

# 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 Core (Written, Math, Oral, Democracy)</i>		
Foundational Core courses ( <a href="http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses">http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses</a> )		14
Including:		
MATH 115	Calculus I with Analytic Geometry <sup>1</sup>	
<i>Portal</i>		
Select one course numbered 188 ( <a href="http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/portal-course">http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/portal-course</a> )		3
<i>Distribution</i>		
ENG 101	Introduction of Academic Writing	3
<i>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.</i>		
Aesthetics ( <a href="http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/aesthetics">http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/aesthetics</a> )		3
Humanities ( <a href="http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/humanities">http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/humanities</a> )		6
Social Sciences ( <a href="http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/social-sciences">http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/social-sciences</a> )		6
Natural Sciences ( <a href="http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/natural-sciences">http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/natural-sciences</a> )		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 ( <a href="http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/analytical-quantitative-thought">http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/analytical-quantitative-thought</a> )		0
Wellness ( <a href="http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/wellness">http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/wellness</a> )		0
<i>Capstone</i>		
Select one course numbered 388 ( <a href="http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/capstone-course">http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/capstone-course</a> )		3
<b>BS Science-related course requirements</b>		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
<b>Unrestricted electives</b>	
Needed to reach 120 credit hour minimum	5-6
<b>Total Credit Hours</b>	<b>117-123</b>

## Major Option

Code	Title	Credit Hours
<b>Chemistry Comprehensive Foundation Requirements</b>		
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
<b>Chemistry Emphasis Requirements</b>		
Select one of the following:		33-36
Biochemistry Emphasis (p. 1)		
Health Sciences Emphasis (p. 2)		
<b>Total Credit Hours</b>		<b>57-60</b>

## Biochemistry Emphasis

Code	Title	Credit Hours
<b>Biochemistry In-Depth Courses</b>		
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:		3
CHEM 300	Environmental Chemistry	

OR any 400-level CHEM lecture(s)		
<b>Biochemistry Supporting Course Requirements</b>		
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

Code	Title	Credit Hours
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### Health Sciences In-Depth Courses

<b>Option 1:</b>		
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 480(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 <sup>2</sup>		
CHEM 300-CHEM 499L <sup>3</sup>		
PHYS 300-PHYS 499L <sup>4</sup>		
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 pharmacology) 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
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<sup>1</sup> Students without sufficient preparation will also need to take the following, increasing the total credit hours needed:

- MATH 102
- MATH 103

<sup>2</sup> Except BIOL 388

<sup>3</sup> Except CHEM 388

<sup>4</sup> Except PHYS 388

<sup>5</sup> Except CHEM 388L and CHEM 399