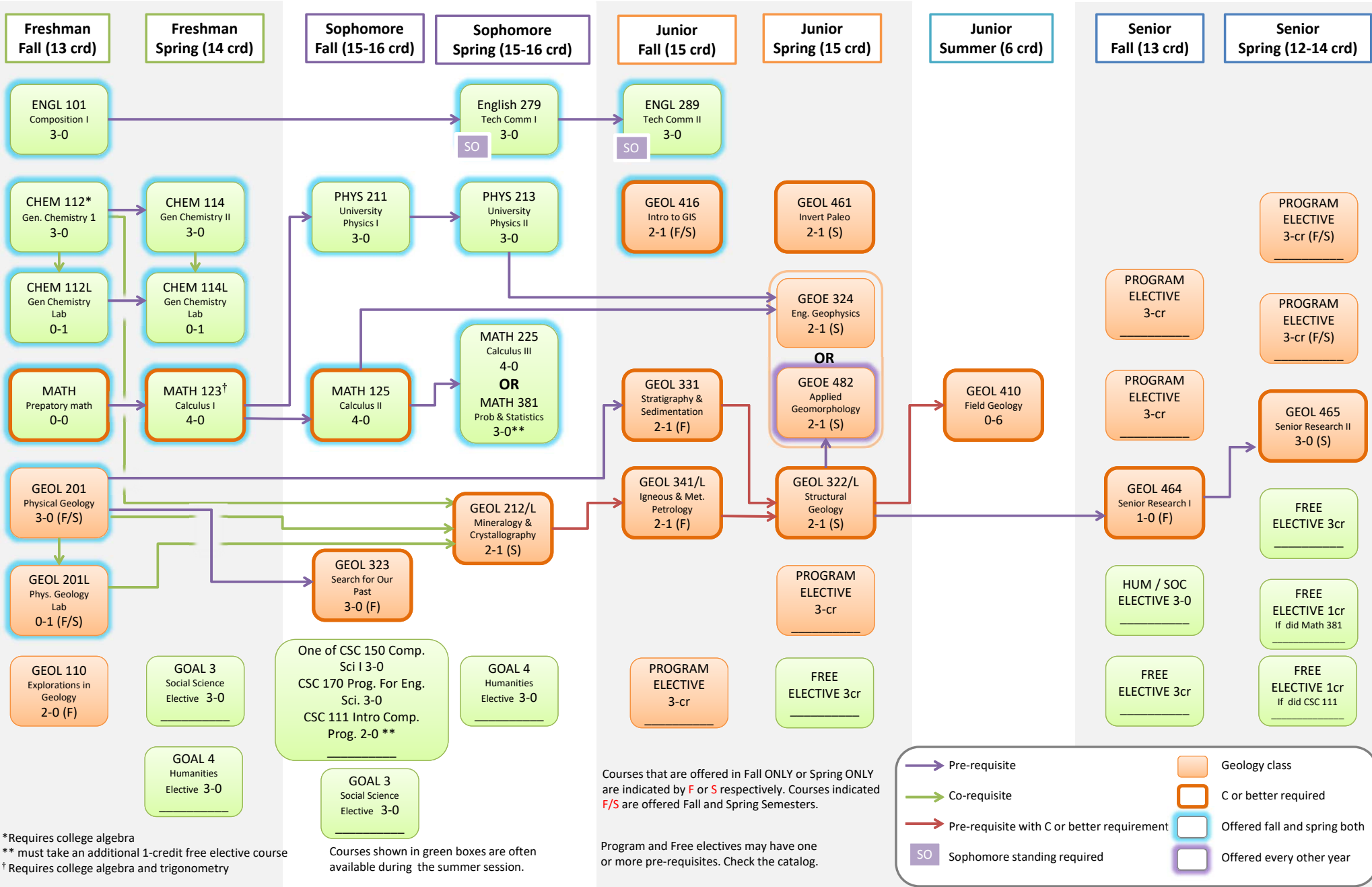


BS in Geology Curriculum Flowchart

Fall 2017
















Recommended electives by focus area

Energy and Mineral Resources

Free electives

MEM 120 Introduction to Mining
MEM 204 Surface Mining
MEM 301 Computer Applications in Mining
MEM 307 Mineral Exploration and Geostatistics
MET 220 Mineral Processing
POLS 407 Environmental Law & Policy

Program electives

 GEOE 201L Surveying for Mining and Geological Eng.
 GEOE 461 Petroleum drilling and Production
 GEOE 462/L Well Log Analysis**
 GEOE 466/L Engineering/Environmental Geology
 GEOE 467 Introduction to Geomechanics**
 GEOL 351 Earth Resources and the Environment**
 GEOL 403 Regional Field Geology (when offered)
 GEOL 420 Introduction to Remote Sensing
 GEOL 422/L Tectonics and Sed. Basin Analysis**
 GEOL 442/L Optical Petrology**
 GEOL 450 Fluid and Thermal Diffusion**
 GEOL 451/L Economic Geology**
 GEOL 476 Petroleum Geology**

Note: A Minor in Petroleum Systems is also offered; consult the requirements in the catalog.

