

Environmental Science Major (option 1)

B.S. in Environmental Science – Curriculum Map 2019-2020 Catalog

Option I

Concentrations for Option 1 are: Environmental Biology, Environmental Chemistry, Environmental Geology, Environmental Engineering, or Climate Science.

Course	Cr.Comp	Course	Cr.Comp
FRESHMAN			
Fall		Spring	
BI 101 Principles of Biology I ¹	4	BI 102 Principles of Biology II ¹	4
EN 101 Composition and Literature I	3	EN 102 Composition and Literature II	3
GL 110 Introduction to Geology (General Education Lab Science)	4	GL 111 Oceanography (General Education Lab Science)	4
MA 107 Precalculus Mathematics (General Education Math)	4	MA 108 Applied Calculus (General Education Math) ²	4
Fall Semester Total Cr.:		Spring Semester Total Cr.:	
15		15	
SOPHOMORE			
Fall		Spring	
CH 103 General Chemistry I	4	CH 104 General Chemistry II	4
Concentration Elective	3-4	Concentration Elective	3-4
ES 270 Fundamentals of Environmental Science (OR) ³	4	General Education Literature or ES 130 (http://catalog.norwich.edu/residentialprograms/catalog/generaleducationgoals)	3
Free Elective (3 cr.)		MA 232 Elementary Statistics	3
ES 251 Sophomore Seminar in Environmental Science	1	Free Elective ³	3-4
PH 323 Environmental Ethics (General Education Ethics OR)	3		
General Education Arts & Humanities (http://catalog.norwich.edu/residentialprograms/catalog/generaleducationgoals)			
Fall Semester Total Cr.:		Spring Semester Total Cr.:	
15-16		16-18	
JUNIOR			
Fall		Spring	
Concentration Elective	3-4	ES 130 Introduction to Environmental Law (OR General Education Literature)	3
EC 201 Principles of Economics (Macro) (General Education Social Science) or 202 Principles of Economics (Micro)	3	Concentration Elective	3-4
PS 201 General Physics I	4	ES 340 Project Development in Environmental Science	1
General Education Arts & Humanities or PH 323) (http://catalog.norwich.edu/residentialprograms/catalog/generaleducationgoals)	3	PS 202 General Physics II	4
Free Elective (or ES 270) ³	3-4	Free Elective ³	4-3
Fall Semester Total Cr.:		Spring Semester Total Cr.:	
16-18		15	
SENIOR			
Fall		Spring	
BI 205 Ecology	4	Concentration Elective	3-4
Concentration Elective	3-4	ES 451 Environmental Science Seminar	3
ES 440 Research Project in Environmental Science (Capstone)	3	ES 460 Project Completion in Environmental Science	1
GL 255 Hydrogeology	3	General Education History (http://catalog.norwich.edu/residentialprograms/catalog/generaleducationgoals)	3

General Education Leadership (http://catalog.norwich.edu/residentialprograms/catalog/generaleducationgoals)	1-3	Free Elective ³	4-3
Fall Semester Total Cr.:	14-17	Spring Semester Total Cr.:	14
TOTAL CREDITS FOR THIS MAJOR: 120-128			

- 1 EnvCH and EnvEG concentrations students take CH 103 and CH 104 as freshmen, and BI 101 and BI 102 in the second year.
- 2 Or equivalent, especially if needed as a prerequisite for Concentration courses.
- 3 Can be used out of sequence and to take more than one concentration elective concurrently.

Available Concentrations – Option I

Environmental Biology Concentration 2019-2020 Catalog

GL 261	Field Geology	4
CH 205	Survey of Organic Chemistry	4
Four of the following (16 credits):		
BI 220	Introductory Microbiology	4
BI 303	Genetics	4
BI 316	Plant Taxonomy	4
BI 326	Natural History of the Vertebrates	4
BI 341	Plant Anatomy	4
BI 351	Dendrology and Silvics	4
BI 395	Evolution	4
BI 424	Woodland Ecology and Management	4
Total Cr.		24

Environmental Geology Concentration 2019-2020 Concentration

GL 253	Geomorphology	4
GL 257	Sedimentology	4
GL 261	Field Geology	4
GL 263	Mineralogy	4
GL 200 level Elective or EG 203 Materials Science		3-4
CH elective: CH204 or above, 3-4 cr. options only		3-4
Total Cr.		22-24

Environmental Chemistry Concentration 2019-2020 Catalog

CH 204	Quantitative Analysis	4
CH 205	Survey of Organic Chemistry	4
GL 263	Mineralogy	4
Three of the following:		10-12
GL 261	Field Geology	4
CH 314	Instrumental Methods (+/- CH 315 Lab)	3/4
EG 203	Materials Science	3
BI 220	Introductory Microbiology	4
Total Cr.		22-24

Environmental Engineering Concentration 2019-2020 Catalog

EG 109	Introduction to Engineering I	3
CE 211	Surveying	3
EG 203	Materials Science	3
AP 221	Site Development and Design	3
GL 253	Geomorphology	4
One of the following:		3-4
GL 261	Field Geology	4
MA 241	Mathematical Computation and Modeling	3
CH elective: CH 204 or above, 3-4 cr. options only		3-4
Total Cr.		19-20

Climate Science Concentration 2019-2020 Catalog

GL 265	Glacial Geology and Paleoclimate	4
CH 204	Quantitative Analysis	4
GL 253	Geomorphology	4
MA 241	Mathematical Computation and Modeling	3

Two of the following:

CH 314	Instrumental Methods (+/- CH 315 Lab)	6-8
PO 305	Geopolitics (recommended)	3/4
BI 395	Evolution	3
PO 415	International Law	4
		3
<hr/> Total Cr.		21-23