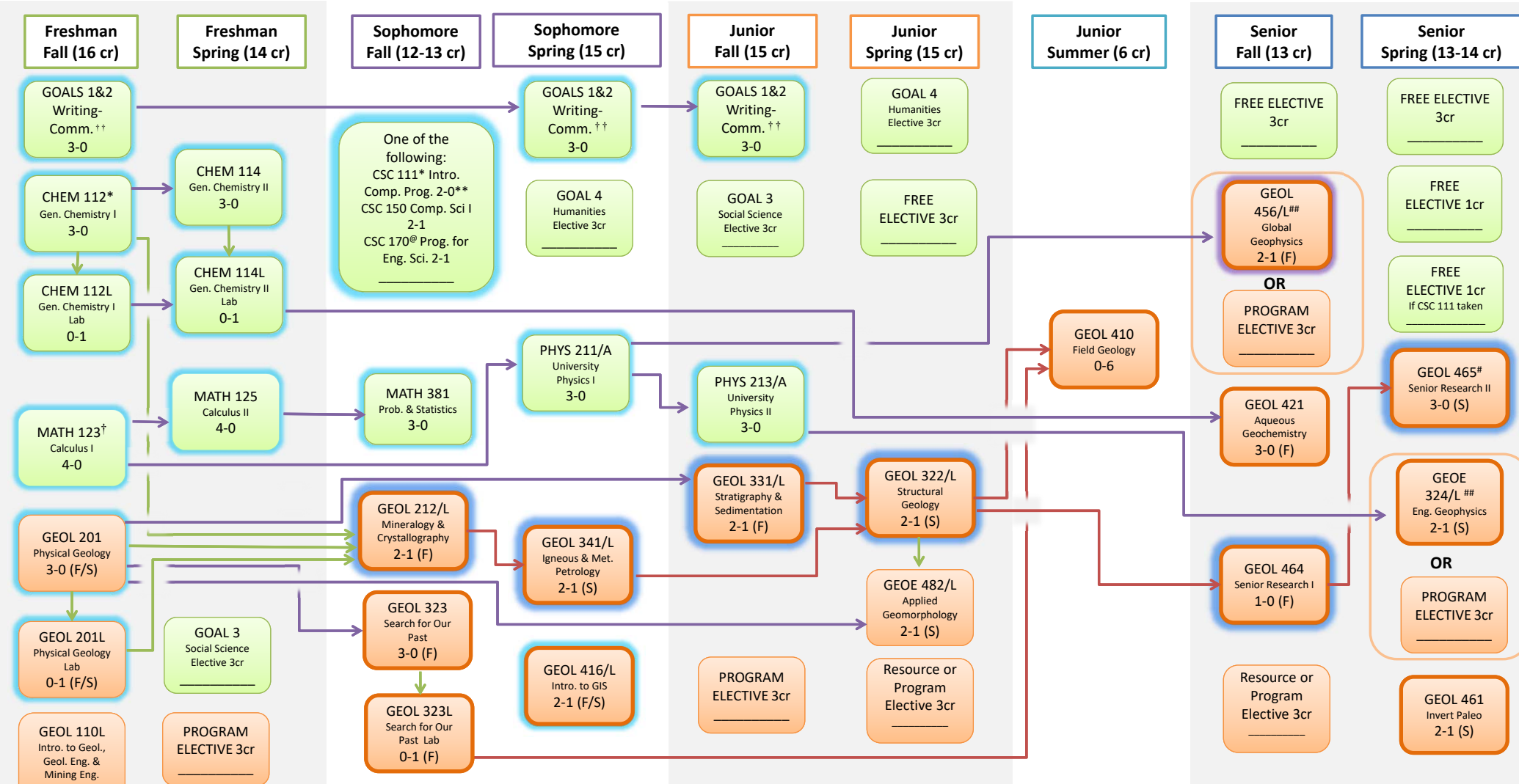


BS in Geology Curriculum Flowchart

Effective Fall 2020



GGE courses offered in Fall ONLY or Spring ONLY are indicated by F or S respectively. Courses indicated F/S are offered Fall and Spring Semesters.

Courses in green boxes are offered fall and spring, and often are available during summer session.

