

**2024-2025 Degree Map-Bachelor of Science in Chemistry, Professional Option**

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 \_\_\_ COMS 1003 \_\_\_

Possible Careers: Chemical, Pharmaceutical, Biotechnology, Analysis, Testing, Consulting, Environmental Analysis

**Sample Schedule**

Semester 1	Hrs.	Grade	Milestones/Notes	Semester 1
ENGL 1013- Comp I (ACTS=ENGL 1013)	3	#		
Social Science	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
<b>Total hours</b>	<b>15</b>	<b>GPA</b>		

Semester 2	Hrs.	Grade	Milestones/Notes	Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#		
BIOL 1114- Principles of Biology (ACTS= BIOL 1014)	4			Milestone
MATH 2924- Calculus II (ACTS= MATH 2505)	4			Milestone
PHSC 1011- Orientation to Physical Science II	1			No Substitutions
CHEM 2134/2130- General Chemistry II (ACTS= CHEM 1424)	4	#		
<b>Total hours</b>	<b>16</b>	<b>GPA</b>		

Semester 3	Hrs.	Grade	Milestones/Notes	Semester 3
Social Science	3			
PHYS 2114/2000- Calculus-Based Phys II(ACTS= PHYS 2034)	4			Milestone
MATH 2934- Calculus III (ACTS= MATH 2603)	4			
COMS 2003*- Microcomp Appl or COMS 2803-Program in C	3			*(COMS 2003 prereq.= COMS 1003)
CHEM 3254- Fundamentals of Organic Chemistry	4	#		Milestone
<b>Total hours</b>	<b>18</b>	<b>GPA</b>		

Semester 4	Hrs.	Grade	Milestones/Notes	Semester 4
U.S. History & Government	3			
PHYS 2124/2010- Calculus-Based Phys II (ACTS= PHYS 2044)	4			
CHEM 3245- Quantitative Analysis	5	#		
CHEM 3264- Mechanistic Organic Chemistry	4	#		
<b>Total hours</b>	<b>16</b>	<b>GPA</b>	<b>CHEM ADVISOR ASSIGNED</b>	

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	U.S. History & Government
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	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)
<b>University Honors students should consult Course Catalog for appropriate Fine Arts/Humanities, US History/Government and Social Science options for University Honors Curriculum.</b>	

**Sample Schedule**

Semester 5	Hrs.	Grade	Milestones/Notes	Semester 5
Fine Arts & Humanities	3			
CHEM 3301- Chemistry Seminar	1	#		
CHEM 3324- Physical Chemistry I	4	#		
CHEM 3423- Descriptive Inorganic Chemistry	3	#		
CHEM Elective	3	#	Any CHEM excluding CHEM 1113/1111 and 2204	
<b>Total hours</b>	<b>14</b>	<b>GPA</b>		

Semester 6	Hrs.	Grade	Milestones/Notes	Semester 6
Fine Arts & Humanities	3			
Social Sci/Fine Arts/Humanities/Comm	3			
CHEM 3334- Physical Chemistry II	4	#		
*General Elective	3			
*General Elective	3			
<b>Total hours</b>	<b>14</b>	<b>GPA</b>	<b>APPLY FOR GRADUATION</b>	

Semester 7	Hrs.	Grade	Milestones/Notes	Semester 7
CHEM 3344- Principles of Biochemistry	4	#		
CHEM 4401- Chemistry Seminar (Spring only)	1	#		
CHEM 4414- Instrumental Analysis	4	#		
CHEM 4433- Advanced Topics in Chemistry (Spring only)	3			
<b>Total hours</b>	<b>12</b>	<b>GPA</b>		

Semester 8	Hrs.	Grade	Milestones/Notes	Semester 8
CHEM 4424- Advanced Inorganic Chemistry	1	#		<b>Graduation Requirements:</b> Min. hours 3000-4000 level courses: 40 No more than 4 PE activity hours Min. hours required:120 2.00+ GPA
CHEM 4991-4- Special Problems in Chemistry OR CHEM 4951-4- Undergraduate Research in Chemistry	2-4	#		
*General Elective	5-7			
<b>Total Hours</b>	<b>13</b>	<b>GPA</b>		

\*General Electives: 13 hours (1000-4000 level) or sufficient number to earn 120 total hours.

Recommended electives: German, Statistics, or ENGL 2053 (ACTS=ENGL2023)

# 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
<b>Communication Courses</b> COMM 1003 Intro to Speech Comm COMM 2003 Public Speaking COMM 2173 Business and Professional Speaking