

## Academic Map: Environmental Science, Chemistry

**Department:** Chemistry and Biochemistry      **Degree:** BS  
**Program/Major:** Environmental Science  
**Track/Emphasis:** Chemistry  
**Does this program require a minor? (Yes/No)** No

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

**UCA Core Requirements:** <https://uca.edu/ubulletin/general-policies-information/uca-core/>  
**LD UCA Core Check Sheet:** <https://uca.edu/academicbulletins/ld-uca-core/>  
**UD UCA Core Course List:** <https://uca.edu/academicbulletins/ud-uca-core/>  
**Degree Requirements:** <https://uca.edu/ubulletin/general-policies-information/degree-requirements/>  
**Program Description:** <https://uca.edu/ubulletin/programs-by-program/interdisciplinary/environmental-science/>  
**Course Descriptions:** <https://uca.edu/ubulletin/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](https://uca.edu/academicbulletins/ld-uca-core/) (https://uca.edu/academicbulletins/ld-uca-core/) takes the user to the *Undergraduate Bulletin's* Lower-Division (LD) UCA Core check sheet, where UCA Core options and ACTS course numbers are listed in full; an [acts link](https://uca.edu/academicbulletins/acts/) takes the user to the *Undergraduate Bulletin's* ACTS page (https://uca.edu/academicbulletins/acts/) for additional information and a UCA-ACTS crosswalk.

**Scholarship recipients:** Please be aware of eligibility criteria for your scholarship(s). In particular, pay attention to (1) the enrollment requirements each semester for disbursement of your scholarship(s) and (2) the number of hours and GPA required each semester and/or year for renewal of your scholarship(s). Some Academic Maps may suggest enrollment in fewer hours than required for disbursement of your scholarship(s). In such cases, work with your academic advisor to adjust your schedule to meet requirements most efficiently. Contact the Office of Student Financial Aid at (501) 450-3140 with any questions regarding enrollment/renewal requirements of your scholarship(s). For online information resources, see endnote 1.

### Year 1

#### Fall – Semester 1 (credit hours: 14)

| SUBJ | NUM  | TITLE  | SCH | ACTS                      |
|------|------|--|-----|---------------------------|
| CHEM | 1450 | College Chemistry I  | 4   | <a href="#">CHEM1414</a>  |
| WRTG | 1310 | Introduction to College Writing                                  | 3   | <a href="#">ENGL1013</a>  |
|      |      | LD UCA Core Course (First Year Seminar recommended) <sup>2</sup> | 3   | <a href="#">core link</a> |
| MATH | 1496 | Calculus I   | 4   | <a href="#">MATH2405</a>  |

#### Spring – Semester 2 (credit hours: 17)

| SUBJ         | NUM          | TITLE  | SCH | ACTS  |
|--------------|--------------|--|-----|---|
| CHEM         | 1451         | College Chemistry II   | 4   | <a href="#">CHEM1424</a>  |
| WRTG<br>ENGL | 1320<br>1320 | Academic Writing and Research or<br>Interdisciplinary Writing and Research or<br>Other approved alternative (LD UCA Core: Research/Writing) <sup>2</sup> | 3   | <a href="#">ENGL1023</a><br><a href="#">ENGL1023</a><br><a href="#">core link</a> |
| MATH         | 1497         | Calculus II  | 4   | <a href="#">MATH2505</a>  |
|              |              | LD UCA Core Course (First Year Seminar, if not taken semester 1)   | 3   | <a href="#">core link</a>   |
|              |              | LD UCA Core Course   | 3   | <a href="#">core link</a>   |

**Year 2****Fall – Semester 3 (credit hours: 14)**

| SUBJ | NUM  | TITLE                      | SCH | ACTS                      |
|------|------|----------------------------|-----|---------------------------|
| CHEM | 2401 | Organic Chemistry I        | 4   |                           |
| BIOL | 1440 | Biology I                  | 4   | <a href="#">BIOL1014</a>  |
| PSCI | 1330 | US Government and Politics | 3   | <a href="#">PLSC2003</a>  |
|      |      | LD UCA Core Course         | 3   | <a href="#">core link</a> |

