

2018-2019 Degree Map-Bachelor of Science in Nuclear 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: Materials Engineer, Nuclear Engineer, Nuclear Fuels Research Engineer, Nuclear Medicine Technologist, Nuclear Power Reactor Operator, Nuclear Technician, Quality Control Engineer, Radiation Protection Engineer

#Prerequisite Courses: ENGL 0303 _____ ENGL 0404 _____ READ 0103 _____ MATH 0803 _____ MATH 1003 _____ MATH 0903 _____ MATH 0900 _____ MATH 1110 _____ MATH 1203 _____ MATH 1914 _____

Sample Schedule	Milestones/Notes		
Semester 1	Hrs.	Grade	Semester 1
ENGL 1013- Comp I (ACTS=ENGL 1013)	3	#	
Social Science/Fine Arts/Humanities/Comm	3		
MATH 2914- Calculus I (ACTS= MATH 2405)	4		#C or > required for Gen Ed. Milestone
PHSC 1001- Orientation to Physical Science	1		
CHEM 2124/2120- General Chemistry I (ACTS= CHEM 1414)	4		Milestone
Total hours	15	GPA	

Semester 2	Hrs.	Grade	Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	
MCEG 2023- Engineering Materials	3		Milestone
MATH 2924- Calculus II (ACTS= MATH2505)	4		Milestone
PHSC 1011- Orientation to Physical Science II	1		No substitutions allowed.
CHEM 2134/2130- Gen. Chem. II(ACTS=CHEM1424)	4		Milestone
Total hours	15	GPA	

Semester 3	Hrs.	Grade	Semester 3
Social Science	3		
Social Science	3		
COMS 2803- Programming in C.	3		
MATH 2934- Calculus III (ACTS= MATH 2603)	4		Milestone
PHYS 2114/2000- General Physics I (ACTS=PHYS 2034)	4		Milestone
Total hours	17	GPA	

Semester 4	Hrs.	Grade	Semester 4
U.S. History & Government	3		
Biological Science	4		
MATH 3243- Differential Equations I	3		
PHYS 2124/2010- General Physics II (ACTS=PHYS 2044)	4		Milestone
Total hours	14	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 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 2003 Introduction to World Literature (ACTS=ENGL2113)	Communication Courses
ENGL 2013 Intro. to American Literature (ACTS=ENGL2653)	COMM 1003 Intro to Speech Comm
ENGL 2023 Honors World Literature	COMM 2003 Public Speaking
PHIL 2003 Introduction to Philosophy (ACTS=PHIL1103)	COMM 2173 Business and Professional Speaking
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
ELEG 2103- Electric Circuits I	3		
MCEG 3313- Thermodynamics I	3		
MCEG 3503- Basic Nuclear Engineering	3		
PHYS 3213- Modern Physics <u>or</u> PHYS Elective (3000-4000)	3		Note 1: PHYS 3213 & 4113 must be completed. Both courses are offered in alternating years. When not available, choose a PHYS Elective.
PHYS 4113- Adv. Physics Lab <u>or</u> PHYS Elective (3000-4000)	3		
See Note 1			
Total hours	15	GPA	

Semester 6	Hrs.	Grade	Semester 6
Fine Arts & Humanities	3		
ELEG 2113/2111- Electric Circuits II and Lab	4		
MCEG 3523 or PHYS 3033- Radiation Health Physics	3		
MCEG 4403- Mechanics of Fluids and Hydraulics	3		
Total hours	13	GPA	APPLY FOR GRADUATION

Semester 7	Hrs.	Grade	Semester 7
MCEG 4323- Power Plant Systems	3		
PHYS 3143 or ELEG 3103- Electronics I	3		
PHYS 3213: Modern Physics <u>or</u> PHYS Elective (3000-4000)	3		See Note 1 in Semester 5
PHYS 4113- Adv. Physics Lab <u>or</u> PHYS Elective (3000-4000)	3		See Note 1 in Semester 5
General Elective (3000-4000 level)	3		
Total hours	15	GPA	

Semester 8	Hrs.	Grade	Semester 8
Fine Arts & Humanities	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 4991- Splc Probs. Phys&Astrmy OR PHYS 4951- UG Rsrch in Phys	1-4		
Engineering Elective	3		
PHYS Elective (3000-4000 level)	3-6		
Total Hours	16	GPA	

General Electives: 3 hours (1000-4000 level)

indicates a "C" or better is required

Social Sciences
HIST 1503 World Civilization to 1500 (ACTS=HIST1113)
HIST 1513 World Civilization since 1500 (ACTS=HIST1123)
HIST 1543 Honors World Civilization 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
POLS 2003 American Government (ACTS=PLSC2003)
ECON 2013 Principles of Economics I (ACTS=ECON2103)
ECON 2103 Honors Principles of Economics I
ECON 2003 Introduction to Economics II (ACTS=ECON2203)
SOC 1003 Introductory Sociology (ACTS=SOC1013)
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