

Geology Major

Total Major hours: 44 (BA), 52 (BS)
Suggested hours per semester: 16-18

Major Academic Plan (MAP) for Catalog Year 2022-2023

The catalog is the final authority on CATC and major requirements; this is intended as a tool for planning purposes. Student course sequencing may vary depending on course offerings and other variables.

Fall Semester 1 GEOL 212 Dynamic Earth and Environment ¹ MATH 221 Applied Calculus ⁴ or MATH 231 Calculus I ^{*4} or PHYS 221 General Physics I ^{1,4, F} <i>CORE 101: First Year Seminar</i> <i>First-Year CATC options-</i> <ul style="list-style-type: none"> ▪ AHS 101: Wellness (2) ▪ COMM 101: Oral Comm (2) ▪ ENGW 103: First-Year Writing ▪ Language Core Competency or Thematic Core Course 	Spring Semester 1 GEOL 212 Dynamic Earth and Environment ¹ , if not complete, or GEOL 343 Fundamentals of Mineral Science (2) ^{**} <i>First-Year CATC Options</i> <i>Language Core Competency</i> <i>BITH 211/ARCH 211: Old Testament</i>	Summer 1 <i>Consider study, internship, or research options –Wheaton In summer program, WIN (HoneyRock), Wheaton in the Black Hills, non-major internship, summer research or other options. (See faculty for advising.)</i>
Fall Semester 2 GEOL 336 Process Geomorphology ^{**} or GEOL 344 Igneous and Metamorphic Petrology [*] MATH 221 ⁴ or 231 ⁴ or PHYS 221 ^{1,4, F} , if not complete <i>Thematic Core or Core Competency Courses (4-8)</i> <i>BITH 213/ARCH 213: New Testament</i>	Spring Semester 2 GEOL 321 Earth History and Stratigraphy ¹ or GEOL 443 Structural Geology ^{**} Major Electives ^{4, 5} (1-4) <i>Thematic Core Course</i> <i>BITH 315: Christian Thought*</i> <i>Advanced Integrative Seminar?*</i>	Summer 2 GEOL 345 Sedimentary Geology (2) ^{6**} GEOL 412 Field Geology (6) ^{6**} or <i>Consider study, internship or research options.</i>
Fall Semester 3 CHEM 231 General Chemistry I Major Electives ^{4, 5} (1-4) MATH 263 Introduction to Statistics ^{1, 3} or B EC 321 Statistics ³ or ENVR 341 Quantitative Methods ^{1,4} for Environmental Analysis and Problem Solving ³ or GEOL 341 ³ <i>Thematic Core Course</i> <i>Advanced Integrative Seminar?*</i>	Spring Semester 3 GEOL 232 Environmental Geochemistry [*] GEOL 343 Fundamentals of Mineral Science (2) ^{**} , if not complete Major Electives ^{4, 5} (1-4) <i>Advanced Integrative Seminar?*</i> <i>Thematic Core Course</i>	Summer 3 <i>Consider study, internship or research options –Wheaton In summer program, WIN (HoneyRock), non-major internship, summer research or other options. (See faculty for advising.)</i>

Fall Semester 4	Spring Semester 4	Summer 4
GEOL 494 Senior Capstone (2)* GEOL 336 Process Geomorphology ^{#*} or GEOL 344 Igneous and Metamorphic Petrology* <i>Complete CATC Coursework</i>	GEOL 321 Earth History and Stratigraphy ¹ or GEOL 443 Structural Geology ^{#*} <i>Complete CATC Coursework</i>	If not complete: GEOL 345 Sedimentary Geology (2) ^{6#*} GEOL 412 Field Geology (6) ^{6#*}

Notes or Special Guidance for Majors:

*Course has prerequisite

^F Fall only course

^S Spring only course

[#]Offered every other year

¹ Courses that meet the CATC Thematic Core tags: GEOL 212 (SP), GEOL 321 (SIP), GEOL 341 (AAQR), PHYS 221 (SP), MATH 263 (AAQR), ENVR 341 (AAQR). A maximum of 3 Thematic Core tags can count toward the major and CATC requirements.

²GEOL 343^{#*}, GEOL 344* and GEOL 443^{#*} must be taken in sequence prior to attending summer Field Camp (GEOL 345^{#*}, GEOL 412^{#*}).

³ Required for Bachelor of Arts only.

⁴ Required for Bachelor of Science only.

⁵ B.S. Geology students must choose a 4 hour elective credit in Geology. Choose from:

GEOL 332 Studies in Regional Geology* (1-2, repeatable course)
 GEOL 341 Quant. Methods for Env. Analysis and Problem Solving (AAQR)
 GEOL 355 Introduction to Soil Science[#] (2)
 GEOL 371 Introduction to Geographic Information Systems (GIS)
 GEOL 372 GIS Practicum (2)
 GEOL 385 Topics in Earth Science (Climate Change, Petroleum Geology)* (2-4)
 GEOL 437 Hydrogeology*

⁶ Summer only course at the Wheaton Science Center.

-It is recommended that Bachelor of Science students also take PHYS 222 and MATH 232.