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>
</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

**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 3

- CHEM 160L  General Chemistry Laboratory 1

Take ONE of the following options:

Take (for Biochemistry emphasis):

- PHYS 275  General Physics I (Calculus) 3

OR take (for Health Science Emphasis):

- PHYS 205  General Physics I 3

- PHYS 205L  Physics I Laboratory 0

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) 3

- PHYS 276L  General Physics II (Calculus) Laboratory 1

OR take (for Health Science Emphasis):

- STAT 241  Elementary Statistics 3

- BIOL 305  BioStatistics 3

- PHYS 206  General Physics II 1

- PHYS 206L  Physics Laboratory II 1

**Major Option**

Complete all required courses 57-60

Unrestricted electives

Needed to reach 120 credit hour minimum 5-6

**Total Credit Hours**

120

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**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 Laboratory 1

- CHEM 351  Biochemistry 3

- CHEM 351L  Biochemistry Laboratory 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:

- **Biochemistry Emphasis (p. 1)**

- **Health Sciences Emphasis (p. 2)**

**Total Biochemistry Hours** 57-60

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**Biochemistry In-Depth Courses**

- CHEM 352  Biochemistry II 3

- CHEM 352L  Biochemistry II Laboratory 1

- CHEM 430  Inorganic Chemistry 3

- CHEM 451  Advanced Biochemistry 3

- CHEM 469  Senior Seminar in Chemistry 1

- CHEM 480  Physical Chemistry 3

- CHEM 482  Physical Chemistry for the Life Sciences 3

- 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 & Molecular Biology
- BIOL 360  Genetics
- BIOL 450  Advanced Molecular Biology
- BIOL 452  Techniques in Molecular Biology
- BIOL 485  Molecular Genetics

Total Credit Hours 33

Health Sciences Emphasis

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<tr>
<td>BIOL 106</td>
<td>Biology II</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 &amp; Molecular Biology</td>
<td></td>
</tr>
<tr>
<td>or BIOL 360</td>
<td>Genetics</td>
<td>4</td>
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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.

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

Except CHEM 388L and CHEM 399