CHEMISTRY B.A.

ACADEMIC ADVISING

Partnering with students to successfully navigate college
Location: Main Hall 208
Phone: 719.255.3260
Website: www.uccs.edu/advising

Connect With Your Advisor
Current UCCS Students
- Appointments: www.uccs.edu/advising/current-students
- Drop In Advising: Most Wednesdays, 1:00pm - 4:00pm
Prospective Students: www.uccs.edu/admissions/contact

GENERAL ACADEMIC INFORMATION

Minimum Graduation Requirements
1. 120 credit hours
2. 45 upper-division credit hours (3000-4999 level)
3. 2.0 CU cumulative GPA
4. Residency: Last 30 credit hours of degree must be completed while registered in the College of Letters, Arts, and Sciences at UCCS

Student Responsibilities
Students are required to know and follow:
1. All academic policies set forth by the University, College, and academic department in the UCCS Catalog: catalog.uccs.edu
2. All course prerequisites designated by the University. Failure to meet course prerequisites may result in an administrative drop of the course from a student’s schedule. See degree audit for course prerequisites within the academic major.

MAJOR INFORMATION

Chemistry is the science about substances, their composition, structure, properties, and interactions. Chemistry helps explain the world and its workings and plays an important role in our lives. Chemists have contributed a great deal to technical advances of society and have made many important contributions to modern life. Everything is made from one or more chemical elements that occur in nature. Chemists use different kinds of chemical processes to make the elements found in nature more useful, and they create countless products that make our lives healthier, easier, and more enjoyable. There are as many specialties as there are areas of application of chemical principles.

<table>
<thead>
<tr>
<th>BA Chemistry Major (51 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Requires a minimum of 51 credit hours of CHEM course work</td>
</tr>
<tr>
<td>- Requires a minimum of 16 credit hours of upper-division (3000-4999 level) CHEM course work.</td>
</tr>
<tr>
<td>- All CHEM courses must have a grade of “C” or better.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Course/Area</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1401/1402</td>
<td>General Chemistry I and Lab</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1511/1513</td>
<td>General Chemistry for Majors II and Lab</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 3201/3203</td>
<td>Organic Chemistry for Majors I and Lab</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 3211/3213</td>
<td>Organic Chemistry for Majors II and Lab</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 4001/4002</td>
<td>Analytical Chemistry I and Lab</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 4011/4012</td>
<td>Practical Instrumental Analysis and Lab</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 4101</td>
<td>Physical Chemistry: Quantum Mechanics and Molecular Spectroscopy</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 4102</td>
<td>Experimental Physical Chemistry: Quantum Mechanics and Molecular Spectroscopy</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 4111</td>
<td>Physical Chemistry: Thermodynamics and Kinetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 4112</td>
<td>Experimental Physical Chemistry: Thermodynamics and Kinetics</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 4211</td>
<td>Biochemistry Principles</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 4301</td>
<td>Inorganic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 4911</td>
<td>Chemistry Capstone</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>Complete 5 hours of Upper-Division (3000+ Level) Chemistry Electives. Up to 5 hours may be from CHEM 4904/4905.</td>
<td>5</td>
</tr>
</tbody>
</table>

Auxiliary Requirements

<table>
<thead>
<tr>
<th>Course/Area</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1350</td>
<td>General Biology II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1350</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1360</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PES 1110/1160</td>
<td>General Physics I and Lab</td>
<td>5</td>
</tr>
<tr>
<td>PES 1120/2160</td>
<td>General Physics II and Lab</td>
<td>5</td>
</tr>
</tbody>
</table>
## General Education and Elective Requirements

**Composition (6 hours)**
1. ENGL 1310
2. ENGL 1410
3. PORT 3000 (0 Credits) – Writing Portfolio

**Reasoning Skills (4 hours)**
1. MATH 1350
2. CHEM 4001

**Area Requirements (27 hours)**
- Maximum 2 courses from any one discipline may be applied to the area requirements
- Courses may not be taken pass/fail
1. Humanities – 9 credit hours of which 3 credits must be HUM 3990.
2. Social Sciences – 9 credit hours
3. Natural Sciences – as listed in course requirements PES 1110, PES 1120, PES 1160, PES 2160

**NOTE:** Cannot select courses from primary major courses for area requirements.

**Oral Communication, Cultural Diversity, and Global Awareness Requirements**
One course from each list (see degree audit). All courses that fulfill these requirements may also count towards other general education or major requirements.

<table>
<thead>
<tr>
<th>Compass Curriculum (12 hours)</th>
<th>Gateway</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explore and Navigate courses must be outside major and area requirements</td>
<td>Explore – Arts, Humanities and Cultures</td>
<td>See Degree Audit</td>
</tr>
<tr>
<td>Writing Intensive, Inclusiveness, and Sustainability courses can count towards other requirements within degree</td>
<td>Explore – Society, Behavior and Health</td>
<td>See Degree Audit</td>
</tr>
<tr>
<td></td>
<td>Explore – Physical and Natural World</td>
<td>BIOL 1350</td>
</tr>
<tr>
<td></td>
<td>Navigate</td>
<td>HUM 3990 (included in LAS area requirements)</td>
</tr>
<tr>
<td></td>
<td>Summit</td>
<td>CHEM 4911 (included in major requirements)</td>
</tr>
<tr>
<td>Writing Intensive Courses (WIC)</td>
<td>Two courses with one upper-division (3000+ level)</td>
<td>1. HUM 3990 (included in LAS area requirements)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. CHEM 1513 (included in major requirements)</td>
</tr>
<tr>
<td>Inclusiveness</td>
<td>See Degree Audit</td>
<td></td>
</tr>
<tr>
<td>Sustainability</td>
<td>See Degree Audit</td>
<td></td>
</tr>
</tbody>
</table>

**General Electives (15 hours)**
Complete additional courses to meet total and upper-division requirements for your degree program.

## Four-Year Degree Plan

Please note that this is an example degree program and your program may vary. Students are responsible for completing all course prerequisites.

### Year One
- **Fall**
  - ENGL 1310 3
  - CHEM 1401/1402 5
  - MATH 1350 4
  - GPS 1010 3

- **Spring**
  - ENGL 1410 3
  - CHEM 1511/1513 5
  - MATH 1360 4
  - Explore – Arts, Humanities & Cultures Course 3

- **Total**
  - 15

### Year Two
- **Fall**
  - CHEM 3201/3203 5
  - PES 1110/1160 5
  - Explore – Society, Behavior and Health Course 3
  - Humanities Elective 3

- **Spring**
  - CHEM 3211/3213 5
  - PES 1120/2160 5
  - BIOL 1350 3
  - General Elective 3

- **Total**
  - 16

### Year Three
- **Fall**
  - CHEM 4001/4002 4
  - CHEM 4101 3
  - CHEM 4102 1
  - CHEM 4211 3
  - Social Science Elective 3

- **Spring**
  - CHEM 4011/4012 5
  - CHEM 4111 3
  - CHEM 4112 1
  - Humanities Elective 3
  - General Elective 3

- **Total**
  - 15

### Year Four
- **Fall**
  - CHEM 4301 3
  - Upper Division (UD) CHEM Elective 3
  - HUM 3990 3
  - Social Science Elective 3

- **Spring**
  - UD CHEM Elective 2
  - Social Science Elective 3
  - UD General Elective 3
  - General Elective 3
  - General Elective 3

- **Total**
  - 14

2020-2021