CHEMISTRY
COMPREHENSIVE, BACHELOR
OF SCIENCE

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

General Studies

**Foundational Core (Written, Math, Oral, Democracy)**
Foundational Core courses (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses) 14
Including:
- MATH 115 Calculus I with Analytic Geometry 1

**Portal**
Select one course numbered 188 (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/portal-course) 3

**Distribution**
- ENG 101 Introduction of Academic Writing 3

If ENG 101 is not taken as a prerequisite for ENG 102 then additional hours may be required to meet the 27 credit hour minimum in the Distribution Area of General Studies.

Aesthetics (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/aesthetics) 3

Humanities (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/humanities) 6

Social Sciences (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/social-sciences) 6

Natural Sciences (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/natural-sciences) 9

Including:
- CHEM 160 General Chemistry
- CHEM 160L General Chemistry Laboratory

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
  - PHYS 205L Physics I Laboratory

Analytical and Quantitative Thought (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/analytical-quantitative-thought) 0

Wellness (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/wellness) 0

**Capstone**
Select one course numbered 388 (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/capstone-course) 3

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
  - PHYS 206L Physics Laboratory II

**Major Option**
Complete all required courses 57-60

**Unrestricted electives**
Needed to reach 120 credit hour minimum 5-6

Total Credit Hours 117-123

**Major Option**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Chemistry Comprehensive Foundation Requirements**
- CHEM 161 General Chemistry 3
- CHEM 161L General Chemistry Laboratory 1
- CHEM 269 Sophomore Seminar in Chemistry 1
- CHEM 301 Analytical Chemistry 3
- CHEM 301L Analytical Chemistry Lab 1
- CHEM 351 Biochemistry 3
- CHEM 351L Biochemistry Lab 1
- CHEM 360 Organic Chemistry 4
- CHEM 360L Organic Chemistry Laboratory 1
- CHEM 361 Organic Chemistry 4
- CHEM 361L Organic Chemistry Laboratory 1
- CHEM 369 Junior Seminar in Chemistry 1

**Chemistry Emphasis Requirements**
Select one of the following: 33-36

Biochemistry Emphasis (p. 1)

Health Sciences Emphasis (p. 2)

Total Credit Hours 57-60

**Biochemistry Emphasis**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Biochemistry In-Depth Courses**
- CHEM 352 Biochemistry II 3
- CHEM 352L Biochemistry II Lab 1
- CHEM 430 Inorganic Chemistry 3
- CHEM 451 Advanced Biochemistry 3
- CHEM 469 Senior Seminar in Chemistry 1
- CHEM 480 Physical Chemistry 3
- or CHEM 482 Physical Chemistry for the Life Sciences
- CHEM 490L Advanced Chemistry Laboratory I 2
- CHEM 499L Problems in Chemistry 2

Take 3 hours from:
- CHEM 300 Environmental Chemistry 3
OR any 400-level CHEM lecture(s)

Biochemistry Supporting Course Requirements
Select 12 credit hours of the following: 12
- BIOL 105 Biology I
- BIOL 106 Biology II
- BIOL 211 Human Microbiology
- BIOL 309 Cellular Biology
- BIOL 360 Genetics
- BIOL 450 Molecular Biology
- BIOL 452 Techniques in Molecular Biology
- BIOL 485 Molecular Genetics

Total Credit Hours 33

Health Sciences Emphasis

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 106</td>
<td>Biology II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211</td>
<td>Human Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 225</td>
<td>Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 226</td>
<td>Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 309</td>
<td>Cellular Biology</td>
<td>4</td>
</tr>
<tr>
<td>or BIOL 360</td>
<td>Genetics</td>
<td>4</td>
</tr>
</tbody>
</table>

Health Sciences In-Depth Courses

Option 1:
- CHEM 352 Biochemistry II 3
- CHEM 352L Biochemistry II Lab 1
- CHEM 490L Advanced Chemistry Laboratory I 2
- CHEM 499L Problems in Chemistry 1

Select 2 of the following: 6
- CHEM 430 Inorganic Chemistry
- CHEM 451 Advanced Biochemistry
- CHEM 482 Physical Chemistry for the Life Sciences
  or CHEM 483 Physical Chemistry

Health Sciences Supporting Course Requirements
- BIOL 106 Biology II 4
- BIOL 211 Human Microbiology 4
- BIOL 225 Anatomy and Physiology 4
- BIOL 226 Anatomy and Physiology 4
- BIOL 309 Cellular Biology 4
  or BIOL 360 Genetics

Health Sciences Elective Requirements
Select 3 credit hours of the following: 3
- BIOL 300-BIOL 499 2
- CHEM 300-CHEM 499L 3
- PHYS 300-PHYS 499L 4
- PE 459 Special Topics Gross Anatomy
- PE 460 Gross Anatomy of Movement

Option 2:
The following option is available to students who are accepted to and complete a minimum of 24 credit hours at an approved pharmacy school prior to receiving a baccalaureate degree from UNK.
- BIOL 106 Biology II 4
- BIOL 225 Anatomy and Physiology 4
- BIOL 226 Anatomy and Physiology 4

Students must successfully complete a minimum of 24 credit hours at an approved pharmacy school in areas related to biology, biochemistry, chemistry (including pharmochemistry) which would be equivalent to upper division baccalaureate level courses. Up to 5 additional hours may be counted as electives toward the UNK degree.

Total Credit Hours 72

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

2. Except BIOL 388
3. Except CHEM 388
4. Except PHYS 388
5. Except CHEM 388L and CHEM 399