

# CHEMISTRY COMPREHENSIVE, BACHELOR OF SCIENCE

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

Code	Title	Credit Hours
<b>General Studies</b>		
<i>Foundational Requirements (LOPERs 1-4)</i>		14
Including:		
LOPER 4: Mathematics, Statistics, and Quantitative Reasoning		
MATH 115	Calculus I with Analytic Geometry <sup>1</sup>	
<i>Broad Knowledge Requirements (LOPERs 5-8)</i>		13
Including:		
LOPER 8: Natural Sciences		
BIOL 106	Biology II	
<i>Dispositional Requirements (LOPERs 9-10)<sup>2</sup></i>		6
<i>Wellness (LOPER 11) Optional</i>		0
<b>BS Science-related course requirements</b>		<b>3-10</b>
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		
<b>Program Specific Requirements</b>		<b>5</b>
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 & 205L	General Physics I and Physics I Laboratory	
or PHYS 275 General Physics I (Calculus) & 275L and General Physics I (Calculus) Laboratory		
<b>Major Option</b>		
Complete all required courses		60-62
<b>Unrestricted electives</b>		
Needed to reach 120 credit hour minimum		12-17
<b>Total Credit Hours</b>		<b>120</b>

## Major Option

Code	Title	Credit Hours
<b>Chemistry Comprehensive Foundation Requirements</b>		
CHEM 160	General Chemistry	3
CHEM 160L	General Chemistry Laboratory	1

CHEM 161	General Chemistry	3
CHEM 161L	General Chemistry Laboratory	1
CHEM 169	Chemistry Foundations and Careers	1
CHEM 301	Analytical Chemistry	3
CHEM 301L	Analytical Chemistry Lab	1
CHEM 310	Safety in Chemistry	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 469	Advanced Seminar in Chemistry	1

### Chemistry Emphasis Requirements

Select one of the following:	31-33
Biochemistry Emphasis (p. 1)	
Health Sciences Emphasis (p. 1)	

Total Credit Hours 60-62

## Biochemistry Emphasis

Code	Title	Credit Hours
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### Biochemistry In-Depth Courses

CHEM 352	Biochemistry II	3
CHEM 352L	Biochemistry II Lab	1
CHEM 430	Inorganic Chemistry	3
CHEM 490L	Advanced Chemistry Laboratory I	2
CHEM 499L	Research in Chemistry	1
CHEM 480	Physical Chemistry	3
or CHEM 482	Survey of Physical Chemistry	

Take 7 hours from 7

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:	11	
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	
BIOL 485	Molecular Genetics	

Total Credit Hours 31

## Health Sciences Emphasis

Code	Title	Credit Hours
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### 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	Research in Chemistry	1
or HSCI 475	Internship in Health Sciences	
Select 2 of the following:		6
CHEM 430	Inorganic Chemistry	
CHEM 451	Advanced Biochemistry	
CHEM 482	Survey of Physical Chemistry	
or CHEM 48C	Physical Chemistry	

**Health Sciences Supporting Course Requirements**

BIOL 211	Human Microbiology	4
BIOL 225	Anatomy and Physiology	4
BIOL 226	Anatomy and Physiology	4
BIOL 309	Cellular & Molecular Biology	4
or BIOL 360	Genetics	

**Health Sciences Elective Requirements**

Select 4 credit hours of the following:		4
BIOL 300-BIOL 499		
CHEM 300-CHEM 499L		
PHYS 300-PHYS 499L		
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 225	Anatomy and Physiology	4
BIOL 226	Anatomy and Physiology	4
HSCI 475	Internship in Health Sciences	1

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

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.