BA with a Major in Chemistry

Program Codes:
20FT0335BA

Degree Requirements
To earn a Bachelor of Arts in Liberal Arts and Sciences degree from UIC, students must complete university, college, and department degree requirements. The Department of Chemistry degree requirements are outlined below. Students should consult the College of Liberal Arts and Sciences section for additional degree requirements and college academic policies.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Summary of Requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Required Prerequisite and Collateral Courses</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Major Requirements</td>
<td>36-40</td>
</tr>
<tr>
<td></td>
<td>General Education and Electives to reach Minimum Total Hours</td>
<td>64-68</td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>120</td>
</tr>
</tbody>
</table>

General Education
See General Education and Writing-in-the-Discipline in the College of Liberal Arts and Sciences section for information on meeting these requirements. Students should consult the course lists below and their advisors to determine which courses are counted toward the General Education and Writing-in-the-Discipline requirements.

Required Prerequisite and Collateral Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Required Courses</td>
<td></td>
</tr>
<tr>
<td>MATH 180</td>
<td>Calculus I a,b</td>
<td>4</td>
</tr>
<tr>
<td>MATH 181</td>
<td>Calculus II a</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 141</td>
<td>General Physics I (Mechanics) a,c</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 142</td>
<td>General Physics II (Electricity and Magnetism) a,c</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYS 131</td>
<td>Introductory Physics for Life Sciences I a</td>
<td></td>
</tr>
<tr>
<td>PHYS 132</td>
<td>Introductory Physics for Life Sciences II a</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>16</td>
</tr>
</tbody>
</table>

Major Requirements

Required Courses
Select one of the following sequences in general and analytical chemistry:
- CHEM 122 Matter and Energy a
- CHEM 123 Foundations of Chemical Inquiry I a,b
- CHEM 124 Chemical Dynamics a
- CHEM 125 Foundations of Chemical Inquiry II a,c
- CHEM 222 Analytical Chemistry

OR
- CHEM 116 Honors and Majors General and Analytical Chemistry I d
- CHEM 118 Honors and Majors General and Analytical Chemistry II d
- CHEM 232 Structure and Function
- CHEM 233 Synthesis Techniques Laboratory
- CHEM 234 Chemical Synthesis

Select one of the following sequences in physical chemistry:
- CHEM 342 Physical Chemistry I
- CHEM 343 Physical Chemistry Laboratory e
- CHEM 346 Physical Chemistry II

OR
- CHEM 340 Physical Chemistry for Biochemists I
- CHEM 343 Physical Chemistry Laboratory e
- CHEM 344 Physical Chemistry for Biochemists II
- CHEM 314 Inorganic Chemistry

Advanced chemistry electives at the 200 level or above

Total Hours 36-40

Recommended Plan of Study

First Year

Fall Semester
- ENGL 160 Academic Writing I: Writing in Academic and Public Contexts 3
- MATH 180 Calculus I 4
- CHEM 116 Honors and Majors General and Analytical Chemistry I d 5
- CHEM 122 Matter and Energy a
- CHEM 123 Foundations of Chemical Inquiry I a,c
- General Education Requirement course 3

Spring Semester
- ENGL 161 Academic Writing II: Writing for Inquiry and Research 3

Notes:
a. Each of the following pairs will be considered one course in meeting the LAS General Education requirements: CHEM 122/123; CHEM 124/125.
b. If not taken concurrently with CHEM 122, CHEM 123 should be taken within one semester of CHEM 122.
c. If not taken concurrently with CHEM 124, CHEM 125 should be taken within one semester of CHEM 124.
d. CHEM 116 and CHEM 118 are recommended for chemistry majors.
e. CHEM 343 fulfills the Writing-in-the-Discipline requirement.
BA with a Major in Chemistry

MATH 181 Calculus II 4
Select one of the following: 3-5
  CHEM 118 Honors and Majors General and Analytical Chemistry
  & CHEM 125 Chemical Dynamics & Foundations of Chemical Inquiry II
  CHEM 222 Structure and Function
General Education Requirement course 3-5 Hours 13-17

Second Year
Fall Semester
Select one of the following: 3-5
  CHEM 124 Chemical Dynamics
  & CHEM 125 and Foundations of Chemical Inquiry II
  CHEM 232 Structure and Function
CHEM 233 Synthesis Techniques Laboratory 2
Select one of the following: 4
  PHYS 141 General Physics I (Mechanics)
  PHYS 131 Introductory Physics for Life Sciences I
Foreign Language 4 Hours 13-15

Spring Semester
CHEM 234 Chemical Synthesis 3
Select one of the following: 4
  PHYS 142 General Physics II (Electricity and Magnetism)
  PHYS 132 Introductory Physics for Life Sciences II
Foreign Language 4
General Education Requirement course 3 Hours 14

Third Year
Fall Semester
CHEM 222 Analytical Chemistry c 4
CHEM 314 Inorganic Chemistry 4
Foreign Language 4
Electives 5 Hours 17

Spring Semester
Select one of the following: 3
  CHEM 340 Physical Chemistry for Biochemists I d
  CHEM 346 Physical Chemistry II b
Foreign Language 4
General Education Requirement course 3
General Education Requirement course 3
Electives 3 Hours 16

Fourth Year
Fall Semester
CHEM 343 Physical Chemistry Laboratory e 3
Select one of the following: 3
  CHEM 342 Physical Chemistry I a
  CHEM 344 Physical Chemistry for Biochemists II d
Electives 9 Hours 15

Spring Semester
Chemistry Elective 5
Electives 10 Hours 15

Total Hours 120

a CHEM 116 and CHEM 342 are offered fall semester only. CHEM 342 requires calculus-based physics (PHYS 141, PHYS 142) as a prerequisite and Calculus III (MATH 210) as a corequisite.
b CHEM 118 and CHEM 346 are offered spring semester only.
c Students who take CHEM 116 and CHEM 118 to fulfill the general chemistry requirement do not need to take CHEM 222.
d CHEM 340 and CHEM 344 are offered in the fall and spring semesters.
e CHEM 343 satisfies the Writing-in-the-Discipline requirement.