BIOLOGY COMPREHENSIVE, BACHELOR OF SCIENCE

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

Code	Title	Credit Hours
General Studies		
Foundational Requirements (LOPERS 1-4) including:		*12*
Including:		
LOPER 4: Mathematics, Statistics, and Quantitative Reasoning [1]		
MATH 103	Plane Trigonometry	
Broad Knowledge Requirements (LOPERS 5-8)		*13*
Including:		
LOPER 7 (Social Science)		
For the Wildlife Emphasis ONLY take:		
ECON 100	Contemporary Economic Issues	
LOPER 8 (Natural Science)		
BIOL 105	Biology I	
Dispositional Requirements (LOPERS 9-10) [2]		*6*
Wellness (LOPER 11) Optional		*0*
Program-Specified Requirements		**4**
BIOL 106	Biology II	
BS Science-related course requirements		**8**
CHEM 160 & 160L	General Chemistry and General Chemistry Laboratory	
CHEM 161 & 161L	General Chemistry and General Chemistry Laboratory	
Major Option		
Complete all required courses		44-61
Unrestricted electives		
Needed to reach 120 credit hour minimum		16-33
Total Credit Hours		120

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

Major Option

Code	Title	Credit Hours
Biology Comprehensive Core Requirements		
BIOL 231	Research Methods I	3
BIOL 305	BioStatistics	3
BIOL 359	Evolution	3
BIOL 360	Genetics	4
Select 2 credit hours of the following:		2
BIOL 421	Seminar in Biology	
or		
BIOL 431A	Research Methods IIA	
AND		
BIOL 431B	Research Methods IIB	
Biology Emphasis Requirements		
Select one of the following:		29-46
General Emphasis (p. 1)		
Wildlife Emphasis (p. 2)		
Health Sciences Emphasis (p. 2)		
Total Credit Hours		44-61

General Emphasis

Code	Title	Credit Hours
Required Courses		
Take all of the following:		13-18
BIOL 307	Ecology	
PHYS 205 & 205L	General Physics I and Physics I Laboratory	
Select one of the following:		
CHEM 250 & 250L	Fundamentals of Organic Chemistry and Fundamentals of Organic Chemistry Lab	
or		
CHEM 360 & 360L	Organic Chemistry and Organic Chemistry Laboratory	
and		
CHEM 361 & 361L	Organic Chemistry and Organic Chemistry Laboratory	
Field Electives		
Select 6-9 credit hours of the following:		6-9
BIOL 330	Wildlife Conservation	
BIOL 405	Range and Wildlife Management	
BIOL 406	Plant Ecology	
BIOL 418	Plant Taxonomy	
BIOL 435	Herpetology	
BIOL 462	Animal Behavior	
BIOL 470	Insect Biology	
BIOL 472	Ichthyology	
BIOL 473	Ornithology	
BIOL 474	Mammalogy	
Laboratory Electives		
Select 6-9 credit hours of the following:		6-9
BIOL 211	Human Microbiology	
BIOL 215	Human Physiology	
BIOL 225	Anatomy and Physiology	
BIOL 226	Anatomy and Physiology	
BIOL 301	Introduction to Soils	
BIOL 309	Cellular & Molecular Biology	
BIOL 401	Principles of Immunology	
BIOL 403	Plant Physiology	
BIOL 404	Developmental Biology	
BIOL 416	Plant Diversity and Evolution	
BIOL 440	Infectious Diseases	
BIOL 450	Advanced Molecular Biology	
BIOL 465	Physiology	
Select one of the following:		4

CHEM 301 & 301L	Analytical Chemistry and Analytical Chemistry Lab	
or		
CHEM 351	Biochemistry I	
Total Credit Hours		29-40

