COLLEGE OF LIBERAL ARTS AND SCIENCES (CLAS) ACADEMIC ADVISING CENTER 2025-2026

ENVIRONMENTAL SCIENCE

THIS IS A **GENERAL** CURRICULUM GUIDE AND IS NOT APPLICABLE TO EVERY STUDENT. IT IS IMPORTANT TO MEET WITH YOUR ADVISOR.

This sample plan assumes that the MTH 110 requirement has been fulfilled. If MTH 110 is needed, students should take the course in the first semester in place of the elective option.

Year One			
ENV 160 Foundations of Environmental Science Lab course (fall only) Fulfills Foundations – Life Science with lab	4	GEO 111 Exploring the Earth Fulfills Foundations – Physical Science with lab	4
BIO 121 General Biology II (Organismal Biology) Prerequisites: MTH 110 or may be taken concurrently	4	WRT 150 Strategies in Writing[2] or WRT 130 if chose WRT 120 in fall	3
General Education courses (choose 2) **OR** WRT 120[1]	6	General Education course(s) Elective(s) MTH 122 or MTH 124 or MTH 125**	3 2-3 3
Elective – choose any 1 credit course to reach 15 for the semester	1		
Total	*15*	*Total*	*15/16**
Year Two			
BIO 215 Ecology Prerequisite: BIO 121	4	GEO 220 Earth Surface Materials and Systems Prerequisites: one of (GEO 111 or GEO 100 or GEO 103 or GEO 105 or GEO 107 or GEO 109) and CHM 125+126. Also recommended: GEO 112 and GEO 175 for Geology and Climate Science majors; ENV 160 for Environmental Science majors	4
CHM 125 & CHM 126 Principles of Chemistry I lec and lab Prerequisite: proficiency through math placement – **see notes below regarding math placement****	4	CHM 127 & 128 Principles of Chemistry II lec and lab Prerequisite: MTH 110 or equivalent	5
GPY 307 Introduction to GIS **OR** NRM 250 Natural Resource Measurements & Mapping[2]	3	Degree-focused Elective[3] Students must choose at least 9 credits in at least 2 disciplines. Pay attention to any prerequisites.	3-4
Quantitative literacy course (either STA 215 Introductory Applied Statistics **OR** GEO 330 Data Analysis for Earth Scientists)	4	General Education courses OR Elective Consider a prerequisite course for Degree-focused Elective	3
Total	*15*	*Total*	*15/16*
Year Three			
ENV 305 Applied Environmental Science Experience Prerequisite: ENV 160	4	NRM 405 GIS Applications in Resource Management[2] Counts toward GIS certificate(s)	3
NRM 281 Principles of Soil Science Prerequisite: CHM 109 or CHM 126+126	4	CHM 221 Survey of Analytical Chemistry General Education	4 3
Environmental Policy course Degree-focused Elective **OR** General Education course **w/SWS designation** BIO 460 and CHM 325 are ENV-focused electives AND are SWS	3 3/4	[4]Gen Ed or Elective(s)	4-6
Total	*14/15*	*Total*	*14-16**
Year Four			
GEO 440 Geohydrology Prerequisites: GEO 220	4	ENV 495 Capstone: Environmental Systems & Processes (**SWS designated**) Prerequisites: Senior standing	3
Degree-focused Elective Elective(s)	3/4 3-7	NRM 330 Environmental Pollution Prerequisites: CHM 109 OR CHM 127+128	3
[4]Applied Training or Professional Certification **OR** Elective	0-4	[4]Degree-focused elective **OR** Elective [4]Elective(s)	3/4 6
Total	*15*	*Total*	*15/16**

*The block tuition rate is for 12-15 credits. You will pay additional tuition for any credits over 15.

A total of 120 credits are required for graduation. Please supplement your schedule with elective courses to reach the required 120 credits.

****MTH 122, 124 or 125 are prerequisites for CHM 127 & 128, and GEO 330.**

[1]Students who self-place into WRT 120 should take this course in the fall semester and then take WRT 130 in the winter semester of the first year. Students who self-place into WRT 150 can take this course in either semester. A grade of C or higher is required to fulfill the WRT 150 requirement.

[2]Students may choose based on interest in pursuing a GIS certificate. Please see reverse for 2 GIS certificate options.

[3]Students should choose talk with an advisor to choose degree electives. Students should distribute electives over several semesters to avoid scheduling issues. Please see reverse side for options.

[4]One Applied Training or Certification is required for completion of capstone assignment. Students have opportunities for completion as part of multiple majors courses and other free, on campus opportunities in addition to external options; May take more than one. Please see reverse side for examples of options.

