

CHEMISTRY-BS-ENVIRONMENTALTHIS IS A **GENERAL** CURRICULUM GUIDE AND IS NOT APPLICABLE TO EVERY STUDENT. IT IS IMPORTANT TO MEET WITH YOUR ADVISOR.

Year One			
^{9,10} CHM 115 Principles of Chemistry I Prerequisites: High school chemistry and (MTH 110 or MTH 122 or MTH 125 or MTH 201)	4 (6)	^{9,10} CHM 116 Principles of Chemistry II Prerequisites: CHM 115 and (MTH 122 or 125 or 201)	5 (7)
⁷ MTH 122 College Algebra Prerequisite: MTH 110 or assignment through Grand Valley math placement	3	⁷ MTH 123 Trigonometry Prerequisite: MTH 122 or assignment through Grand Valley math placement (MTH 122 may be taken concurrently)	3
Gen Ed	3	WRT 150 Strategies in Writing	4
² Elective	1	Gen Ed	3
¹ Track Course	3	Elective	1
<i>Numbers noted within (parentheses) are contact hours</i>	<i>Total</i>	<i>Total</i>	<i>16*</i>
Year Two			
⁹ CHM 222 Quantitative Analysis Prerequisite: CHM 116; Corequisite: CHM 241 or CHM 245	3 (6)	CHM 225 Instrumental Analysis I Prerequisite: CHM 222	3 (6)
^{3,9} CHM 245 Principles of Organic Chemistry I	4	^{3,9} CHM 247 Principles of Organic Chemistry II	3
CHM 246 Principles of Organic Chemistry I Lab Prerequisite: CHM 116; CHM 245 and 246 must be taken as corequisites	1 (4)	CHM 248 Principles of Organic Chemistry II Lab Prerequisites: CHM 245 and CHM 246; CHM 247 and 248 must be taken as corequisites	1 (4)
MTH 201 Calculus I Prerequisites: MTH 122 and MTH 123 or assignment through Grand Valley math placement	4	CIS 150 Introduction to Computing	3
Gen Ed	3	⁴ PHY 220 General Physics I Prerequisites: MTH 122 and MTH 123	5 (7)
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>15</i>
Year Three			
⁵ CHM 351 Introduction to Physical Chemistry Prerequisites: CHM 116, MTH 201, and PHY 220 (may be taken concurrently)	3	CHM 321 Environmental Chemistry Prerequisites: CHM 231 or CHM 242 or CHM 247 or CHM 248 (Offered in winter of odd-numbered years)	3
³ PHY 221 General Physics II Prerequisites: PHY 220	5 (7)	^{5,6} CHM 352 SWS Applied Physical Chemistry Prerequisites: CHM 116, MTH 201, CHM 351 and PHY 220 (may be taken concurrently)	1 (3)
STA 215 Introductory Applied Statistics Prerequisites: MTH 110 or equivalent	3	⁹ CHM 391 Chemistry Seminar I	1
¹ Track Course	3	¹ Track Course	3
² Elective	1	Gen Ed	3
		Issue	3
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>14</i>
Year Four			
CHM 322 Environmental Chemical Analysis Prerequisites: CHM 221 or CHM 222, and CHM 231, CHM 242, CHM 247 or CHM 248 (Offered in Fall of odd-numbered years)	3 (5)	CHM 491 Chemistry Seminar II (Capstone)	1
⁸ CHM Elective Course	3	OSH 414 Environmental Safety and Health Regulations	3
¹ Track Course	3	¹ Track Course	3
Gen Ed	3	Gen Ed	3
Issue	3	Gen Ed	3
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>16*</i>

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

¹ The environmental emphasis also requires specialization in a discipline outside of chemistry. Students must choose one of the following tracks to complete the emphasis: Biology; Natural Resources Management; or Geology. See reverse track courses.² Elective refers to any course that will help you earn the required 120 credits for graduation.³ CHM 241 and CHM 242 may substitute for CHM 245/246/247/248 with advisor approval.⁴ Students interested in graduate school should take PHY 230/231 in place of PHY 220/221 and should also take MTH 202.⁵ Students interested in graduate school should take CHM 356, 353, 358 and 355 or 455 instead of CHM 351 and 352.⁶ Students must complete a total of two courses with an SWS attribute.⁷ Math proficiency exams are available for MTH 122 and MTH 123. **To take the Math Proficiency Tests online, visit this link: gvsu.edu/s/mv**

⁸Chemistry elective must be taken at the 300-400 level and be 2-3 credits (approval required).

⁹The following courses must be completed with a C or better grade: CHM 115, 116, 222, 225, 245, 246, 247, 248, 391.

¹⁰Chemistry majors who have AP/IB Credit in CHM 115 and/or CHM 116 are generally better prepared for higher level chemistry courses if they take CHM 115 and CHM 116 at GVSU.

Declaring the Chemistry Major with Environmental emphasis:

1. In myBanner, select "Student" > "Student Records" > "Change Major" > "Change Major 1/Program"
2. Choose "Chemistry BS - Environmental" from the drop-down box.
3. Click "Submit" and then "Change to New Program"

General Education Categories fulfilled by the Chemistry -Environmental Major:
Physical Sciences with Lab: CHM 115
Mathematical Sciences: MTH 122 or MTH 123 or MTH 201

Track Courses		
Choose ONE of the following tracks:		
Biology	Natural Resource Management	Geology
BIO 120 General Biology I BIO 215 General Ecology <i>And TWO of the following:</i> BIO 338 Environmental Ethics BIO 357 Environmental Microbiology BIO 440 Limnology	GEO 111 Exploring the Earth NRM 281 Principles of Soil Science <i>And TWO of the following:</i> GPY 307 Introduction to Computer Mapping/Geographic Information Systems NRM 320 Introduction to Resource Systems NRM 451 Natural Resource Policy NRM 452 Watershed and Wetland Management	GEO 111 Exploring the Earth GEO 112 Earth History <i>And TWO of the following:</i> GEO 440 Geohydrology GEO 445 Introduction to Geochemistry GPY 307 Introduction to Computer Mapping/Geographic Information Systems

It is imperative to meet with your faculty advisor or an advisor in the CLAS Academic Advising Center regularly.

Please Friend the GVSU Chemistry Facebook page: <https://www.facebook.com/gvsu.chemistrystockroom>

**The CLAS Academic Advising Center is located in C-1-140 MAK, 616-331-8585
<http://www.gvsu.edu/clasadvising> (Also find us on Orgsync, Facebook, and Twitter!)**

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