

2020-2021 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 <http://www.atu.edu/catalog/>

Possible careers include: Biophysicist, Chemical Engineer, Chemical Technician, Conservation Scientist, Environmental Engineer, Food & Drug Inspector, Food Technologist, Forensic Science Technician, Industrial Air Pollution Analyst, Industrial Waste Inspector, Materials Scientist, Microbiologist, Pharmacist, Soil Scientist, Toxicologist, Water Pollution Control Inspector

#Prerequisite Courses: ENGL 0303 ____ MATH 0803 ____ MATH 1003 ____ MATH 0903 ____ MATH 0900 ____ 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 | # | | |
| 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 |
| Total hours | 15 | GPA | | |

| 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 (MANDATORY) | 1 | | | |
| CHEM 2134/2130- General Chemistry II (ACTS= CHEM 1424) | 4 | # | | |
| Total hours | 16 | GPA | | |

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

| 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 | # | | |
| Total hours | 16 | GPA | CHEM 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/>

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|--|--|
| 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

| 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- Excluding CHEM 1113 and CHEM 2204 | 3 | # | | CHEM 1113 (ACTS=CHEM1214) |
| Total hours | 14 | GPA | | |

| 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 | # | | |
| CHEM 4424- Advanced Inorganic Chemistry | 4 | # | | |
| Total hours | 14 | GPA | APPLY FOR GRADUATION | |

| Semester 7 | Hrs. | Grade | Milestones/Notes | Semester 7 |
|---------------------------------------|------|-------|------------------|------------|
| CHEM 3344- Principles of Biochemistry | 4 | # | | |
| CHEM 4414- Instrumental Analysis | 4 | # | | |
| *General Elective | 3 | | | |
| *General Elective | 3 | | | |
| Total hours | 14 | GPA | | |

| Semester 8 | Hrs. | Grade | Milestones/Notes | Semester 8 |
|---|-------|-------|------------------|---|
| CHEM 4401- Chemistry Seminar (Spring only) | 1 | # | | |
| CHEM 4992-4- Special Problems in Chemistry OR CHEM 4952-4- Undergraduate Research in Chemistry | 2-4 | # | | Graduation Requirements: Min. hours 3000-4000 level courses: 40 No more than 4 PE activity hours Min. hours required:120 2.00+ GPA |
| CHEM 4433- Advanced Topics in Chemistry (Spring only) | 3 | # | | |
| *General Elective | 5-7 | | | |
| Total Hours | 11-15 | GPA | | |

*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 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 POLS 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 |