COLLEGE OF LIBERAL ARTS AND SCIENCES (CLAS) ACADEMIC ADVISING CENTER 2014-2015

CHEMISTRY-BS-ENVIRONMENTAL

THIS 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
		WRT 150 Strategies in Writing	4
Gen Ed	3	Gen Ed	3
[2]Elective	1	Elective	1
[1]Track Course	3		
Numbers noted within (parentheses) are contact hours Total	*14*	*Total*	*16**
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 *(changing to 4 credits in Fall 2015)*	3	[3,9]**CHM 247** Principles of Organic Chemistry II	3
		CHM 248 Principles of Organic Chemistry II Lab	1
CHM 246 Principles of Organic Chemistry I Lab Prerequisite: CHM 116; CHM 245 and 246 must be taken as corequisites	1 *(4)*	Prerequisites: CHM 245 and CHM 246; CHM 247 and 248 must be taken as corequisites	*(4)*
		CIS 150 Introduction to Computing	3
MTH 201 Calculus I Prerequisites: MTH 122 and MTH 123 or assignment through Grand Valley math placement	4	[4]**PHY 220** General Physics I Prerequisites: MTH 122 and MTH 123	5 *(7)*
Gen Ed	3		
[2]Elective	1		
Total	*15*	*Total*	*15*
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
Total	*15*	*Total*	*14*
Year Four			
CHM 322 Environmental Chemical Analysis (Capstone) 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	1
		OSH 414 Environmental Safety and Health Regulations	3
		[1]Track Course	3
[8]CHM Elective Course	3	Gen Ed	3
[1]Track Course	3	Gen Ed	3
Gen Ed	3	Gen Ed	3
Issue	3		
Total	*15*	*Total*	*16**

*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 in cases where CHM 116 is taken prior to year two.

[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/jk***
[8] Chemistry elective must be taken at the 300-400 level and be 2-3 credits (approval required).
[9] The following courses must be completed with a C or better grade: CHM 115, 116, 222, 225, 245, 246, 247, 248, 391.
[10] Chemistry 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 Overlap

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 *And **TWO** of the following:* BIO 338 Environmental Ethics BIO 357 Environmental Microbiology BIO 440 Limnology	GEO 111 Exploring the Earth NRM 281 Principles of Soil Science *And **TWO** of the following:* 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 *And **TWO** of the following:* 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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