

# MOLECULAR BIOLOGY COMPREHENSIVE, BACHELOR OF SCIENCE

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

Code	Title	Credit Hours
<b>General Studies</b>		
<i>Foundational Requirements (LOPERS 1-4)</i>		12-14
Including:		
LOPER 4: Mathematics, Statistics, and Quantitative Reasoning		
Take 1 of the following: <sup>1</sup>		
MATH 115	Calculus I with Analytic Geometry or MATH 12: Applied Calculus I	
<i>Broad Knowledge Requirements (LOPERS 5-8)</i>		13
Including:		
<i>LOPER 8: Natural Science</i>		
CHEM 160 & 160L	General Chemistry and General Chemistry Laboratory	
<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>		5
PHYS 205 & 205L	General Physics I and Physics I Laboratory	
<b>Program-Specified Requirements</b>		4
CHEM 161 & 161L	General Chemistry and General Chemistry Laboratory	
<b>Major Option</b>		
Complete all required courses		46-54
<b>Unrestricted electives</b>		
Needed to reach 120 credit hour minimum		34-24
Total Credit Hours		120

A minimum 2.5 GPA is required in all courses counting toward this major.

## Major Option

Code	Title	Credit Hours
<b>Molecular Biology Comprehensive Core Requirements</b>		
BIOL 105	Biology I	4
BIOL 106	Biology II	4
BIOL 231	Research Methods I	3
BIOL 290	Evolution	3
BIOL 309	Cellular & Molecular Biology	4
BIOL 360	Genetics	4
BIOL 450	Advanced Molecular Biology	4
Take two hours from the following:		2
BIOL 421	Seminar in Biology	

or

BIOL 431A & BIOL 431B	Research Methods IIA and Research Methods IIB	
<b>Biology Comprehensive Supporting Course Requirements</b>		
Select one of the following options:		5-10
CHEM 250 & 250L	Elementary Organic Chemistry and Elementary Organic Chemistry Lab	
or		
CHEM 360 & 360L & CHEM 361 & CHEM 361L	Organic Chemistry and Organic Chemistry Laboratory and Organic Chemistry and Organic Chemistry Laboratory	
Take the following:		
CHEM 351 & 351L	Biochemistry and Biochemistry Lab	4
Select 9-12 credit hours of the following:		9-12
BIOL 305	BioStatistics	
BIOL 311	Bioethics	
BIOL 325	Medical Terminology	
BIOL 401	Principles of Immunology	
BIOL 404	Developmental Biology	
BIOL 440	Infectious Diseases	
BIOL 461	Human Genetics	
BIOL 465	Physiology	
CHEM 301 & 301L	Analytical Chemistry and Analytical Chemistry Lab	
CHEM 352 & 352L	Biochemistry II and Biochemistry II Lab	
Total Credit Hours		46-54

<sup>1</sup> The Molecular Biology degree requires a minimal mathematical competency at the level of calculus. Students with sufficient preparation may enter the mathematics program at a higher level. Students are required to take a LOPERS 4: Mathematics, Statistical, and Quantitative Reasoning course regardless of entry level. See advisor for math placement.

<sup>2</sup> 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.