COLLEGE OF LIBERAL ARTS AND SCIENCES (CLAS) ACADEMIC ADVISING CENTER 2025-2026

# GEOLOGY-CHEMISTRY-BS

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

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| **Year One** | | | |
| [1]General Education ***OR*** [1]WRT 120 (*self-placement*) | 3-4 | [1]WRT 130 ***OR*** WRT 150 Strategies in Writing (*self-placement*) | 3-4 |
| [2,7] CHM 125 Principles of Chemistry I<br>Prerequisites: High school chemistry and (MTH 110 or MTH 122 or MTH 125 or MTH 201, CHM 126 (corequisite)) | 3 | [22]CHM 127 Principles of Chemistry II<br>Prerequisites: CHM 125+126 & MTH 122, 125 or 201 | 4 |
| | | CHM 128 Principles of Chemistry II (Lab) | 1 |
| CHM 126 Principles of Chemistry I (Lab) | 1 | **GEO 112** Earth History<br>Prerequisite: A course in physical or general geology. GEO 111 (*preferred*). | 4 |
| [3, 4]**GEO 111** Exploring the Earth | 4 | | |
| MTH 122 Algebra ***OR*** MTH 124 Pre-Calculus<br>Prerequisite: MTH 110 or Math placement exam | 3-5 | MTH 123 Trigonometry ***OR*** General Education *(**DO NOT** take if you take MTH 124)*<br>Prerequisites: MTH 122 (*can be taken concurrently*) or Math placement exam | 3 |
| *Total* | *15/14* | *Total* | *15/16** |
| **Year Two** | | | |
| CHM 221 Survey of Analytical Chemistry<br>Prerequisites: CHM 116 or 1 full year of General Chemistry | 4 | CHM 325 Instrumental Analysis (*SWS*)<br>Prerequisite: CHM 221 & WRT 150 | 4 |
| **GEO 214** Solid Earth Materials and Systems ***OR*** **GEO 220** Earth Surface Materials and Systems<br>Prerequisites: GEO 111 & CHM 125/126; GEO 112 & 175 (*can be taken concurrently*) | 4 | **GEO 214** Solid Earth Materials and Systems ***OR*** **GEO 220** Earth Surface Materials and Systems<br>Prerequisites: GEO 111 & CHM 125/126; GEO 112 & 175 (*can be taken concurrently*) | 4 |
| **GEO 175** Research Tools for Geosciences<br>Prerequisites: GEO 111 & 112 (*can be taken concurrently*) | 1 | MTH 201 Calculus I<br>Prerequisites: MTH 122 & 123; or MTH 124 | 4 |
| General Education | 3 | General Education | 3 |
| General Education | 3 | | |
| *Total* | 15 | *Total* | *15* |
| **Year Three** | | | |
| CHM 351 Introduction to Physical Chemistry<br>Prerequisites: CHM 127/128, MTH 201, & PHY 220 or PHY 230 (*can be taken concurrently*) | 3 | CHM 352 Applied Physical Chemistry<br>Prerequisites: CHM 127/128 & 351, MTH 201, (*can be taken concurrently*), and PHY 220 (*can be taken concurrently*) | 1 |
| **GEO 311** Structural Geology<br>Prerequisites: GEO 214 & MTH 123 | 4 | **GEO 312** Sedimentation-Stratigraphy<br>Prerequisite: GEO 112 | 4 |
| PHY 230 Principles of Physics I<br>Prerequisites: MTH 201 (*MTH 202 recommended as corequisite*) | 5 | **GEO 445** Introduction to Geochemistry<br>Prerequisites: GEO 112 & 220; MTH 122 & CHM 127/128 (*can be taken concurrently*) (*MTH 201 strongly recommended*) | 3 |
| General Education | 3 | General Education | 3 |
| | | Issues<br>Prerequisite: Junior Standing | 3 |
| *Total* | *15* | *Total* | *14* |
| **Year Four** | | | |
| [5] **GEO 484** Geology Seminar Fall Only<br>Prerequisite: GEO 214 & 220, & Junior standing in the Geology, Geology-Chemistry, or Earth science major or Geology Minor | 1 | [3,5]**GEO 485** Geology Seminar (*SWS*) Winter Only<br>Prerequisite: GEO 214, GEO 220, at least Junior standing in the Geology, Geology-Chemistry, or Earth science Major or Geology Minor. Permit required: must secure a mentor and define a research question before enrolling. | 1 |
| Geology Elective Course | 3-5 | | |
| General Education | 3 | General Education | 3 |
| Issues<br>Prerequisite: Junior Standing | 3 | General Education | 3 |
| [6]Minor/Elective | 3 | [6]Minor/Elective | 3 |
| | | [6]Minor/Elective | 3 |
| *Total* | *13/15* | *Total* | *13* |

[1]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. WRT 150 can take it in either semester during 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 (***NOT A C-***) is required in WRT 130 or 150 to satisfy the WRT requirement.

[2]Students with an ACT Science sub score below 22 tend to be more successful if they only take one science course during the Fall semester of Year 1.

[3]SWS = Supplemental Writing Skills. Students must complete 2 courses with a SWS attribute.

[4]The preferred entry to the major is GEO 111, but GEO 100, 103, 105, 107 or 109 can count toward the major instead of GEO 111.

[5] Students must take GEO 484 (Fall Only) and GEO 485 (Winter Only). The preferred order is to take GEO 484 first and students are encouraged to identify a project and mentor early.

[6]Elective refers to any course to help you earn the required 120 credits to graduate. However, students should consider adding a complementary minor or certificate. See both your Academic advisor and Faculty Advisor for more information.

[7]**CHM 109 is recommended prior to CHM 125 if chemistry was not taken in high school or if the ACT science sub score is below 22. However, CHM 109 does NOT count toward the Geo-Chemistry major.**

*Students must have a minimum of 120 credits to graduate with 58 of the 120 credits being from a senior level institution like GVSU and the final 30 credits of the 120 credits are specifically to be completed at GVSU. Elective refers to any course that will help meet these requirements.
*The block tuition rate is for 12-15 credits. You will pay additional tuition for any credits over 15. For more information contact the Office of Financial Aid.
*A major GPA of 2.0 or higher within the major is required to graduate.

**Declaring the Geology-Chemistry Major:**

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

| General Education Overlap | |
|---|---|
| Mathematical Sciences: MTH 122, 123, 124, 201 | Physical Science with a Lab: GEO 111 |

It is imperative to meet with your ***FACULTY ADVISOR*** and an advisor in the CLAS Academic Advising Center regularly.
CLAS Advisors: Your advisors in the CLAS Academic Advising Center are Brandon Moskun (moskunb@gvsu.edu) and Khalaya Daniels (daniekha@gvsu.edu).
Edited 3/26/2025