

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

Year One			
<sup>2</sup> <b>CHM 115</b> Principles of Chemistry I Prerequisites: High school chemistry and (MTH 110 or MTH 122 or MTH 125 or MTH 201)	4 (6)	<sup>2</sup> <b>CHM 116</b> Principles of Chemistry II Prerequisites: CHM 115 and (MTH 122 or MTH 124 or MTH 125 or MTH 201)	5 (7)
<sup>4</sup> <b>MTH 124</b> Precalculus: Functions and Models Prerequisite: MTH 110	5	<b>WRT 150</b> Strategies in Writing	4
Gen Ed		Gen Ed	3
Gen Ed	3	Gen Ed	3
	3		
<i>Numbers noted within (parentheses) are contact hours</i>	<i>Total</i>	<i>Total</i>	<i>15</i>
	15		15
Year Two			
<b>CHM 273</b> Principles of Inorganic Chemistry (Fall Only) Prerequisites: CHM 116	3	<b>CHM 221</b> Survey of Analytical Chemistry Prerequisites: CHM 116	4 (7)
<sup>1</sup> <b>CHM 245</b> Principles of Organic Chemistry I (Fall Only)	4	<sup>1</sup> <b>CHM 247</b> Principles of Organic Chemistry II (Winter Only)	3
<sup>1</sup> <b>CHM 246</b> Principles of Organic Chemistry I Lab (Fall Only) Prerequisites: CHM 116; CHM 245 and 246 <b>must</b> be taken concurrently	1 (4)	<sup>1</sup> <b>CHM 248</b> Principles of Organic Chemistry II Lab (Winter Only) Prerequisites: CHM 245 and CHM 246; CHM 247 and 248 <b>must</b> be taken concurrently	1 (4)
<b>MTH 201</b> Calculus I Prerequisites: MTH 124; or MTH 122 and MTH 123; or assignment through Grand Valley math placement	4	<b>MTH 202</b> Calculus II Prerequisite: MTH 201	4
Gen Ed	3	<b>PHY 230</b> Principles of Physics I Prerequisite: MTH 201	5 (7)
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>16*</i>
	15		16*
Year Three			
<b>CHM 325</b> SWS Instrumental Analysis (Fall Only) Prerequisites: CHM 221; WRT 150 with a C or better	4 (6)	<b>CHM 352</b> SWS Applied Physical Chemistry Prerequisites: CHM 351 or 358 (may be taken concurrently)	1 (3)
<b>CHM 356</b> Physical Chemistry I (Fall Only) Prerequisites: CHM 116, MTH 202, PHY 230	3	<b>CHM 358</b> Physical Chemistry II (Winter Only) Prerequisites: CHM 356 and PHY 231 (may be taken concurrently)	3
<b>PHY 231</b> Principles of Physics II Prerequisite: PHY 230 and MTH 202	5 (7)	<b>CHM 391</b> Chemistry Seminar I Prerequisites: 18 credits of chemistry and junior standing	1
Gen Ed	3	<b>MTH 203</b> Calculus III (recommended)	4
		Issue	3
		<sup>3</sup> Elective	3
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>15</i>
	15		15
Year Four			
<b>CHM 461</b> Biochemistry I Prerequisites: CHM 242, CHM 247, or CHM 248	3	<b>CHM 491</b> Chemistry Seminar II (Capstone) Prerequisites: CHM 391 and senior standing	1
Chemistry Elective (see p. 2)	3	Chemistry Elective (see p. 2)	3
Gen Ed	3	Chemistry Elective (see p. 2)	3
Issue	3	<sup>3</sup> Elective	3
<sup>3</sup> Elective	3	Gen Ed	3
		Gen Ed	3
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>16*</i>
	15		16*

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

<sup>1</sup>CHM 241 and CHM 242 may substitute for CHM 245/246/247/248 with advisor approval.<sup>2</sup>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.<sup>3</sup>Elective refers to any course that will help you earn the required 120 credits for graduation.<sup>4</sup> MTH 124 is not part of the major but may be required depending on math placement. **To take the Math Proficiency Tests online, visit this link: [gvsu.edu/s/mv](http://gvsu.edu/s/mv)**

**Declaring the Chemistry Major:**

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

General Education Categories fulfilled by the Chemistry Major:
Physical Sciences with Lab: CHM 115
Mathematical Sciences: MTH 124 or MTH 201

**Choose 3 classes from the following Chemistry Elective options (all classes are 3 credit hours)**

**Offered in Fall Semesters only:****CHM 421** Green Chemistry for Sustainable Environment

Prerequisite: One of CHM 231, CHM 242, or CHM 247

**CHM 447** Organic Synthesis and Characterization

Prerequisite: CHM 242, or CHM 247 and CHM 248

**CHM 457** Advanced Physical and Instrumental Chemistry Lab

Prerequisites: CHM 221 and CHM 352

**CHM 471** Advanced Inorganic ChemistryPrerequisites: CHM 242 or CHM 248; CHM 273; CHM 351 or CHM 356  
(CHM 351 or CHM 356 may be taken concurrently)**Offered in both Fall and Winter Semesters:****CHM 462** Techniques in Biochemistry

Prerequisite: CHM 461

**Offered in Winter Semesters only:****CHM 427** Green and Environmental Chemistry Lab

Prerequisite: CHM 221; CHM 241, or CHM 245 and CHM 246

**CHM 441** Advanced Topics in Organic Chemistry (*offered in odd-numbered years*)

Prerequisite: CHM 242 or CHM 247

**CHM 442** Synthetic Polymers: Life Cycle and Emerging Sustainable Technologies (*offered in even-numbered years*)

Prerequisite: CHM 242 or CHM 247

**CHM 463** Biochemistry II

Prerequisite: CHM 461

**CHM 475** Electrochemistry (*offered in odd-numbered years*)

Prerequisites: CHM 115, MTH 122; and PHY 221 or PHY 231; or permission of instructor.

**CHM 477** Synthetic Inorganic Chemistry

Prerequisites: CHM 273; CHM 242 or 248

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-1-120 MAK, 616-331-8585**

<http://www.gvsu.edu/clasadvising> (Also find us on Facebook and Twitter!)

**Pre-Professional Students**

(Pre-Chiropractic, Pre-Dental, Pre-Medical, Pre-Optometry, Pre-Pharmacy, Pre-Podiatry, & Pre-Veterinary)

***Keep in mind that you may major in anything so long as you complete the prerequisites for your professional program.***

To schedule an appointment with a Pre-Professional Advisor in the CLAS Academic Advising Center, visit [www.gvsu.edu/clasadvising](http://www.gvsu.edu/clasadvising) and click on "Schedule Appointment"

To find more information on Pre-Professional programs, visit [www.gvsu.edu/clasadvising/preprofessional](http://www.gvsu.edu/clasadvising/preprofessional)