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

CHEMISTRY-BS-PROFESSIONAL

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

Year One			
[2,8]**CHM 115** Principles of Chemistry I Prerequisites: High school chemistry and (MTH 110 or MTH 122 or MTH 125 or MTH 201)	4 *(6)*	[2,8]**CHM 116** Principles of Chemistry II Prerequisites: CHM 115 and (MTH 122 or MTH 125 or MTH 201)	5 *(7)*
[9]**MTH 122** College Algebra Prerequisite: MTH 110 or assignment through Grand Valley math placement	3	[9]**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
Gen Ed	3	Gen Ed	3
Gen Ed	3		
Numbers noted within (parentheses) are contact hours Total	*16*	*Total*	*15*
Year Two			
[8]**CHM 222** Quantitative Analysis Prerequisites: CHM 116; Corequisite: CHM 241 or CHM 245	3 *(6)*	[8]**CHM 225** Instrumental Analysis I Prerequisite: CHM 222	3 *(6)*
[1,8]**CHM 245** Principles of Organic Chemistry I *(changing to 4 credits in Fall 2015)*	3	[1,8]**CHM 247** Principles of Organic Chemistry II	3
[1,8]**CHM 246** Principles of Organic Chemistry I Lab Prerequisite: CHM 116; CHM 245 and 246 **must** be taken concurrently	1 *(4)*	[1,8]**CHM 248** Principles of Organic Chemistry II Lab Prerequisites: CHM 245 and CHM 246; CHM 247 and 248 **must** be taken concurrently	1 *(4)*
MTH 201 Calculus I Prerequisites: MTH 122 and MTH 123 or assignment through Grand Valley math placement	4	**MTH 202** Calculus II Prerequisite: MTH 201	4
		PHY 230 Principles of Physics I Prerequisite: MTH 201	5 *(7)*
Gen Ed	3		
Total	*14*	*Total*	*16**
Spring/Summer			
MTH 203 Calculus III (recommended)	4		
Total	*4*		
Year Three			
CHM 353 Physical/Computational Chemistry Lab I Prerequisites: CHM 222 and CHM 356 (may be taken concurrently)	2 *(4)*	[3, 4]**CHM 355** *SWS* Physical Chemistry Laboratory II Prerequisites: CHM 222, CHM 353, and CHM 358 (may be taken concurrently)	1 *(4)*
CHM 356 Physical Chemistry I Prerequisites: CHM 116, MTH 202, PHY 230	3	**CHM 358** Physical Chemistry II Prerequisites: CHM 356 and PHY 231 (may be taken concurrently)	3
CHM 372 Inorganic Chemistry Lab Techniques Prerequisites: CHM 222; and CHM 247 or CHM 248 or CHM 249	1 *(4)*	**CHM 461** Biochemistry I Prerequisites: CHM 242, CHM 247, or CHM 248	4
CHM 391 Chemistry Seminar I	1		
PHY 231 Principles of Physics II Prerequisite: PHY 230	5 *(7)*	Issue [5]Elective	3 3
Gen Ed	3		
Total	*15*	*Total*	*14*
Year Four			
CHM 471 Advanced Inorganic Chemistry (Capstone) Prerequisites: CHM 351 or CHM 356 may be taken concurrently	3	**CHM 491** Chemistry Seminar II [7]Upper Level Chemistry Lab Elective Course	1 3
[6]Chemistry non-lab Elective Course	3	[7]Upper Level Chemistry Lab Elective Course	3
Gen Ed	3	[5]Elective	3
Issue	3	Gen Ed	3
[5]Elective	3	Gen Ed	3
Total	*15*	*Total*	*16**

See reverse for more notes

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

[1]CHM 241 and CHM 242 may substitute for CHM 245/246/247/248 in cases where CHM 116 is not taken prior to year two.

[2]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.

[3] CHM 455 may be taken instead of CHM 355. The additional 28 hours of lab count towards upper-level lab requirement.

[4] Students must complete two courses with an SWS attribute.
[5] Elective refers to any course that will help you earn the required 120 credits for graduation.
[6] Choose one course from the following non-lab classes: CHM 441, 463, 473, or 442.
[7] You must chose lab electives, totaling 80 hours, from the following: CHM 322 (42), 344 (42), 425 (28), 462 (84), 452 (70), 455 (28), or 499 (84). Numbers in ( ) are the amount of hours for each course.
[8] The following courses must be completed with a C or better grade: CHM 115, 116, 222, 225, 245, 246, 247, 248, 391.
[9] 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***

Declaring the Chemistry-Professional Major:

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

General Education Overlap

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

Chemistry Elective Courses for the Chemistry Major Professional Emphasis	
Choose ONE of the following non-lab courses:	**80 hours of lab electives are required. Choose from the following:** Numbers in ( ) are the amount of hours for each course
CHM 441 Advanced Organic Chemistry CHM 442 Polymer Chemistry CHM 463 Biochemistry II CHM 473 Organometallic Chemistry	CHM 322 (42) Environmental Chemical Analysis CHM 344 (42) Qualitative Organic Analysis CHM 425 (28) Instrumental Analysis II CHM 452 (70) Advanced Synthetic Techniques CHM 455 (28) Physical/Computational Chemistry Lab II CHM 462 (84) Techniques in Biochemistry CHM 499 (42-84 depending on credits) Investigation Problems

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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