# COMPUTER SCIENCE + CHEMISTRY, BSLAS

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

## Required Computer Science Coursework

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 100</td>
<td>Computer Science Orientation (recommended; 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.)</td>
<td>1</td>
</tr>
<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

- CS 233 Computer Architecture
- & CS 341 and System Programming

OR

- CS 340 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:

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- 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)

| MATH 221 | Calculus I | 4-5 |
| MATH 220 | Calculus   |     |
| MATH 225 | Introductory Matrix Theory   | 2 or 3 |
| MATH 257 | Linear Algebra with Computational Applications |     |
| MATH 231 | Calculus II | 3   |

## Required Chemistry Coursework - Minimum of 24 hours

### Foundation Courses - 12 hours required

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

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- 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 | 4
- or CHEM 236 Fundamental Organic Chem I

## Advanced Chemistry Courses - 12 hours

Information listed in this catalog is current as of 07/2022
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 440</td>
<td>Physical Chemistry Principles</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 442</td>
<td>Physical Chemistry I</td>
<td>4</td>
</tr>
</tbody>
</table>

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