EARTH SCIENCE, B.S. - CONCENTRATION: ENVIRONMENTAL

120 Overall Credits Required

LIBERAL EDUCATION PROGRAM AND WRITING REQUIREMENTS

Liberal Education Program

Students must complete a comprehensive three-tiered Liberal Education Program (LEP). View all requirements of the tiers on the Liberal Education Program.

While the choice of courses that fulfill the requirements is generally left up to students, courses in the major and/or cognate may also satisfy LEP requirements. These shared courses are recommended below to fulfill both areas, although the course credits are only counted once towards the 120 credits required for graduation.

Tier 1 - Quantitative Reasoning (select one):
MAT 122 – Precalculus
MAT 150 – Calculus I

Tier 2 – Natural World I: Physical Realm:
CHE 120 – General Chemistry I

Tier 2 – Natural World II: Life and Environment:
ESC 201 — Historical Geology (‘C-’ or better)

Tier 2 – Time and Place:
ESC 210 — Principles of Astronomy (‘C-’ or better)

Tier 3 – Capstone:
ESC 332 – Invertebrate Paleontology (‘C-’ or better)

Writing Requirements (“W-Courses”)

Three W-courses are required. These may not be taken until after a student has passed ENG 112 — Writing Arguments. W-courses may count toward LEP, major, or cognate requirements, as well as free electives. Course sections that meet this requirement are designated by section numbers ending in “W”.

Transfer students who enter with 60 to 89 credits are required to pass two W-courses, while transfer students who enter with 90 credits or more must pass one W-course.

MAJOR REQUIREMENTS
58 Credits Required
‘C-’ or better required

Requirements:
ESC 200 - Physical Geology
ESC 201 - Historical Geology
ESC 205 - Principles of Meteorology
ESC 210 - Principles of Astronomy
ESC 220 - Physical and Chemical Oceanography
ESC 303 – Environmental Earth Science
ESC 311 - Mineralogy
ESC 312 – Petrology
ESC 325 – Stratigraphy and Sedimentation
ESC 332 – Invertebrate Paleontology
ESC 350 - Structural Geology and Tectonics
ESC 430 - Field Methods
Select three courses from:
• ESC 315 - Geomorphology
• ESC 404 - Air Pollution Meteorology
• ESC 420 - Earth Resources
• ESC 421 - Marine Geology
• ESC 457 - Hydrology
• ESC 458 - Soil Science
Select one option from the following two:
• ESC 492 - Undergraduate Thesis Proposal
  • and ESC 493 - Undergraduate Thesis
• Two additional ESC courses above the 200-level

COGNATE REQUIREMENTS

22 Credits Required

Requirements:
CHE 120 – General Chemistry I
PHY 200 – General Physics I
Select one from:
• BIO 102 – Biology I
• BIO 103 - Biology II
• BIO 120 – Microbiology
• BIO 233 - General Microbiology
• CHE 121 – General Chemistry II
• PHY 201 – General Physics II
Select two from:
• BIO 202 - Ecology
• BIO 210 - Environmental Biology and Conservation
• BIO 230 - Plant Anatomy and Morphology
• BIO 327 - Field Natural History
• BIO 429 - Limnology
• CHE 240 - Analytical Chemistry
• CHE 340 - Environmental Chemistry
• PCH 202 - Introduction to Public Health
• PCH 259 - Environmental Health

Select one from:

• MAT 122 – Precalculus
• MAT 150 – Calculus I

Non-Course Requirement:
Pass Praxis® II with a score of 157 or higher

FREE ELECTIVES

Remaining credits to reach total Overall Credits Required (listed above).