**Spring – Semester 4 (credit hours: 16)**

| SUBJ | NUM  | TITLE                | SCH | ACTS                      |
|------|------|----------------------|-----|---------------------------|
| CHEM | 3411 | Organic Chemistry II | 4   |                           |
| BIOL | 1441 | Biology II           | 4   |                           |
|      |      | LD UCA Core Course   | 3   | <a href="#">core link</a> |
|      |      | LD UCA Core Course   | 3   | <a href="#">core link</a> |
| CHEM | 3211 | Organic Spectroscopy | 2   |                           |

**Year 3****Fall – Semester 5 (credit hours: 17)**

| SUBJ | NUM          | TITLE  | SCH | ACTS   |
|------|--------------|--|-----|--|
| CHEM | 3520         | Quantitative Analysis                                    | 5   |  |
| PHYS | 1441<br>1410 | University Physics 1 or<br>College Physics 1             | 4   | <a href="#">PHYS2034</a><br><a href="#">PHYS2014</a> |
| GEOG | 1400         | Earth Systems Science                                    | 4   | <a href="#">PHSC1104</a>                             |
| ENVR | 3410         | Environmental Theory and Application (UD UCA Core: D, C) | 4   |  |

**Spring – Semester 6 (credit hours: 15)**

| SUBJ | NUM          | TITLE   | SCH | ACTS   |
|------|--------------|---|-----|--|
|      |              | Restricted elective <sup>3</sup> (BIOL 3403 is recommended) | 4   |  |
| PHYS | 1442<br>1420 | University Physics 2 or<br>College Physics 2                | 4   | <a href="#">PHYS2044</a><br><a href="#">PHYS2024</a> |
| CHEM | 4451         | Advanced Analytical Chemistry                               | 4   |  |
|      |              | General Elective  | 3   |  |

**Year 4****Fall – Semester 7 (Credit hours: 15)**

| SUBJ | NUM  | TITLE  | SCH | ACTS |
|------|------|--|-----|------|
| GEOG | 3301 | Conservation of Natural Resources (UD UCA Core: R)                   | 3   |      |
|      |      | Restricted elective <sup>3</sup>                                     | 3   |      |
|      |      | Restricted elective <sup>3</sup>                                     | 3   |      |
| PSCI | 3320 | Environmental Policy and Regulation <sup>4</sup> (UD UCA Core, I, R) | 3   |      |
|      |      | General Elective   | 3   |      |

**Spring – Semester 8 (Credit hours: 14)**

| SUBJ | NUM  | TITLE   | SCH | ACTS |
|------|------|---|-----|------|
| CHEM | 4351 | Environmental Chemistry <sup>5</sup>            | 3   |      |
| CHEM | 4152 | Environmental Chemistry Laboratory <sup>5</sup> | 1   |      |
| ENVR | 4410 | Environmental Practicum (UD UCA Core: Z)        | 4   |      |
|      |      | General Elective                                | 3   |      |
|      |      | General Elective                                | 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: \_\_\_\_\_

### Notes

<sup>1</sup> See online information resources for UCA scholarships at <https://uca.edu/scholarships/> and for state scholarships at <https://scholarships.adhe.edu/scholarships-and-programs/a-z/>.

<sup>2</sup> 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. 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.

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. Consult annotations in this Academic Map, the *Undergraduate Bulletin*, and your academic advisors for appropriate courses with which to fulfill UD UCA Core requirements.

<sup>3</sup> Restricted elective (at least 10 hours): Choose from CHEM 3150, CHEM 3360, CHEM 4121, CHEM 4320, CHEM 4335, CHEM 4380, CHEM 4450, CHEM 4460, BIOL 3403, ENVR 4465, GEOG 4304, GEOG 4305, ECON 3330, and a maximum of 2 credits of research in the College of Natural Science and Mathematics, or 8 hours of courses that count toward a minor in mathematics, biology, physics, or geography.

<sup>4</sup> This course carries the prerequisites of PSCI 1330 AND the consent of the PSCI 3320 instructor or the chair of the Political Science department.

<sup>5</sup> CHEM 4351 and CHEM 4152 are offered spring semester, odd years. Must be taken in semester offered.