Academic Map: Chemistry, ACS Certified: Biochemistry

|  |  |  |  |
| --- | --- | --- | --- |
| **Department:** | Chemistry | **Degree:** | BS |
| **Program/Major:** | Chemistry |  |  |
| **Track/Emphasis:** | ACS Certified: Biochemistry |  |  |
| **Does this program require a minor? (Yes/No)** | No |  |

**Important program information in the online *Undergraduate Bulletin*:**

|  |  |
| --- | --- |
| **UCA Core Requirements:** | <http://uca.edu/ubulletin2015/general-policies-information/uca-core/>  |
| **LD Core Check Sheet:** | <http://uca.edu/ubulletin/ldcore/> |
| **Degree Requirements:** | <http://uca.edu/ubulletin2015/general-policies-information/degree-requirements/>  |
| **Program Description:** | <http://uca.edu/ubulletin2015/colleges-departments-programs/college-of-natural-sciences-and-mathematics/department-of-chemistry/>  |
| **Course Descriptions:** | <http://uca.edu/ubulletin2015/courses/>  |

**This degree program requires a total of 120 semester credit hours, including at least 40 upper-division credit hours.**

Comparable courses in the Arkansas Course Transfer System (ACTS) are cross-referenced in the ACTS column of each semester block below; a [core link](http://uca.edu/ubulletin/ldcore/) (http://uca.edu/ubulletin/ldcore/) takes the user to the *Undergraduate Bulletin*’s UCA Lower-Division Core check sheet, where UCA Core options and ACTS course numbers are listed in full; an [acts link](http://uca.edu/ubulletin/arkansas-course-transfer-system/) takes the user to the *Undergraduate Bulletin*'s ACTS page (http://uca.edu/ubulletin/arkansas-course-transfer-system/) for additional information and a UCA-ACTS crosswalk.

Year 1

Fall – Semester 1 (credit hours: 14)

| SUBJ | NUM | TITLE | SCH | ACTS |
| --- | --- | --- | --- | --- |
| CHEM  | 1450 | College Chemistry I | 4 | CHEM1414 |
| MATH | 1496 | Calculus I | 4 | MATH2405 |
|  |  | LD UCA Core Course[[1]](#endnote-1) | 3 | [core link](http://uca.edu/ubulletin/ldcore/) |
| WRTG | 1310 | Introduction to College Writing | 3 | ENGL1013 |

Spring – Semester 2 (credit hours: 15)

| SUBJ | NUM | TITLE | SCH | ACTS |
| --- | --- | --- | --- | --- |
| CHEM  | 1451 | College Chemistry II | 4 | CHEM1424 |
| MATH  | 1497 | Calculus II | 4 | MATH2505 |
| BIOL | 1440 | Principles of Biology I | 4 | BIOL1014 |
| WRTGENGL | 13201320 | Academic Writing and Research orInterdisciplinary Writing and Research orOther approved alternative | 3 | ENGL1023ENGL1023[core link](http://uca.edu/ubulletin/ldcore/) |

Year 2

Fall – Semester 3 (credit hours: 15)

| SUBJ | NUM | TITLE | SCH | ACTS |
| --- | --- | --- | --- | --- |
| CHEM  | 2401 | Organic Chemistry I | 4 |  |
| BIOL  | 1441 | Principles of Biology II | 4 |  |
| MATH | 2471 | Calculus III | 4 | MATH2603 |
|  |  | LD UCA Core Course1 | 3 | [core link](http://uca.edu/ubulletin/ldcore/) |

Spring – Semester 4 (credit hours: 16)

| SUBJ | NUM | TITLE | SCH | ACTS |
| --- | --- | --- | --- | --- |
| CHEM  | 3411 | Organic Chemistry II | 4 |  |
| CHEM  | 3211 | Organic Spectroscopy | 2 |  |
| PHYS  | 1441 | University Physics 1 | 4 | PHYS2034 |
|  |  | LD UCA Core Course1  | 3 | [core link](http://uca.edu/ubulletin/ldcore/) |
|  |  | LD UCA Core Course1 | 3 | [core link](http://uca.edu/ubulletin/ldcore/) |

Year 3

Fall – Semester 5 (credit hours: 15)

| SUBJ | NUM | TITLE | SCH | ACTS |
| --- | --- | --- | --- | --- |
| CHEM  | 3520 | Quantitative Analysis | 5 |  |
| CHEM  | 4320 | Biochemistry I | 3 |  |
| PHYS | 1442 | University Physics 2  | 4 | PHYS2044 |
|  |  | LD UCA Core Course1 | 3 | [core link](http://uca.edu/ubulletin/ldcore/) |

Spring – Semester 6 (credit hours: 17)

| SUBJ | NUM | TITLE | SCH | ACTS |
| --- | --- | --- | --- | --- |
| CHEM  | 4335 | Biochemistry II | 3 |  |
| BIOL  | 2490 | Genetics | 4 |  |
| CHEM | 4121 | Biochemistry Lab | 1 |  |
|  |  | LD UCA Core Course1  | 3 | [core link](http://uca.edu/ubulletin/ldcore/) |
|  |  | LD UCA Core Course1 | 3 | [core link](http://uca.edu/ubulletin/ldcore/) |
|  |  | General Elective  | 3 |  |

Year 4

Fall – Semester 7 (Credit hours: 15)

| SUBJ | NUM | TITLE | SCH | ACTS |
| --- | --- | --- | --- | --- |
| BIOL  | 3420 | General Microbiology | 4 |  |
| CHEM  | 4450 | Physical Chemistry I | 4 |  |
|  |  | UD UCA Core Course | 3 |  |
| CHEM |  | Research[[2]](#endnote-2) | 1 |  |
|  |  | Inorganic Chemistry[[3]](#endnote-3) or UD UCA Core Course | 3 |  |

Spring – Semester 8 (Credit hours: 13)

| SUBJ | NUM | TITLE | SCH | ACTS |
| --- | --- | --- | --- | --- |
| CHEM  | 4112 | Seminar: Capstone | 1 |  |
|  |  | General Elective | 1 |  |
| CHEM  |  | Research2 | 1 |  |
|  |  | Inorganic Chemistry3 or UD UCA Core Course | 3 |  |
| CHEM  | 4460 | Physical Chemistry II | 4 |  |
|  |  | UD UCA Core Course | 3 |  |

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Signed – Department Chair |  | Date |
|  |  |  |
|  |  |  |
| Signed – College Dean |  | Date |

**To be completed by the advisor when an Eight-Semester plan is accepted by the student:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **If applicable, has student selected a minor? Type “x” as appropriate.** |  | **No** |  | **Yes** |
| **If “yes,” specify:** |  |

1. See appropriate choices, alternatives, or substitutions under "UCA Core" in the Undergraduate Bulletin. During the first year, a student must complete a UCA Core course designated as a First-Year Seminar (FYS) in Critical Inquiry, Diversity, or Responsible Living. An approved UCA Core lab science and an approved UCA Core math course should be taken in the first two years if possible. The student will also need to complete major, minor, or general elective courses designated as fulfilling the upper-division and capstone requirements of the UCA Core. Students are encouraged to choose a course in economics to fulfill either Lower Division Core social science category (ECON 2320 or 2321) or their responsible living category (ECON 1310) requirements. [↑](#endnote-ref-1)
2. Students must take at least two hours of research. [↑](#endnote-ref-2)
3. Students must take either CHEM 3360 (Intermediate Inorganic Chemistry) or CHEM 4380 (Advanced Inorganic Chemistry). [↑](#endnote-ref-3)