Declaring the Environmental Science Major:

1. Log into myBanner from the GVSU homepage
2. Once logged in select "Student," "Student Records," and then "Change Major"
3. Click on the "Change Major 1/Program" box
4. Click on the down arrow in the box next to "New Major 1/Program", choose "Environmental Science-BS"
5. Click "Submit" and then "Change to New Program"

General Education Overlap

General Education Categories fulfilled by the Environmental Science Major:	
Life Sciences with Lab: ENV 160	Physical Sciences with Lab: CHM 125+126 or GEO 111
Mathematical Sciences: STA 215	Supplemental Writing Skills: BIO 460, CHM 325, ENV 495
Issues: GPY 323, GPY 327, GPY/ENS 412, NRM/EGR 406, NRM 451, PLS/ENS 323	

[3]Environmental Science - focused Electives (credits)

Choose at least 9 cr in at least 2 disciplines; *Prerequisites are listed*

BIO 357 – Environmental Microbiology (4) – *Prereq: BIO 120 or permission of instructor*
BIO 440 – Limnology (4) – *Prereq: BIO 215*
BIO 451 – Stream Ecology (3) – *Prereq: BIO 215*
BIO 460 – Terrestrial Ecosystem Ecology (4) – *Prereq: BIO 215*
CHM 231 – Intro to Organic Chem (4) – *Preq: CHM 127 + 128*
CHM 325 – Instrumental Analysis (3) – *Prereq: CHM 221*
CHM 421 – Green Chem for Sustainable Environment (3) – *Prereq: One of CHM 231, CHM 242, or CHM 247*
CHM 427 – Green and Environmental Chemistry Lab (3) - *Prereq: CHM 221 and either (CHM 241) or both (CHM 245 and CHM 246)*
GEO 312 – Sedimentology and Stratigraphy (4) – *Prereq: GEO 112 or ENV 160*
GEO 320 – Geomorphology (4) – *Prereq: GEO 112*
GEO 420 – Glacial and Quaternary Geol (4) – *Prereq: GEO 112*
GEO 445 – Introduction to Geochemistry (3) – *Prereq: GEO 220, MTH 122, and CHM 127 +128*
GPY/ENS 412 – Global Climate and Environ. Change (3) *Prereq: Junior standing, and either GPY 100 or ENS 201 or at least one course from Foundations - Natural Sciences*
GPY 327 – Race, Ethnicity, and Place (3) – *Prereq: Junior standing*
GPY 328 – Urban Ecological Design (3)
GPY 407 – Advanced GIS (3) – *Prereq: GPY 307*
NRM 240 – Principles of Climatology (3)
NRM 450 – Applied Spatial Analysis of Natural Res. (3) – *Prereq: NRM 405 or GPY 307*
NRM 454 – Watershed and Wetland Management (4) – *Prereq: MTH 122 and NRM 250*
OSH 460 – Environmental Compliance Applications (3) – *Prereq: OSH 414*

[2,4]GIS Certification Options

GIS & Technology Certificate (offered through GPY) *Recommended courses to maximize overlap with the ENV degree. Courses in **BOLD** will meet ENV degree requirements.*	**Applied GIS in Natural Resources (offered through BIO)** *Recommended courses to maximize overlap with the ENV degree. Courses in **BOLD** will meet ENV degree requirements.*
GPY 200 – Computer Cartography **GPY 307 – Intro to GIS** **GPY 407 – Advanced GIS** **NRM 250- Natural Resource Measurements & Mapping** OR **NRM 405 – GIS Applications in Resource Management**	**NRM 250 – Natural Resource Measurements & Mapping** **NRM 405 – GIS Applications in Resource Management** **NRM 450 – Applied Spatial Analysis** NRM/GPY 435 – Applications of Web GIS & Drones

[4]Applied Training OR Professional Certification Required Assignment for Capstone (examples of options)

Below are some examples of certifications. This list is not exhaustive. Students should talk to their faculty advisor for approval of certifications.

Hazardous materials	RCRA Haz. Waste Generator Training	Earned through OSH 460
	Basic Haz Mat Employee Training	Earned through OSH 414
	Michigan HAZWOPER Training	(link)
Water conservation & management	Industrial or Construction Stormwater Operator Training	Earned through OSH 460
	Water Operator Training	EGLE (link)
Wetland delineation	Wetland Delineation Training	Michigan Wetlands Assoc. (link)
Environmental professional	Envtl. Professional In-Training (EPI) Cert.	Board for Global EHS Credentialing (link)
	Assoc. Envtl. Professional (AEP) Cert.	Natl. Registry of Envtl. Professionals (link)
GIS, remote sensing	GIS & Technology Certificate	GVSU Undergraduate Cert. (link)
	Applied GIS in Natural Resources Cert.	GVSU Undergraduate Cert. (link)
	Environmental Remote Sensing Cert.	GVSU Undergrad Cert. (link)
	FAA Part 107 Remote Pilot Certification	Federal Aviation Admin (link)
Prescribed fire	Intro to Wildland Fire Behavior Cert.	Earned through NRM 230
	Wildland Firefighter Training Cert.	Earned through NRM 230
	Intro to Fire Effects Cert.	Earned through NRM 415
	Intermediate Wildland Fire Cert.	Earned through NRM 430

It is imperative to meet with your faculty mentor and an advisor in the CLAS Academic Advising Center regularly. The CLAS Academic Advising Center is located in C-1-140 MAK, 616-331-8585. Online at: http://www.gvsu.edu/clasadvising

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