

2022-2023 Degree Map-Bachelor of Science in 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: Natural Sciences Manager, Physicist, Physics Teacher, Aeronautical & Aerospace Engineer, Aerospace Engineering Technician, Atmospheric and Space Scientist, Cartographer, Hydraulic Engineer, Photogrammetrist

#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	#	
COMS 1013 Programming I	3		Prereq: #C or > in MATH 1113 or higher math
COMS 1011 Programming I Lab	1		Pass/Fail
MATH 2914 Calculus I (ACTS=MATH 2405)	4	#	Students with MATH ACT 26 or higher eligible to enroll in MATH 2914.
CHEM 2124/2120- General Chemistry I (ACTS= CHEM 1414)	4	#	
PHSC 1001- Orientation to Physical Science	1		
Total hours	16	GPA	

Semester 2	Hrs.	Grade	Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	
PHYS 2114/2000-Calculus Based Physics I (ACTS=PHYS 2034)	4		
MATH 2924- Calculus II (ACTS= MATH 2505)	4		Milestone
PHSC 1011- Orientation to Physical Science II	1		Milestone
CHEM 2134/2130- Gen. Chem. II(ACTS=CHEM1424)	4	Milestone	No substitutions allowed.
Total hours	16	GPA	Milestone

Semester 3	Hrs.	Grade	Semester 3
Biological Science	4		
Social Science	3		
MATH 2934- Calculus III (ACTS= MATH 2603)	4		Milestone
PHYS 2124/2010- Calculus-Based Physics II (ACTS=PHYS 2044)	4		Milestone
Total hours	15	GPA	

Semester 4	Hrs.	Grade	Semester 4
ELEG 2103- Electric Circuits I	3		
U.S. History & Government	3		
MATH 3243- Differential Equations I	3		Milestone
PHYS 3213- Modern Physics	3		
Elective	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/>

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) POLS 2003 American Government (ACTS=PLSC2003)
	Communication Courses COMM 1003 Intro to Speech Comm COMM 2003 Public Speaking COMM 2173 Business and Professional Speaking

Sample Schedule	Milestones/Notes		
Semester 5	Hrs.	Grade	Semester 5
Fine Arts & Humanities	3		
PHYS 3023- Mechanics or PHYS 4013 Quantum Mechanics	3		
ELEG 2113- Electric Circuits II	3		
ELEG 2111- Electric Circuits Laboratory	1		
PHYS 3133- Electr. & Magnetism or PHYS 4023 Computational Phys	3		Note 1: PHYS3133 offered in alternating Fall semesters.
STAT 2304- Programming Language Data Science	4		
Total hours	17	GPA	

Semester 6	Hrs.	Grade	Semester 6
Fine Arts & Humanities	3		
(PHYS 4213- or PHYS 4003-Thermodynam/ Stat Mech	3		
PHYS 3003 Optics or PHYS 4113- Adv. Physics Lab	3		
*General Elective (3000-4000 level)	3		
*General Elective	1		
Total hours	13	GPA	APPLY FOR GRADUATION

Semester 7	Hrs.	Grade	Semester 7
PHYS 3023- Mechanics or PHYS 4013 Quantum Mechanics	3		
PHYS 3133- Theory/Elec and Magnetism I or PHYS 4023- Compu	3		See Note 1 in Semester 5
MATH 4003 Linear Algebra I	3		See excluded math courses below.
Social Science	3		
*General Elective (3000-4000 level)	3		
Total hours	15	GPA	

Semester 8	Hrs.	Grade	Semester 8
Social Sci./Fine Arts/Humanities/Comm	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 3003 Optics or PHYS 4113- Adv. Physics Lab	3		
(PHYS 4213- or PHYS 4003-Thermodynam/ Stat Mech	3		
PHYS 4951- UG Research in Physics	1		
*General 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

indicates a "C" or better is required

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)	FIN 2013 Personal Finance
ECON 2003 Principles of Economics I (ACTS=ECON2103)	LEAD 1003 Introduction to Leadership
ECON 2103 Honors Principles of Economics I	