CHEMISTRY: CHEMISTRY TEACHING, BSLAS

for the degree of Bachelor of Science in Liberal Arts and Sciences Major in Chemistry, Chemistry Teaching Concentration

department website: https://chemistry.illinois.edu
department faculty: Chemistry Faculty (https://chemistry.illinois.edu/directory/faculty-by-type/)
advising: SCS Academic Advising (http://advising.scs.illinois.edu/)
overview of college admissions & requirements: Liberal Arts & Sciences (http://catalog.illinois.edu/schools/las/academic-units/)
college website: https://las.illinois.edu/

This concentration fulfills state certification requirements to teach high school (grades 9-12) chemistry through the AP/honors level and biology, earth and space science, environmental science and physics up to but not including the AP/honors level.

Students in this concentration must complete the Teacher Education Minor in Secondary School Teaching (39 hours). See the College of Education section for requirements of the minor (http://catalog.illinois.edu/undergraduate/education/minors/teacher-education-secondary-school/).

Time to degree completion varies. Minimum time to completion is 8 semesters. Some students require 10 semesters. Transfer students may need 10 total semesters combined to complete the program. Please see the LAS section in the transfer handbook (https://admissions.illinois.edu/Content/docs/Handbook_LAS.pdf) for more information.

To remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education, grade-point averages of 2.5 (A=4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

Undergraduate Degree Programs in Chemistry

For the Degree of Bachelor of Science in Liberal Arts and Sciences

- Major in Computer Science & Chemistry, BSLAS (http://catalog.illinois.edu/undergraduate/eng_las/computer-science-chemistry-bslas/)
- Major in Chemistry (Sciences and Letters) (http://catalog.illinois.edu/undergraduate/las/chemistry-bslas/#degreerequirementstext)
- Major in Chemistry (Sciences and Letters), Chemistry Teaching Concentration (p. 1)

For the Degree of Bachelor of Science in Chemistry

- Major in Chemistry (Specialized Curriculum) (http://catalog.illinois.edu/undergraduate/las/chemistry-bs/#degreerequirementstext)
- Major in Chemistry (Specialized Curriculum), Environmental Chemistry Concentration (http://catalog.illinois.edu/undergraduate/las/chemistry-bs/environmental-chemistry/)

for the degree of Bachelor of Science in Liberal Arts and Sciences Major in Chemistry, Chemistry Teaching Concentration

This concentration fulfills state certification requirements to teach high school (grades 9-12) chemistry through the AP/honors level and biology, earth and space science, environmental science and physics up to but not including the AP/honors level.

Students in this concentration must complete the Teacher Education Minor in Secondary School Teaching (39 hours). See the College of Education section for requirements of the minor (http://catalog.illinois.edu/undergraduate/education/minors/teacher-education-secondary-school/).

Time to degree completion varies. Minimum time to completion is 8 semesters. Some students require 10 semesters. Transfer students may need 10 total semesters combined to complete the program. Please see the LAS section in the transfer handbook (https://admissions.illinois.edu/Content/docs/Handbook_LAS.pdf) for more information.

To remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education, grade-point averages of 2.5 (A=4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

Departmental distinction: Students qualify for graduation with distinction by exhibiting superior performance in both course work and in senior thesis research. To be eligible, a student must have a UIUC coursework major grade point average of 3.25, must take CHEM 499 (normally for two semesters) and submit a senior thesis for evaluation, and must have their undergraduate research advisor submit to the department Head a letter of support attesting to the effort invested by the student. The minimum major GPAs for Distinction, High Distinction, and Highest Distinction are 3.25, 3.5, and 3.75, respectively. Students in the Chemistry Teaching Concentration may submit their final teaching portfolio for evaluation in lieu of taking CHEM 499 and submitting a senior thesis. Final decisions on awarding Distinction honors will be made by the Head or designee.

General education: Students must complete the Campus General Education (https://courses.illinois.edu/gened/DEFAULT/DEFAULT/) requirements including the campus general education language requirement.

Minimum required major and supporting course work: Minimum required major and supporting course work normally equates to 48-51 hours including at least 30 hours in Chemistry or Biochemistry courses. Twelve hours of 300- and 400-level in in Chemistry and/or Biochemistry must be taken on this campus. Transfer credit in chemistry must be approved by an advisor in chemistry in order to be included in the 30 hours. Minimum hours required for graduation: 120 hours.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 150</td>
<td>First Semester Success in Chemistry</td>
<td>22-26</td>
</tr>
<tr>
<td>CHEM 440</td>
<td>Physical Chemistry Principles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or CHEM 442 Physical Chemistry I</td>
<td>4-8</td>
</tr>
<tr>
<td></td>
<td>Two other 300- or 400-level courses, at least one of which must be outside physical chemistry.</td>
<td></td>
</tr>
<tr>
<td>MATH 220</td>
<td>Calculus</td>
<td>4-5</td>
</tr>
</tbody>
</table>

