

Most GEO majors: 46-47 cr in GEO
Math & Science: 31-33 cr
Total GEO BS requirements (Current): 77-83 cr
Most GEO majors: 77-80 cr

Summary of requirements for Geology Department majors

Geology BS Requirements - other disciplines:

Basic Math (6)

MTH 122, 123 (6)

Science Math Cognates (25-27)

Chemistry: CHM 115 & 116 (9)

Physics:

PHY 220 & 221 (10)

or PHY 230 & 231 (10)

Choose from one of these options

- Calculus: MTH 201 & 202 (8)
- Statistics: STA 215 & 216 (6)
- Computer Science: choose 1 from each list:
 - CIS 160 (3), 161 (3), 162 (4)
 - CIS 163 (4), 231 (3), 260 (4)
- GIS
 - GPY 307 (3) + one of the following:
 - GPY 407 (4), GEO 425 (3), NRM 395 (3)

Geology BS - Environmental Emphasis (13-15)

- GEO 440 - Hydrogeology (3) (F)
- GEO 320 - Geomorphology (4) (F)
- Choose 1 from:
 - GEO 445 - Geochemistry (3) (W-odd)
 - GEO 430 - Oceanography (3) (F-even)
 - GEO 425 - GIS (3) (W-even)
 - GEO 470 Geophysics (4) (W-even)
 - GEO 420 - Glacial and Quaternary Geology (4) (W-odd)
- 1 Geology Free Elective (3-4)

46-50 GEO cr

For GEO courses not offered every semester,
the semester(s) offered are indicated – e.g. (W)

Required of all (19)

- GEO 111 – Exploring the Earth (4)
 - GEO 112 - Historical Geology (4)
 - GEO 175 - Research tools for Geoscientists (1)
 - **GEO 214** - Solid Earth Materials and Systems (4)
 - GEO 220 - Earth Surface Materials and Systems (4)
 - GEO 485 - Geology Research Seminar (Capstone) (SWS) (1)(W)
 - **GEO 486** - Geology Readings Seminar (Capstone) (1) (F)
- Take GEO 486 before GEO 485 if possible*

19 cr

Geology BS core (14)

- GEO 311 - Structural Geology (4) (F)
- GEO 312 - Sedimentation and Stratigraphy (4) (W)
- Field requirement (6)
 - **GEO 315** – Field Methods (3) (F-even and Sp-odd) + Field camp (3+) (**GEO 493** – Applied Field Geology)
 - or
 - Field camp (6) (**GEO 493** – Applied Field Geology)

19 cr

Geology BS (13-17)

- **GEO 314** – Petrography (2) (W)
- Choice of: (2 or 3)
 - GEO 411 - Global tectonics (3) (W-even)
 - **GEO 414** - Advanced Petrology (2) (W-odd)
- 3 Geology Free Electives (3 or 4 credit courses) (9-12)

33 cr

33 cr

Earth Science Secondary Ed (36)

- **GEO 203** (3)
- Geomorphology (320) (4) (F)
- Oceanography (430) (3) (F-even)
- **SCI 450 (3)** - Earth and Life Science in Secondary Education (3) (W-even)

Cognate Science/Math Courses:

- MTH 123 – Trigonometry (3)
- CHM 115 – Principles of Chemistry I (4)
- MTH 122 – College Algebra (3)
- PHY 105 – Astronomy (3)
- PHY 220/221 – General Physics I & II (10)

Total 56 cr

Geology – Chemistry BS (44-45)

- GEO 311 - Structural Geology (4) (F)
- GEO 312 - Sedimentation and Stratigraphy (4) (W)
- **GEO 445** - Geochemistry (3) (W-odd)
- 1 Geology Free Elective (3-4)
- CHM 115 & CHM 116 Principles of Chemistry I & II (9)
- CHM 221 – Introduction to Analytical Chemistry (4)
- CHM 325 - Instrumental Analysis (4) (W)
- CHM 351 – Introduction to Physical Chemistry (3) (F)
- CHM 352 – Applied Physical Chemistry (1)(F)
- MTH 201 – Calculus I (4)
- PHY 230 – Principles of Physics I (5)

Total 63-4 cr

Geology Free Electives

- Students can choose from any Geology course at 300 level or above (including requirements or elective choices from other emphases)
- Not including theme or issues courses