

2024-2025 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 <https://catalog.atu.edu/>

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

Semester 2	Hrs.		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	#	
MCEG 2023- Engineering Materials	3		
PHYS 2114/2000- Calculus-Based Physics I (ACTS=PHYS 2034)	4		
Total hours	15	GPA	

Semester 3	Hrs.		Semester 3
Social Sciences	3		
PHYS 2124/2010- Calculus-Based Physics II (ACTS=PHYS 2044)	4		
MATH 2934- Calculus III (ACTS= MATH 2603)	4		
MCEG 2013- Statics	3		
COMS 2203 Programming Foundations II	3		
Total hours	17	GPA	

Semester 4	Hrs.		Semester 4
Fine Arts/Humanities	3		
ELEG 2103- Electric Circuits I	3		
MCEG 2033- Dynamics	3		
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 by searching keyword "ACTS" at <https://adhe.edu/>

Fine Arts and Humanities ART 2123 Experiencing Art (ACTS=ARTA1003) MUS 2003 Survey of Music History (ACTS=MUSC1003) TH 2273 Introduction to Theatre (ACTS=DRAM 1003) ENGL/JOUR 2173 Introduction to Film ENGL 2003 Introduction to World Literature (ACTS=ENGL2113) ENGL 2013 Intro. to American Literature (ACTS=ENGL2653) PHIL 2003 Introduction to Philosophy (ACTS=PHIL1103) PHIL 2053 Introduction to Critical Thinking (ACTS=PHIL 1003) 1013 from SPAN, FR, GER, JPN, CHIN, or LAT 1023 from SPAN, FR, GER, JPN, CHIN, or LAT LEAD 2003 Ethics in Leadership	U.S. History & Government HIST 1903 Survey of American History HIST 2003 U.S. History to 1877 (ACTS=HIST2113) HIST 2013 U.S. History since 1877 (ACTS=HIST2123) POLS 2003 American Government (ACTS=PLSC2003) University Honors students should consult Course Catalog for appropriate Fine Arts/Humanities, US History/Government and Social Science options for University Honors Curriculum.
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Possible Careers: Engineering (Process and Testing), Research, Quality Control, Development, Instrumentation, Consulting

Sample Schedule

Semester 5	Hrs.	Grade	Milestones/Notes
Fine Arts/Humanities	3		
ELEG 2113- Electric Circuits II	3		
ELEG 2111- Electric Circuits Lab	1		
PHYS 3023- Mechanics or PHYSC 4013 Quantum Mechanics	3		
PHYS 3133- Theo Elec/Magnet or PHYS 4023- Computational	3		PHYS3133 offered alternating fall semesters
MCEG 3013- Mech of Materials	3		
Total hours	16	GPA	

Semester 6	Hrs.		Semester 6
US History/ Government	3		
PHYS 3003- Optics or PHYS 4113 Advanced Physics Lab	3		PHYS 4113 offered in alternating years.
PHYS 4213- Adv Topic/ Physic/ Astrono (or UD MATH) or PHYS 4003-Thermodynam/ Stat Mech	3		Math Elective Exclude: MATH 3003, 3033, 4113
COMS 2323- Programming in Python	3		Prereq: COMS 2203
MCEG 4202-Engineering Design	2		
Total hours	14	GPA	APPLY FOR GRADUATION

Semester 7	Hrs.		Semester 7
MCEG 4403- Mechanics of Fluids and Hydraulics	3		
PHYS 3023- Mechanics or PHYS 4013- Quantum Mechanics	3		
PHYS 3133- Theo Elec/Magnet or PHYS 4023- Computational	3		
MCEG 3313- Thermodynamics I	3		
ELEG/MCEG/ COMS Elective (3000-4000 level)	3		
Total hours	15	GPA	

Semester 8	Hrs.		Semester 8
PHYS 3003- OPTICS or PHYS 4113 Advanced Physics Lab	3		
(PHYS 4213- Adv Topic/ Physic/ Astrono or MATH UD) or PHYS 4003-Thermodynam/ Stat Mech	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
PHYS 4061- Engineering Physics Design	1		
MCEG 4443- Heat Transfer	3		
ELEG/MCEG/COMS Elective (3000-4000 level)	2		
Total Hours	12	GPA	

*General Electives: 5 hours 3000-4000 level

indicates a "C" or better is required

Social Sciences HIST 1503 World History to 1500 (ACTS=HIST1113) HIST 1513 World History since 1500 (ACTS=HIST1123) HIST 2003 U.S. History to 1877 (ACTS=HIST2113) HIST 2013 U.S. History since 1877 (ACTS=HIST2123) HIST 1903 Survey of American History POLS 2003 American Government (ACTS=PLSC2003) ECON 2003 Principles of Macroeconomics (ACTS=ECON2103) ECON 2013 Principles of Microeconomics (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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