

**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>1</sup> <b>CHM 115</b> Principles of Chemistry I (GE Physical Science) Prerequisites: High school chemistry and (MTH 110 or MTH 122 or MTH 125 or MTH 201)	4 (6)	<sup>1</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>2</sup> <b>MTH 124</b> Precalculus: Functions and Models Prerequisite: MTH 110	5	<sup>3</sup> <b>WRT 130</b> or <b>WRT 150</b> Strategies in Writing (GE Writing)	3/4
Gen Ed (GE Art) or <sup>3</sup> <b>WRT 120</b> (self-placement)	3	<b>MTH 201</b> Calculus I (GE Math)	4
Gen Ed (GE Philosophy & Literature)	3	Prerequisites: MTH 124; or MTH 122 and MTH 123; or assignment through Grand Valley math placement	
		<sup>5</sup> Elective or Gen Ed (GE Life Science)	2-3
<i>Numbers noted within (parentheses) are contact hours</i>	<i>Total</i>	<i>Total</i>	<i>15-16</i>
	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>4</sup> <b>CHM 245</b> Principles of Organic Chemistry I (Fall Only)	4	<sup>4</sup> <b>CHM 247</b> Principles of Organic Chemistry II (Winter Only)	3
<sup>4</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>4</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 202</b> Calculus II Prerequisite: MTH 201	4	<b>PHY 230</b> Principles of Physics I Prerequisite: MTH 201	5 (7)
Gen Ed (GE Social/Behavioral)	3	<sup>5</sup> Elective	1
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>14</i>
Year Three			
<b>CHM 325</b> SWS Instrumental Analysis (Fall Only) Prerequisites: CHM 221; WRT 130 or 150 with a C or better	4 (6)	<b>CHM 352</b> Applied Physical Chemistry Prerequisites: CHM 351 or 356 (either can 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 (GE Social/Behavioral)	3	<b>MTH 203</b> Calculus III (recommended)	4
		Issue-SWS	3
		<sup>5</sup> Elective	3
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>15</i>
Year Four			
<b>CHM 461</b> Biochemistry I Prerequisites: CHM 242 or CHM 247, CHM 248	4	Chemistry Elective (see p. 2)	3
Chemistry Elective (see p. 2)	3	Chemistry Elective (see p. 2)	3
Gen Ed (GE Historical Analysis)	3	<sup>5</sup> Elective or Gen Ed (if remaining)	3
Issue	3	Gen Ed (GE US Diversity)	3
<b>CHM 491</b> Chemistry Seminar II (Capstone) Prerequisites: CHM 391 and senior standing	1	Gen Ed (GE Global Perspectives)	3
<sup>5</sup> Elective	1-2		
<i>Total</i>	<i>15-16</i>	<i>Total</i>	<i>15*</i>

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

<sup>1</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>2</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](https://gvsu.edu/s/mv)**<sup>3</sup>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 their first year. Students will not need to take WRT 150 if they have earned credit for the course through AP/Dual Enrollment. A grade of C or better is required in WRT 130 or 150 in order to satisfy the WRT requirement at GVSU.<sup>4</sup>CHM 241 and CHM 242 may substitute for CHM 245/246/247/248 with advisor approval.

<sup>5</sup> Students must have a **minimum of 120 credits** to graduate with **58 of the 120 credits** being from a senior level institution and the **final 30 of the 120 credits** completed at GVSU. Elective refers to any course that will help meet these requirements.

**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)  
Check Chemistry department website for most current [course rotation schedule](#)

Offered in Fall Semesters only:	Offered in Winter Semesters only:
<b>CHM 421</b> Green Chemistry for Sustainable Environment ( <i>offered in odd-numbered years</i> ) Prerequisite: One of CHM 231, CHM 242, or CHM 247	<b>CHM 427</b> Green and Environmental Chemistry Lab ( <i>offered in odd-numbered years</i> ) Prerequisite: CHM 221; CHM 241, or CHM 245 and CHM 246
<b>CHM 441</b> Advanced Topics in Organic Chemistry ( <i>offered in combination with CHM 447</i> ) Prerequisite: CHM 242 or CHM 247	<b>CHM 457</b> Advanced Physical & Instrumental Chemistry Lab ( <i>offered even-numbered years</i> ) Prerequisites: CHM 221 and CHM 352 (may be taken concurrently)
<b>CHM 447</b> Organic Synthesis and Characterization ( <i>offered in combination with CHM 441</i> ) Prerequisite: CHM 242, or CHM 247 and CHM 248	<b>CHM 463</b> Biochemistry II Prerequisite: CHM 461
<b>CHM 475</b> Electrochemistry ( <i>offered in even-numbered years</i> ) Prerequisites: CHM 115, and one of PHY 221, PHY 231 or PHY 234; or permission of instructor.	<b>CHM 471</b> Advanced Inorganic Chemistry ( <i>offered in combination with CHM 477</i> ) Prerequisites: CHM 242 or CHM 248; CHM 273; CHM 351 or CHM 356 (CHM 351 or CHM 356 may be taken concurrently)
<b>Offered in both Fall and Winter Semesters:</b>	<b>CHM 477</b> Synthetic Inorganic Chemistry ( <i>offered in combination with CHM 471</i> ) Prerequisites: CHM 273; CHM 242 or 248
<b>CHM 462-SWS</b> Techniques in Biochemistry Prerequisite: CHM 461	

**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: [www.facebook.com/gvsu.chemistrystockroom](http://www.facebook.com/gvsu.chemistrystockroom)

**The CLAS Academic Advising Center is located in C-1-120 MAK, 616-331-8585**  
[www.gvsu.edu/clasadvising](http://www.gvsu.edu/clasadvising) (Also find us on Facebook and Instagram)

**Preprofessional Students**

(Prechiropractic, Predental, Premedical, Preoptometry, Prepharmacy, Prepodiatry, & Preveterinary)

**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 Preprofessional 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 Preprofessional programs, visit [www.gvsu.edu/clasadvising/preprofessional](http://www.gvsu.edu/clasadvising/preprofessional)