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/)


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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 adviser 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>
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</thead>
<tbody>
<tr>
<td>CHEM 150</td>
<td>First Semester Success in Chemistry ³</td>
<td>22-26</td>
</tr>
<tr>
<td>CHEM 440</td>
<td>Physical Chemistry Principles</td>
<td></td>
</tr>
<tr>
<td>or CHEM 442</td>
<td>Physical Chemistry I</td>
<td>4-8</td>
</tr>
<tr>
<td>Two other 300- or 400-level courses, at least one of which must be outside physical chemistry.</td>
<td></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 07/2021.
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, 397, 496, 497, or 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**
---|---|---
CHEM 202  | Accelerated Chemistry I  | 10-12
& CHEM 203  | and Accelerated Chemistry Lab I  |
& CHEM 204  | and Accelerated Chemistry II  |
& CHEM 205  | and Accelerated Chemistry Lab II  |
or
CHEM 102  | General Chemistry I  |  
& CHEM 103  | and General Chemistry Lab I  |
& CHEM 104  | and General Chemistry II  |
& CHEM 105  | and General Chemistry Lab II  |
& CHEM 222  | and Quantitative Analysis Lecture  |
& CHEM 223  | and Quantitative Analysis Lab  |

Select one of the following Organic Chemistry course groups:  5-6
CHEM 236  | Fundamental Organic Chem I  |
& CHEM 237  | and Structure and Synthesis  |
or
CHEM 232  | Elementary Organic Chemistry I  |
& CHEM 233  | and Elementary Organic Chem Lab I  |
MATH 220  | Calculus  4-5
or MATH 221  | Calculus I  3
MATH 231  | Calculus II  3

**Additional Required Coursework**

Teacher Education Minor in Secondary School Teaching (http://catalog.illinois.edu/undergraduate/education/secondary/)  39
CHEM 495  | Teaching Secondary Chemistry  4
CHEM 150  | First Semester Success in Chemistry  1
CHEM 440  | Physical Chemistry Principles  4
or 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 Physics: Quantum Physics  2

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**Requirements for the Teacher Education in Secondary School Teaching Minor**

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<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>3</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.