3		
PHYS 4991- Spcl Probs. PHYS&Astrmy OR PHYS 4951- UG Rsrch in Phys	1		
ELEG/MCEG Elective (3000-4000 level)	3		
Total hours	16	GPA	

Semester 8	Hrs.	Grade	Semester 8
ELEG/MCEG 4991 OR ELEG/MCEG 4951	1		
MCEG 4403- Mechanics of Fluids and Hydraulics	3		Graduation Requirements: 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
MCEG 4443- Heat Transfer	3		
PHYS 4013- 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

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)	
ECON 2003 Principles of Economics I (ACTS=ECON2103)	
ECON 2103 Honors Principles of Economics I	