* Requires college algebra
 ** Must take an additional 1-credit free elective course
 † Requires college algebra and trigonometry
 †† Recommended English courses for Geology majors are ENGL 101, 279, and 289, the latter two of which require sophomore standing.
 @Requires MATH 123
 #Permission of Instructor course
 ## Either GEOL 456/L or GEOE 324/L required

Program elective=Course with GEOL or GEOE prefix. At least 6 credits must be taken from 400-level courses.
Resource elective=GEOE 475/L, GEOL 351, GEOL 451/L, or GEOL 476.
Free elective=Course with any prefix that is approved by the academic advisor.

Program, Resource, and Free electives may have one or more pre-requisites. Check the catalog.

- Pre-requisite
- Pre- or Co-requisite
- Pre-requisite with C or better requirement
- GEOL or GEOE course
- Critical course sequence
- C or better required
- Offered fall and spring
- Offered every other year

RECOMMENDED ELECTIVES BY SEMESTER & FOCUS AREA

FREE ELECTIVES BY SEMESTER	Focus Area(s)	PROGRAM ELECTIVES BY SEMESTER
Every Fall and Spring		Every Fall and Spring
CSC 111/L Introduction to Computer Programming	1,4	GEOE 201L Surveying for Mining and Geol. Eng.
CSC 150 Computer Science I	3,4,5	GEOE 475/L Groundwater
CSC 170/L Programming for Eng. & Scientists		Every Fall
CSC 215 Programming Techniques	1,2,3,4,5	GEOE 456/556 Statistical Methods in Geology and Geological Engineering
MATH 315 Linear Algebra	1,3	GEOE 466/L Engineering/Environmental Geology
MATH 321 Differential Equations (+every summer)	4,6	GEOE 419 Advanced Geospatial Analysis
Every Fall	1,3,4,6	GEOE 420 Introduction to Remote Sensing
BIOL 151 General Biology I		Every Spring
BIOL 121/L Basic Anatomy	1,3,5,6	GEOE 324/L Engineering Geophysics I
BIOL 311/L Principles of Ecology	1	GEOE 461 Petroleum Drilling and Production Eng.
BIOL 331 Microbiology	4,6	GEOE 417 Geospatial Databases
CEE 437 Watershed and Floodplain Modeling		Fall- Even Years Only
MEM 301/L Computer Applications in Mining	1	GEOE 462/L Well Log Analysis
POLS 407 Environmental Law & Policy	1,6	GEOE 422/L Tectonics and Sed. Basin Analysis
Every Spring		Spring- Even Years Only
AES/BIOL 406 Global Environmental Change	1,3,5	GEOE 467 Introduction to Geomechanics
BIOL 153 General Biology II	3,4,5,6	GEOE 3XX (Geologic Disasters and Society, starting 2022)
BIOL 326 Biomedical Physiology	2,3	GEOE 435 Geomicrobiology
MATH 382 Probability Theory and Statistics II	1	GEOE 451/L Economic Geology
MEM 120 Introduction to Mining	2	GEOE 475/L Vertebrate Fossil Prep./Conservation
MEM 204 Surface Mining Methods and Unit Op.		Spring- Odd Years Only
MET 220/L Mineral Processing and Res. Recovery	1,3	GEOE 351 Earth Resources and the Environment
MEM 307 Mineral Exploration and Geostatistics	2	GEOE 372 Dinosaurs
Fall- Even Years Only	1,5,6	GEOE 444 Orogenic Systems (new course 2020-21)
AES 201 Introduction to Atmospheric Sciences	1	GEOE 476 Petroleum Geology
AES 403 Biogeochemistry		Fall- Odd Years Only
Spring- Even Years Only	1,5,6	GEOE 456 Global Geophysics
MATH 451 Math Modeling		Every Summer
	1,3,6	GEOE/GEOE 412 Science and Eng. Field App.
	2	GEOE 471 Field Paleontology
		TBA-Alternate Years
	2	GEOE 474 Paleontological Res. Management
	2	GEOE 473/L Museum Exhibit Design
	2	GEOE 472/L Museum Collections Management

Key for Focus Areas

- 1 Energy and Mineral Resources
- 2 Paleontology
- 3 Environmental Geology
- 4 Geospatial Technology
- 5 Geophysics
- 6 Solid Earth and Tectonics

Electives may be spread across several focus areas or concentrated in one area. Free electives may include additional geology courses if desired.