# Chemistry Comprehensive, Bachelor of Science

Offered by Department of Chemistry (http://catalog.unk.edu/undergraduate/departments-programs/chemistry/)

## Code  Title  Credit Hours

### General Studies

**Foundational Requirements (LOPERs 1-4)**  14

- LOPER 4: Mathematics, Statistics, and Quantitative Reasoning
  - MATH 115  Calculus I with Analytic Geometry

**Broad Knowledge Requirements (LOPERs 5-8)**  13

- LOPER 8: Natural Sciences
  - BIOL 106  Biology II

**Dispositional Requirements (LOPERs 9-10)**  2

- Wellness (LOPER 11) Optional  0

**BS Science-related course requirements**  8-10

- Take ONE of the following options:
  - Take (for Biochemistry Emphasis):
    - MATH 202  Calculus II with Analytic Geometry
    - PHYS 276  General Physics II (Calculus)
    - PHYS 276L  General Physics II (Calculus) Laboratory
  - OR take (for Health Science Emphasis):
    - STAT 241  Elementary Statistics
    - or BIOL 305  BioStatistics
    - PHYS 206  General Physics II
    - & 206L  and Physics Laboratory II
    - or PHYS 276  General Physics II (Calculus)
    - & 276L  and General Physics II (Calculus) Laboratory

### Program Specific Requirements  5

- Take ONE of the following options:
  - Take (for Biochemistry Emphasis):
    - PHYS 275  General Physics I (Calculus)
    - PHYS 275L  General Physics I (Calculus) Laboratory
  - OR take (for Health Science Emphasis):
    - PHYS 205  General Physics I
    - & 205L  and Physics Laboratory
    - or PHYS 275  General Physics I (Calculus)
    - & 275L  and General Physics I (Calculus) Laboratory

### Major Option

- Complete all required courses  60-62

### Unrestricted electives

- Needed to reach 120 credit hour minimum  12-10

### Total Credit Hours

- 120

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## Major Option

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CHEM 160</td>
<td>General Chemistry</td>
<td>3</td>
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<tr>
<td>CHEM 160L</td>
<td>General Chemistry Laboratory</td>
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<td>CHEM 169</td>
<td>Chemistry Foundations and Careers</td>
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<td>CHEM 301</td>
<td>Analytical Chemistry</td>
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<td>CHEM 301L</td>
<td>Analytical Chemistry Lab</td>
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<td>CHEM 310</td>
<td>Safety in Chemistry</td>
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<td>CHEM 351</td>
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<td>CHEM 360</td>
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<td>CHEM 469</td>
<td>Advanced Seminar in Chemistry</td>
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## Chemistry Emphasis Requirements

- Select one of the following:
  - Biochemistry Emphasis (p. 1)
  - Health Sciences Emphasis (p. 2)

### Biochemistry Emphasis

<table>
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<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CHEM 352</td>
<td>Biochemistry II</td>
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<tr>
<td>CHEM 352L</td>
<td>Biochemistry II Lab</td>
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<td>CHEM 430</td>
<td>Inorganic Chemistry</td>
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<td>CHEM 490L</td>
<td>Advanced Chemistry Laboratory I</td>
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<td>CHEM 499L</td>
<td>Research in Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 480</td>
<td>Physical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>or CHEM 482</td>
<td>Survey of Physical Chemistry</td>
<td></td>
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</tbody>
</table>

- Take 7 hours from
  - CHEM 300 | Environmental Chemistry             |
  - CHEM 451 | Advanced Biochemistry               |
  - CHEM 499L | Research in Chemistry               |
  - BIOL 309 | Cellular & Molecular Biology        |
  - BIOL 401 | Principles of Immunology            |

- OR any 400-level CHEM lecture(s)

## Biochemistry Supporting Course Requirements

- Select 11 credit hours of the following:
  - BIOL 105 | Biology I                           |
  - BIOL 211 | Human Microbiology                  |
  - BIOL 309 | Cellular & Molecular Biology        |
  - BIOL 360 | Genetics                            |
  - BIOL 450 | Advanced Molecular Biology          |
  - BIOL 452 | Techniques in Molecular Biology     |

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Designated courses with the appropriate content may be approved to satisfy one of the Broad Knowledge requirements plus LOPER 9 or Broad Knowledge plus LOPER 10. Courses may be approved to satisfy LOPER 9 or LOPER 10 alone. *(Courses satisfying LOPER 9 or LOPER 10 alone must be 3 credit hours.)* Students applying this option will need to take additional hours in other categories to meet the required GS hours.

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1 Students without sufficient preparation will also need to take the following, increasing the total credit hours needed:
- MATH 102
- MATH 103