

Grand Valley State University
CLAS Academic Advising Center
C-1-140 Mackinac Hall
616-331-8585

Teaching Endorsement Planned Program
Biology Major – Secondary Education
(Fall 2016 and After)

Student Name: _____ Date: _____

Email Address: _____ G#: _____

Transfer Institution(s): _____

Key: ✓ - Completed or In Progress W - Waived Highlighted - Still Needs to be Completed

Biology Major – Required Courses

Course Number	✓	Course Name	Credit s	Completed	Scheduled	Grade	Quality Points
BIO 120		General Biology I	4				
BIO 121		General Biology II	4				
BIO 210		Evolutionary Biology	3				
BIO 215		Ecology	4				
BIO 375		Genetics	3				
BIO 376		Genetics Laboratory	1				
CMB 405		Cell and Molecular Biology	4				
BIO 495		Perspectives in Biology	3				
		Biology Elective – Plant Organismal Biology (choose one)					
BIO 243		Plant Identification and Natural History	3				
BIO 303		Plant Morphology	4				
BIO 313		Plants and Islands	4				
BIO 323		Aquatic and Wetlands Plants	3				
BIO 333		Systematic Botany	4				
BIO 403		Plant Structure and Function	4				
BIO 413		Freshwater Algae	3				
BIO 423		Plant Biotechnology	3				
BIO 433		Plant Ecology	4				
		Biology Elective – Animal Organismal Biology (choose one)					
BIO 222		Natural History of Vertebrates	3				
BIO 232		Natural History of Invertebrates	3				
BIO 272		Insect Biology and Diversity	3				
BIO 302		Comparative Vertebrate Anatomy	4				
BIO 342		Ornithology	3				
BIO 362		Fisheries Biology	4				
BIO 402		Aquatic Insects	3				
BIO 412		Mammalogy	4				
BIO 422		Embryology	3				
BIO 432		Comparative Animal Physiology	4				
BMS 208 & 309		Human Anatomy & Laboratory in Human Anatomy	3/1				
BMS 290 & 291		Human Physiology & Laboratory in Human Physiology	3/1				

	Biology Electives Students must complete a minimum of 41 credits of Biology coursework. This includes the Biology core listed previously. Students should select additional courses from the following electives, or from additional plant or animal courses listed previously, or BIO Issues courses, credits in research (BIO 499), or internship credit (BIO 490). Students should consult with a Biology advisor prior to selecting elective courses. Students are allowed to use a maximum of 8 BMS credits towards the Biology electives.					
BIO 308*	Wildlife Ecology	4				
BIO 317	Principles of Animal Nutrition	3				
BIO 319	Global Agricultural Sustainability	3				
BIO 325	Human Sexuality	3				
BIO 328	Biomedical Ethics	3				
BIO 329	Evolution of Social Behavior	3				
BIO 338	Environmental Ethics	3				
BIO 349	The Darwinian Revolution	3				
BIO 352	Animal Behavior	3				
BIO 357	Environmental Microbiology	4				
BIO 370	Marine Biology	3				
BIO 386*	Ecological Restoration & Management	4				
BIO 408*	Wildlife Management	4				
BIO 416	Advanced Genetics Laboratory	2				
BIO 440	Limnology	4				
BIO 442	Fish Ecology	3				
BIO 450	Stream Ecology	4				
BIO 452	Human Evolution	3				
BIO 460	Terrestrial Ecosystem Ecology	4				
BIO 470	Conservation Biology	3				
BIO 473	Ecology and Evolution of Plant-Animal Interactions	3				
BIO 485	Molecular Ecology	3				
BIO 486	Advanced Restoration Ecology	3				
BMS 212 & 213	Introductory Microbiology & Laboratory in Microbiology	3/1				
CMB 351	Bioinformatics: Tools and Techniques for Life Scientists	3				
CMB 411	Genetics of Development and Cancer	3				
CMB 414	Molecular Biology of the Gene	3				
CMB 426	Nucleic Acids Laboratory	3				
CHM 115	Principles of Chemistry I	4				
CHM 116	Principles of Chemistry II	5				
CHM 231 ²	Introduction to Organic Chemistry OR Organic Chemistry for Life Sciences I	4 5				
CHM 241						
CHM 232 ²	Biological Chemistry OR Organic Chemistry for Life Sciences II	4 4				
CHM 242						
STA 215	Introductory Applied Statistics OR Survey of Calculus OR Calculus I	3 3 4				
MTH 125						
MTH 201						
PHY 200 ³	Physics for the Life Sciences OR General Physics I OR Principles of Physics I	4 5 5				
PHY 220						
PHY 230						

Cumulative GPA: _____

Special Considerations:

*These courses may be cross-listed as NRM

¹BIO 104, 105, 107, 109, 205, 309, 310, 311, 329 and 349 are excluded from the major.

²If CHM 231 is chosen, CHM 232 must be taken. If CHM 241 is chosen, CHM 242 must be taken

³Secondary Education students considering the Integrated Science Secondary Endorsement are encouraged to take both PHY 220 & 221 or PHY 230 & 231.

⁴Students with a bachelor's degree and a biology major from another institution must earn at least 5 credits in Biology from GVSU.

⁵Students must complete a minimum of 41 credits of Biology coursework

⁶BIO 407 - Biology and Society: Study Abroad, BIO 417 - International Field Biology, OR BIO 418 - Regional Field Biology possible with Biology Department permission

Notes:

Substitutions, Equivalencies, and Waivers Approved By:

Date:

Prepared By:

Date:

Academic Departmental Approval (Pending Completion of Highlighted Requirements):

Date: