CHEMISTRY: CHEMISTRY TEACHING, BSLAS

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.

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

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 hours required for graduation: 120 hours, to include a minimum of 40 hours of upper-division coursework generally at the 300 and 400 level. These hours can be drawn from all elements of the degree.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAS 101</td>
<td>Design Your First Year Experience</td>
<td>1</td>
</tr>
</tbody>
</table>

CHEMISTRY: CHEMISTRY TEACHING, BSLAS

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.

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

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 hours required for graduation: 120 hours, to include a minimum of 40 hours of upper-division coursework generally at the 300 and 400 level. These hours can be drawn from all elements of the degree.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAS 101</td>
<td>Design Your First Year Experience</td>
<td>1</td>
</tr>
</tbody>
</table>

Chemistry and biochemistry courses are any courses in CHEM or BIOC.

No more than 10 hours of the following courses may count toward the 30 hours: CHEM 197, CHEM 297, CHEM 397, CHEM 497, and CHEM 499. The following courses do not count towards the 30 hours: CHEM 101, CHEM 108, and CHEM 199.

At least 12 of the 30 hours must be at the 300 or 400 level, including at least one course outside physical chemistry. These 12 hours must include CHEM 440 or CHEM 442 and may include MCB 354 or MCB 450.

CHEM 150 First Semester Success in Chemistry (Transfer students may elect to take an additional 1 hour of 200 level or higher Chemistry, including CHEM 297, CHEM 397, CHEM 497, or CHEM 499.)

General chemistry courses

Select one of the following:

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 202 Accelerated Chemistry I
& CHEM 203 and Accelerated Chemistry Lab I
& CHEM 204 and Accelerated Chemistry II
& CHEM 205 and Accelerated Chemistry Lab II

Organic chemistry courses

Select one of the following:

CHEM 232 Elementary Organic Chemistry I
& CHEM 233 and Elementary Organic Chem Lab I

CHEM 236 Fundamental Organic Chem I
& CHEM 237 and Structure and Synthesis

Physical chemistry course

CHEM 440 Physical Chemistry Principles
or CHEM 442 Physical Chemistry I

Mathematics courses

MATH 220 Calculus 4-5
or MATH 221 Calculus I

MATH 231 Calculus II 3

MATH 241 Calculus III 4

Physics courses

Select one of the following:

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

Information listed in this catalog is current as of 05/2024
Chemistry Teaching Option Concentration

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):

- CHEM 202 and Accelerated Chemistry I
- & CHEM 203 and Accelerated Chemistry Lab I
- & CHEM 204 and Accelerated Chemistry II
- & CHEM 205 and Accelerated Chemistry Lab II

or

- CHEM 102 and 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:

- CHEM 236 and Fundamental Organic Chem I
- & CHEM 237 and Structure and Synthesis

or

- CHEM 232 and Elementary Organic Chemistry I
- & CHEM 233 and Elementary Organic Chem Lab I
- MATH 220 and Calculus I
- or MATH 221 and Calculus II
- MATH 231 and Calculus II

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
- 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.

- 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

1 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.

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>CHEM 297, CHEM 397, CHEM 496, CHEM 497, CHEM 499.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CI 401 Introductory Teaching in a Diverse Society 3
CI 403 Teaching a Diverse High School Student Population 3
CI 404 Teaching and Assessing Secondary School Students 3
CI 473 Disciplinary Literacy 3
EPSY 201 Educational Psychology 1, 2 3
EPSY 485 Assessing Student Performance 3
SPED 405 General Educator’s Role in Special Education 3
EDPR 442 Educational Practice in Secondary Education 12

Total Hours 39-40

1 EDU 201, EDU 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.

Sample Sequence
This sample sequence is intended to be used only as a guide for degree completion. All students should work individually with their academic advisors to decide the actual course selection and sequence that works best for them based on their academic preparation and goals. Enrichment programming such as study abroad, minors, internships, and so on may impact the structure of this four-year plan. Course availability is not guaranteed during the semester indicated in the sample sequence.

Students must fulfill their Language Other Than English requirement by successfully completing a third level of a language other than English. See the corresponding section on the Degree and General Education Requirements page (http://catalog.illinois.edu/general-information/degree-general-education-requirements/).

First Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW XXX</td>
<td></td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Hours</th>
<th>Second Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW XXX (or substitute NEW XXX)</td>
<td></td>
</tr>
<tr>
<td>NEW XXX</td>
<td></td>
</tr>
<tr>
<td>NEW XXX</td>
<td></td>
</tr>
<tr>
<td>NEW XXX</td>
<td>Language Other than English (3rd level) or Comp. I</td>
</tr>
<tr>
<td>NEW XXX</td>
<td>Free elective course</td>
</tr>
<tr>
<td>Comp. I or Language Other than English (3rd level)</td>
<td>4</td>
</tr>
</tbody>
</table>

Second Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW XXX</td>
<td></td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Hours</th>
<th>Second Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW XXX</td>
<td></td>
</tr>
<tr>
<td>NEW XXX</td>
<td></td>
</tr>
</tbody>
</table>
### 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*

---

### Course Information

<table>
<thead>
<tr>
<th></th>
<th>First Semester</th>
<th>Second Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td></td>
<td></td>
<td>3 New XXX</td>
</tr>
<tr>
<td>Education course</td>
<td></td>
<td>Free elective course</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Third Year

<table>
<thead>
<tr>
<th></th>
<th>First Semester</th>
<th>Second Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td>3</td>
</tr>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td></td>
</tr>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td></td>
</tr>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td></td>
</tr>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td></td>
</tr>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td></td>
</tr>
</tbody>
</table>

#### Fourth Year

<table>
<thead>
<tr>
<th></th>
<th>First Semester</th>
<th>Second Semester</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td>0</td>
</tr>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td></td>
</tr>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td></td>
</tr>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td></td>
</tr>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td></td>
</tr>
<tr>
<td>New XXX</td>
<td></td>
<td>New XXX</td>
<td></td>
</tr>
</tbody>
</table>

**Total Hours 16**

---

**College of Liberal Arts & Sciences**

Liberal Arts & Sciences College & Admissions requirements (http://catalog.illinois.edu/schools/las/)

LAS website (https://las.illinois.edu/)

---

Information listed in this catalog is current as of 05/2024