

2022-2023 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

Semester 1	Hrs.	Grade	Milestones/Notes	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 1013- Programming I	3		Prereq: #C or > in MATH 1113 or higher	
COMS 1011- Programming I Lab	1		Lab is Pass/Fail	
CHEM 2124/2120- Gen. Chem. I (ACTS=CHEM1414)	4	#		
Total hours	16	GPA		

Semester 2	Hrs.	Grade	Milestones/Notes	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			
PHYS 2114/2000- Calculus-Based Physics I (ACTS=PHYS 2034)	4			
Total hours	15	GPA		

Semester 3	Hrs.	Grade	Milestones/Notes	Semester 3
Social Sciences	3			
PHYS 2124/2010- Calculus-Based Physics II (ACTS=PHYS 2044)	4		Milestone	
MATH 2934- Calculus III (ACTS= MATH 2603)	4			
MCEG 2013- Statics	3			
MCEG 1002- Engineering Graphics	2			
Total hours	16	GPA		

Semester 4	Hrs.	Grade	Milestones/Notes	Semester 4
Fine Arts/Humanities	3			
ELEG 2103- Electric Circuits I	3			
MCEG 2033- Dynamics	3		Milestone	
MATH 3243- Differential Equations I	3			
PHYS 3213- Modern Physics	3			
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/>

indicates a "C" or better is required

Fine Arts and Humanities ART 2123 Experiencing Art (ACTS=ARTA1003) MUS 2003 Introduction to Music (ACTS=MUSC1003) TH 2273 Introduction to Theatre (ACTS=DRAM 1003) ENGL 2173 Introduction to Film JOUR 2173 Introduction to Film 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)	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 since 1877 (ACTS=HIST2123) PLSC 2003 American Government (ACTS=PLSC2003) Communication Courses COMM 1003 Intro to Speech Comm COMM 2003 Public Speaking COMM 2173 Business and Professional Speaking
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Sample Schedule

Semester 5	Hrs.	Grade	Milestones/Notes	Semester 5
Fine Arts/Humanities	3			
ELEG 2113- Electric Circuits II	3			
ELEG 2111- Electric Circuits Lab	1			
PHYS 3023- Mechanics or PHYS 4013 Quantum Mechanics	3			
PHYS 3133- Theory/Elec and Magnetism I or PHYS 4023- Comp	3			
MCEG 3013- Mech of Materials	3			
Total hours	16	GPA		

Semester 6	Hrs.	Grade	Milestones/Notes	Semester 6
US History/ Government	3			
PHYS 3003- OPTICS or PHYS 4113 Advanced Physics Lab	3			
(PHYS 4213- Adv Topic/ Physic/ Astrono or Math UD)or PHYS 4003-Therm	3			
ELEG/MCEG/COMS ELECTIVE (3000-4000 level)	3			
MCEG 4202-Engineering Design/ELEG 4202- Engineering Design	2			
Total hours	14	GPA	APPLY FOR GRADUATION	

Semester 7	Hrs.	Grade	Milestones/Notes	Semester 7
MCEG 4403- Mechanics of Fluids and Hydraulics	3			
PHYS 3023- Mechanics or PHYS 4013- Quantum Mechanics	3			
PHYS 3133- Theory/Elec and Magnetism I or PHYS 4023- Comp	3		Complete both PHYS 4113 & MATH. PHYS 4113 offered in alternating years.	
MCEG 3313- Thermodynamics I	3			
ELEG/MCEG/ COMS Elective (3000-4000 level)	3			
Total hours	15	GPA		

Semester 8	Hrs.	Grade	Milestones/Notes	Semester 8
PHYS 3003- OPTICS or PHYS 4113 Advanced Physics Lab	3			
PHYS 4213- Adv Topic/ Physic/ Astrono or Math UD or PHYS 4003- Therm	3			
PHYS 4951- Undergraduate Research	1			
MCEG 4443- Heat Transfer	3			
ELEG/MCEG/COMS Elective (3000-4000 level)	3			
Total Hours	13	GPA		

*General Electives: 5 hours (Choose at least 9 hrs. from PHYS, PHSC, BIOL, ENGR, COMS) with 6 hours 3000-4000

**Math Elective Exclusions: Math 3003, 3033, 4113

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