Information listed in this catalog is current as of 08/2021
or MATH 221 Calculus I
MATH 231 Calculus II 3
MATH 241 Calculus III 4

Select one of the following: 8-10

PHYS 101 College Physics: Mech & Heat
& PHYS 102 and College Physics: E&M & Modern
PHYS 211 University Physics: Mechanics
& PHYS 212 and University Physics: Elec & Mag

1 Excluding CHEM 101, CHEM 108, and CHEM 199.

2 No more than 10 hours of the following courses may count toward the 22-26 hours in Chemistry: CHEM 197, CHEM 199, CHEM 297, CHEM 397, CHEM 496, CHEM 497, and CHEM 499.

3 On- and off-campus transfer students in the BSLAS curriculum may substitute CHEM 152 for CHEM 150. Alternatively, transfer students may elect to take an additional 1 hour of 200 level or higher Chemistry, including CHEM 297, CHEM 397, CHEM 496, CHEM 497, or CHEM 499 as long as no more than 10 total hours of the total 22-26 required Chemistry hours come from CHEM 297, CHEM 397, CHEM 496, CHEM 497, CHEM 499.

Chemistry Teaching Option Concentration

Code | Title | Hours
--- | --- | ---

Foundation Courses

The following courses must be completed or in progress when students apply to the Secondary Education minor.

Select one group of courses (Accelerated or General Chemistry): 10-12

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 202 &amp; CHEM 203 &amp; CHEM 204 &amp; CHEM 205</td>
<td>Accelerated Chemistry I and Accelerated Chemistry Lab I and Accelerated Chemistry II and Accelerated Chemistry Lab II</td>
<td>10</td>
</tr>
<tr>
<td>CHEM 102 &amp; CHEM 103 &amp; CHEM 104 &amp; CHEM 105 &amp; CHEM 222 &amp; CHEM 223</td>
<td>General Chemistry I and General Chemistry Lab I and General Chemistry II and General Chemistry Lab II and Quantitative Analysis Lecture and Quantitative Analysis Lab</td>
<td>12</td>
</tr>
</tbody>
</table>

Select one of the following Organic Chemistry course groups: 5-6

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 236 &amp; CHEM 237</td>
<td>Fundamental Organic Chem I and Structure and Synthesis</td>
<td>6</td>
</tr>
</tbody>
</table>

MATH 220 Calculus 4-5
MATH 231 Calculus II 3

Additional Required Coursework

Teacher Education Minor in Secondary School Teaching (http://catalog.illinois.edu/undergraduate/education/secondary/)

CHEM 495 Teaching Secondary Chemistry 4
CHEM 150 First Semester Success in Chemistry 1 1
CHEM 440 Physical Chemistry Principles 4
CHEM 442 Physical Chemistry I

At least four additional hours of 300- or 400-level chemistry and/or biochemistry course work. 4

ASTR 100 Introduction to Astronomy 3
GEOL 107 Physical Geology 4
IB 100 Biology in Today's World 3
MATH 241 Calculus III 4
PHYS 211 University Physics: Mechanics 4
PHYS 212 University Physics: Elec & Mag 4
PHYS 214 Univ Phys: Quantum Physics 2

Requirements for the Teacher Education in Secondary School Teaching Minor

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 201</td>
<td>Identity and Difference in Education</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 202</td>
<td>Social Justice, School and Society</td>
<td>3</td>
</tr>
<tr>
<td>CI 401</td>
<td>Introductory Teaching in a Diverse Society</td>
<td>3</td>
</tr>
<tr>
<td>CI 403</td>
<td>Teaching a Diverse High School Student Population</td>
<td>3</td>
</tr>
<tr>
<td>CI 404</td>
<td>Teaching and Assessing Secondary School Students</td>
<td>3</td>
</tr>
<tr>
<td>CI 473</td>
<td>Disciplinary Literacy</td>
<td>3</td>
</tr>
<tr>
<td>EPSY 201</td>
<td>Educational Psychology</td>
<td>1, 2</td>
</tr>
<tr>
<td>EPSY 485</td>
<td>Assessing Student Performance</td>
<td>3</td>
</tr>
<tr>
<td>SPED 405</td>
<td>General Educator's Role in Special Education</td>
<td>3</td>
</tr>
<tr>
<td>EDPR 442</td>
<td>Educational Practice in Secondary Education</td>
<td>12</td>
</tr>
</tbody>
</table>

Total Hours 39-40

1 EDUC 201, EDUC 202 and EPSY 201 can be completed at any time during the degree and are not pre-requisites to apply for the minor.

2 PSYC 100 is a pre-requisite for EPSY 201.