Wildlife Emphasis

Code	Title	Credit Hours
Required Courses		
BIOL 213	Introduction to Fish and Wildlife Management	2
BIOL 307	Ecology	3
BIOL 330	Wildlife Conservation	3
BIOL 405	Range and Wildlife Management	3
BIOL 418	Plant Taxonomy	3
Select one of the following:		3
BIOL 409	Biological Studies using GIS	
GEOG 417	GIScience Principles and Concepts	
GEOG 418	Working with GIScience and Spatial Analysis	
Botany		
Select 2 courses from the following:		6
BIOL 403	Plant Physiology	
BIOL 406	Plant Ecology	
BIOL 416	Plant Diversity and Evolution	
Zoology		
Select 2 courses from the following:		6
BIOL 435	Herpetology	
BIOL 470	Insect Biology	
BIOL 472	Ichthyology	
BIOL 473	Ornithology	
BIOL 474	Mammalogy	
Human Dimensions		
Take one course from the following:		3
BIOL 311	Bioethics	
BIOL 426	Human Dimensions of Wildlife and Fisheries	
BIOL 442	Wildlife and Fisheries Laws and Policies	
ECON 385	Environmental Economics	
PSCI 332	Environmental Politics & Policy	
Other Electives		
Take 3 courses from the following:		9
BIOL 301	Introduction to Soils	
BIOL 309	Cellular & Molecular Biology	
BIOL 403	Plant Physiology (This course can only count in one area.)	
BIOL 404	Developmental Biology	
BIOL 406	Plant Ecology (This course can only count in one area.)	
BIOL 409	Biological Studies using GIS (This course can only count in one area.)	
BIOL 416	Plant Diversity and Evolution (This course can only count in one area.)	
BIOL 430	Special Topics in Biology	
BIOL 435	Herpetology (This course can only count in one area.)	
BIOL 450	Advanced Molecular Biology	
BIOL 456	Regional Field Study	
BIOL 462	Animal Behavior	
BIOL 465	Physiology	
BIOL 470	Insect Biology (This course can only count in one area.)	
BIOL 472	Ichthyology (This course can only count in one area.)	
BIOL 473	Ornithology (This course can only count in one area.)	
BIOL 474	Mammalogy (This course can only count in one area.)	
GEOG 416	Applications of Geographic Information Systems	
GEOG 417	GIScience Principles and Concepts (This course can only count in one area.)	
GEOG 418	Working with GIScience and Spatial Analysis (This course can only count in one area.)	
MATH 123	Applied Calculus I	
PHYS 205 & 205L	General Physics I and Physics I Laboratory	
CHEM 250 & 250L	Fundamentals of Organic Chemistry and Fundamentals of Organic Chemistry Lab	
or		
CHEM 360 & 360L	Organic Chemistry and Organic Chemistry Laboratory	
and		
CHEM 361 & 361L	Organic Chemistry and Organic Chemistry Laboratory	
Total Credit Hours		41

Health Sciences Emphasis

Code	Title	Credit Hours
Physiology		**8**
Select one of the following:		
BIOL 215 & PE 360	Human Physiology and Introduction to Anatomical Biomechanics	
or		
BIOL 225 & BIOL 226	Anatomy and Physiology and Anatomy and Physiology	
Microbiology		**4**
BIOL 211	Human Microbiology	
Cellular and Molecular Biology		**4**
BIOL 309	Cellular & Molecular Biology	
Biology		
Select 5 credit hours of the following:		5
BIOL 311	Bioethics	

BIOL 325	Medical Terminology (This course can only count in one area.)	
BIOL 401	Principles of Immunology	
BIOL 404	Developmental Biology	
BIOL 440	Infectious Diseases	
BIOL 450	Advanced Molecular Biology	
BIOL 461	Human Genetics	
BIOL 465	Physiology (This course can only count in one area.)	
Supporting Courses		**20-25**
Take one of the following Organic Chemistry options:		
CHEM 250 & 250L	Fundamentals of Organic Chemistry and Fundamentals of Organic Chemistry Lab	
or		
CHEM 360 & 360L	Organic Chemistry and Organic Chemistry Laboratory	
and		
CHEM 361 & 361L	Organic Chemistry and Organic Chemistry Laboratory	
Take the following Physics courses:		
PHYS 205 & 205L	General Physics I and Physics I Laboratory	
Take the following Biochemistry courses:		
CHEM 351	Biochemistry I	
Take one of the following advanced Anatomy/Physiology courses:		
BIOL 465	Physiology (This course can only count in one area.)	
PE 459	Special Topics Gross Anatomy	
PE 460	Gross Anatomy of Movement	
Select 3 credit hours of the following:		
BIOL 110	Introduction to Epidemiology	
BIOL 325	Medical Terminology (This course can only count in one area.)	
CHEM 352 & 352L	Biochemistry II and Advanced Biochemistry Lab	
ECON 410	Health Care Economics	
PE 108	Introduction to Nutrition	
HSCI 225	Introduction to Hematology	
HSCI 300	Seminar in Health Sciences	
MGT 450	Population Health Management: Systems and Policies	
PSY 440	Health Psychology	
SOC 275	Social Psychology	
SOC 462	Sociology of Health and Illness	
SPAN 103	Spanish for Special Purposes	
Total Credit Hours		41-46

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The Biology degree, General Emphasis and Health Science Emphasis require a minimal mathematical competency at the level of trigonometry. Students with sufficient preparation may enter the mathematics program at a higher level, reducing the total credit hours needed. **See advisor for math placement.**