Paleontology

Free electives

AES 403 Biogeochemistry**
AES 406 Global Environmental Change**
BIOL 121/L Anatomy
BIOL 151 General Biology I
BIOL 123 Physiology
BIOL 153 General Biology II
BIOL 311 Principles of Ecology

Program electives

 GEOE 482/L Applied Geomorphology**
 GEOL 372 Dinosaurs
 GEOL 403 Regional Field Geology (when offered)
 GEOL 471 Field Paleontology
 GEOL 472/L Museum Collections Management**
 GEOL 473/L Museum Exhibit Design**
 GEOL 474 Paleontological Resource Management**
 GEOL 475/L Vertebrate Fossil Prep./Conservation

** Offered alternate years.

#Students must take at least one of these courses.











If both are taken, the second may serve as a geology elective.

Environmental Geology

Free electives

AES 301 Introduction to Atmospheric Sciences
AES 403 Biogeochemistry
AES/BIOL 406 Global Environmental Change**
BIOL 311 Principles of Ecology
BIOL 331 Microbiology
POLS 407 Environmental Law & Policy

Program electives






 GEOE 201L Surveying for Mining and Geological Eng.
 GEOE 324/L Engineering Geophysics I#
 GEOE 466/L Engineering/Environmental Geology
 GEOE 467 Introduction to Geomechanics**
 GEOE 475/L Ground Water
 GEOE 482/L Applied Geomorphology***
 GEOL 351 Earth Resources and the Environment**
 GEOL 403 Regional Field Geology (when offered)
 GEOL 420 Introduction to Remote Sensing
 GEOL 450 Fluid and Thermal Diffusion**

Geospatial Technology

Free electives

CSC 111 Introduction to Computer Programming
CSC 150 Computer Science I
CSC 250 Computer Science II
CEE 437 Watershed and Floodplain Modeling
MEM 301/301L Computer Applications in Mining

Program electives






 GEOE 201L Surveying for Mining and Geological Eng.
 GEOE 482/L Applied Geomorphology***
 GEOL 417 Geospatial Databases
 GEOL 419 Advanced Geospatial Analysis
 GEOL 420 Introduction to Remote Sensing

Geomathematics

Free electives

MATH 321 Differential Equations
MATH 315 Linear Algebra
MATH 353 Linear Optimization
MATH 382 Probability Theory and Statistics II
MATH 451 Math Modeling

Program electives

 GEOE 324/L Engineering Geophysics I#
 GEOE 467 Introduction to Geomechanics**
 GEOE 475/L Groundwater
 GEOL 419 Advanced Geospatial Analysis
 GEOL 450 Fluid and Thermal Diffusion**

Program electives by semester

Every Fall and Spring

GEOE 475/L Ground Water

Every Fall Semester

GEOE 201L Surveying for Mining and Geological Eng.
GEOE 466/L Engineering/Environmental Geology
GEOL 419 Advanced Geospatial Analysis
GEOL 420 Introduction to Remote Sensing

Fall- Odd years only

GEOL 472/L Museum Collections Management
GEOL 450 Fluid and Thermal Diffusion

Fall –Even Years only

GEOE 462/L Well Log Analysis
GEOL 422/L Tectonics and Sed. Basin Analysis

Every Summer

GEOL 410 Field Geology
GEOL 471 Field Paleontology

Every Spring Semester

GEOE 201L Surveying for Mining and Geological Eng
GEOE 324/L Engineering Geophysics I
GEOE 461 Petroleum Drilling and Production Eng.
GEOL 372 Dinosaurs
GEOL 417 Geospatial Databases
GEOE 475/L Vertebrate Fossil Prep./Conservation
GEOL 476 Petroleum Geology

Spring –Odd years only

GEOE 482/L Applied Geomorphology
GEOL 351 Earth Resources and the Environment
GEOL 474 Paleontological Res. Management

Spring- Even years only

GEOE 467 Introduction to Geomechanics
GEOL 442/L Optical Petrology
GEOL 451/L Economic Geology
GEOL 473/L Museum Exhibit Design

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