

BIOLOGY, A.S.

Location(s): AL, AN, LO, MA, WO

NOVA Code: 6550

The curriculum is designed to prepare students to transfer to a four-year college or university to complete a baccalaureate degree program with a major in one of the following fields: agriculture, biology, botany, pre-dentistry, forestry, genetics, microbiology, molecular biology, neuroscience, pre-pharmacy, pre-physical therapy, pre-medicine, science education, pre-veterinary, or zoology.

Two Years

Course	Title	Credits
1st Semester		
CHM 111	General Chemistry I	4
ENG 111	College Composition I	3
HIS Elective (https://catalog.nvcc.edu/general-education-electives/#ge_hist_elec)		3
Select one of the following: ¹		4-5
MTH 167	PreCalculus with Trigonometry	
Physical or Life Science Elective w/Lab (p. 2)		
SDV 100 or SDV 101	College Success Skills or Orientation to:	1
Credits		15-16
2nd Semester		
BIO 101	General Biology I	4
CHM 112	General Chemistry II	4
ENG 112	College Composition II	3
Humanities/Fine Arts Elective (https://catalog.nvcc.edu/general-education-electives/#ge_hum_fa_elect) ²		3
MTH 263	Calculus I ¹	4
Credits		18
3rd Semester		
Social/Behavioral Sciences Elective (https://catalog.nvcc.edu/general-education-electives/#ge_soc_beh_sci_elec)		3
Select one of the following: ³		4
BIO 102	General Biology II	
BIO 207	General Zoology	
Select one of the following CST Electives:		3
CST 100	Principles of Public Speaking	
CST 110	Introduction to Human Communication	
CST 126	Interpersonal Communication	
Select one of the following: ¹		3-4
MTH 264	Calculus II	
MTH 245	Statistics I	
Physical or Life Science Elective w/Lab (p. 2)		
Credits		13-14
4th Semester		
BIO 206	Cell Biology ⁴	4
Humanities/Fine Arts Elective (https://catalog.nvcc.edu/general-education-electives/#ge_hum_fa_elect)		3
Physical or Life Science Elective w/Lab (p. 2)		4
Select one of the following: ¹		3-4
MTH 245	Statistics I	
MTH 264	Calculus II	
Physical or Life Science Elective w/Lab (p. 2)		
Credits		14-15
Total Credits		60-63

Electives should be chosen with the advice of an academic advisor to meet the requirements of the intended transfer institution.

- ¹ Select one option from the "Mathematics List" below to satisfy the program's mathematics and credit hour requirements. Click the list to expand.
- ² Students must choose courses from two of the following three areas: Fine Arts, Humanities, and Literature. Credit will not be awarded for taking two courses from the same area.
- ³ Students transferring to George Mason University who take BIO 207 General Zoology must also take BIO 110 General Botany.
- ⁴ Students may substitute this course with BIO 205 General Microbiology or BIO 256 General Genetics, as advised by their intended transfer institution.

Students must complete at least 60 credits applicable to this program, regardless of the combination of math and science courses.

Mathematics List

To fulfill the mathematics and credit hour requirements in the program, students will select MTH courses from this list and follow one of the options provided.

Code	Title	Credits
MTH 161	PreCalculus I ¹	3
MTH 162	PreCalculus II ¹	3
MTH 167	PreCalculus with Trigonometry ¹	5
MTH 245	Statistics I	3
MTH 263	Calculus I	4
MTH 264	Calculus II	4

- ¹ Students may take MTH 161 PreCalculus I and MTH 162 PreCalculus II instead of MTH 167 PreCalculus with Trigonometry, but may **not** earn credit for both MTH 167 PreCalculus with Trigonometry and MTH 161 PreCalculus I or MTH 162 PreCalculus II.

Option 1

Begin with PreCalculus (5 CR.)

Course	Title	Credits
1st Semester		
MTH 167	PreCalculus with Trigonometry	5
Credits		5
2nd Semester		
MTH 263	Calculus I	4
Credits		4
3rd Semester		
Select one of the following:		3
MTH 245	Statistics I	
MTH 264	Calculus II	
Physical or Life Science Elective w/Lab (p. 2)		
Credits		3
4th Semester		
Physical or Life Science Elective w/Lab (p. 2)		3
Credits		3
Total Credits		15

Option 2

Begin with PreCalculus (3 CR.)

Course	Title	Credits
1st Semester		
MTH 161	PreCalculus I	3
	Credits	3
2nd Semester		
MTH 162	PreCalculus II	3
	Credits	3
3rd Semester		
MTH 263	Calculus I	4
	Credits	4
4th Semester		
Select one of the following:		3
MTH 245	Statistics I	
MTH 264	Calculus II	
Physical or Life Science Elective w/Lab (p. 2)		
	Credits	3
	Total Credits	13

Option 3

Begin with Calculus (4 CR)

Course	Title	Credits
1st Semester		
MTH 263	Calculus I	4
	Credits	4
2nd Semester		
Select one of the following:		3
MTH 245	Statistics I	
MTH 264	Calculus II	
Physical or Life Science Elective w/Lab (p. 2)		
	Credits	3
3rd Semester		
Physical or Life Science Elective w/Lab (p. 2)		3
	Credits	3
4th Semester		
Physical or Life Science Elective w/Lab (p. 2)		3
	Credits	3
	Total Credits	13

Physical or Life Science Electives w/Lab

Students may choose any lab science elective from the following list:

Code	Title	Credits
BIO 102	General Biology II	4
BIO 110	General Botany	4
BIO 207	General Zoology	4
BIO 205	General Microbiology	4
BIO 256	General Genetics	4
BIO 270	General Ecology	4
CHM 241	Organic Chemistry I	3
CHM 242	Organic Chemistry II	3
CHM 245	Organic Chemistry I Laboratory	2
CHM 246	Organic Chemistry II Laboratory	2
GOL 105	Physical Geology	4
GOL 106	Historical Geology	4
PHY 201	General College Physics I	4
PHY 202	General College Physics II	4

PHY 241	University Physics I	4
PHY 242	University Physics II	4

Please note: BIO 141 Human Anatomy And Physiology I and BIO 142 Human Anatomy and Physiology II, CHM 101 Introductory Chemistry I, PHY 100 Elements of Physics, or ENV 121 Foundations of Environmental Science and ENV 122 Applications in Environmental Science **do not** satisfy this requirement.