COMPUTER SCIENCE + CHEMISTRY, BSLAS

for the degree of Bachelor of Science in Liberal Arts and Sciences
Major in Computer Science and Chemistry

computer science website: CS + X Degrees (https://cs.illinois.edu/academics/undergraduate/degree-program-options/cs-x-degree-programs/#requirements)
chemistry website: CS + Chemistry (https://chemistry.illinois.edu/computer-science-chemistry-degree-requirements/)
department page: https://chemistry.illinois.edu/
overview of college admissions & requirements: Liberal Arts & Sciences (http://catalog.illinois.edu/undergraduate/las/academic-units/)
college websites: https://las.illinois.edu/ and https://engineering.illinois.edu
chemistry email: scs-advising@illinois.edu
computer science email: undergrad@cs.illinois.edu
(academic@cs.illinois.edu)

Undergraduate Degree Programs in Chemistry

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

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

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 Computer Science and Chemistry

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office by the beginning of the fifth semester (60-75 hours).

Please visit the computer science advisor as well as the Chemical Sciences advising office.

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

Minimum required major and supporting course work: Normally equates to 66 hours. Twelve hours of 300- and 400-level in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 100</td>
<td>Freshman Orientation (recommended)</td>
<td>1</td>
</tr>
</tbody>
</table>

Required Computer Science Coursework

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 124</td>
<td>Introduction to Computer Science I</td>
<td>3</td>
</tr>
<tr>
<td>CS 128</td>
<td>Introduction to Computer Science II</td>
<td>3</td>
</tr>
<tr>
<td>CS 173</td>
<td>Discrete Structures</td>
<td>3</td>
</tr>
<tr>
<td>CS 225</td>
<td>Data Structures</td>
<td>4</td>
</tr>
<tr>
<td>CS 222</td>
<td>Software Design Lab</td>
<td>1</td>
</tr>
</tbody>
</table>

Choose one of the following combinations: 8-11 hours

- CS 233 Computer Architecture
- CS 241 and System Programming

OR

- CS 240 Introduction to Computer Systems

& two CS courses at the 400 level above CS 403, excluding CS 421 and CS 491

Choose one of the following: 3 hours

- STAT 200 Statistical Analysis
- STAT 212 Biostatistics
- CS 361 Probability & Statistics for Computer Science
- CS 374 Introduction to Algorithms & Models of Computation
- CS 421 Programming Languages & Compilers

Mathematics (may also fulfill the General Education Quantitative Reasoning I and II requirements)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 221</td>
<td>Calculus I</td>
<td>4-5</td>
</tr>
<tr>
<td>or MATH 220</td>
<td>Calculus</td>
<td></td>
</tr>
<tr>
<td>MATH 225</td>
<td>Introductory Matrix Theory</td>
<td>2 or 3</td>
</tr>
<tr>
<td>or MATH 257</td>
<td>Linear Algebra with</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Computational Applications</td>
<td></td>
</tr>
<tr>
<td>MATH 231</td>
<td>Calculus II</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Chemistry Coursework - Minimum of 24 hours

Foundation Courses- 12 hours required

Select one of the following (General or Accelerated 8 hours Chemistry):

- 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

or

- CHEM 202 Accelerated Chemistry I
- & CHEM 203 and Accelerated Chemistry Lab I
- & CHEM 204 and Accelerated Chemistry II
- CHEM 232 Elementary Organic Chemistry I
- or CHEM 236 Fundamental Organic Chem I

Advanced Chemistry Courses- 12 hours

- CHEM 440 Physical Chemistry Principles | 4
- or CHEM 442 Physical Chemistry I

In consultation with an advisor, choose 8 hours of 300- or 400-level chemistry courses. 2

1. CS 100 is an orientation course aimed at first-year students, so students who declare the major after the freshman year are not required to complete it.
2. The following courses may not be used to complete the advanced chemistry hours: CHEM 315, CHEM 397, CHEM 445, CHEM 447, CHEM 492, CHEM 494, CHEM 496, CHEM 497 and CHEM 499, and any course in another unit, such as any BIOC or MCB course.