

BACHELOR OF SCIENCE DEGREE ENVIRONMENTAL GEOSCIENCES

COORDINATE MAJOR

FOR ADDITIONAL INFORMATION, PLEASE CONTACT THE [DEPARTMENT OF GEOLOGICAL SCIENCES](#)

1) UNIVERSITY REQUIREMENTS

Writing Requirement

Tier I: LB 133 4
Tier II: Satisfied by completing the Lyman Briggs College History, Philosophy and Sociology of Science and Senior requirements listed below.

Integrative Studies in Arts & Humanities (IAH)

IAH 201-210* 4
IAH 211-241*† 4

Integrative Studies in Social, Behavioral & Economic Sciences (ISS)

ISS 200-level course* 4
ISS 300-level course*‡ 4

*National, International, & Multicultural Diversity
Students must include at least one "N" course and one "I" course in their Integrative Studies programs. A "D" course may meet either an "N" or an "I" requirement, but not both.

†Beginning Summer 2013, LB 331, 333, and 336 will fulfill the IAH "B" university requirement (IAH 211 or higher). Please consult your LBC advisor for specific details for your program.

‡Beginning Summer 2013, LB 332, 334, and 335 will fulfill the ISS 300-level university requirement. Please consult your LBC advisor for specific details for your program.

Mathematics, Biological and Physical Sciences

Satisfied by the Lyman Briggs College requirements in Mathematics, Biological and Physical Sciences (see below).

Minimum number of credits required: 120

Minimum cumulative and major grade point average: 2.0

(2) LYMAN BRIGGS COLLEGE REQUIREMENTS

Biological Sciences (9 cr.)

Complete ONE of the following groups of courses
(1) LB 144 & 145 9
(2) BS 161, 162, 171, & 172 10

Chemistry (8-9 cr.)

Complete ONE of the following groups of courses
(1) LB 171, 171L, 172, & 172L 9
(2) CEM 141, 142, & 161 8
(3) CEM 151, 152, & 161 8

Physics (8-10 cr.)

Complete ONE of the following groups of courses
(1) LB 273, 274 8
(2) PHY 183, 184 8
(3) PHY 231, 232, 251, 252 8

Mathematics (6-7 cr.)

Complete ONE of the following groups of courses
(1) LB 118 & 119 8
(2) MTH 132 & 133 7

History, Philosophy & Sociology of Science (11-12 cr.)

LB 133 4
LB 330-336, 355, 490E; ENG 473A; HST 425; SOC 368 7-8

Senior Seminar (4 cr.)

LB 492 4

(3) MAJOR REQUIREMENTS

Complete ALL of the following courses (31 cr.)

| | | | |
|-----|-----|--|---|
| GLG | 201 | The Dynamic Earth | 4 |
| GLG | 304 | Physical and Biological History of Earth | 4 |
| GLG | 321 | Mineralogy and Geochemistry | 4 |
| GLG | 401 | Plate Tectonics (W) | 4 |
| GLG | 411 | Hydrogeology | 3 |
| GLG | 412 | Glacial Geology & the Record of Climate Change | 4 |
| GLG | 421 | Environmental Geochemistry | 4 |
| GLG | 431 | Sedimentology & Stratigraphy | 4 |

Complete ONE of the following courses (3-4 cr.)

| | | | |
|-----|-----|---------------------------|---|
| LB | 220 | Calculus III | 4 |
| MTH | 234 | Multivariable Calculus | 4 |
| STT | 200 | Statistical Methods | 3 |
| STT | 201 | Statistical Methods | 3 |
| STT | 231 | Statistics for Scientists | 3 |
| STT | 421 | Statistics I | 3 |

Complete ONE of the following courses (3-4 cr.)

| | | | |
|------|-----|-----------------------------|---|
| GEO | 203 | Introduction to Meteorology | 3 |
| IBIO | 303 | Oceanography | 4 |

Complete ONE of the following courses (3-4 cr.)

| | | | |
|-----|-----|-----------------------------------|---|
| GEO | 324 | Remote Sensing of the Environment | 4 |
| GEO | 325 | Geographic Information Systems | 3 |
| STT | 464 | Statistics for Biologists | 3 |

Complete ONE of the following courses (3 cr.)

| | | | |
|------|-----|-------------------------------|---|
| GEO | 435 | Geography of Health & Disease | 3 |
| IBIO | 355 | Ecology | 3 |

Complete ONE from each of the following areas (9-10 cr.)

(1) Geophysical Systems

| | | | |
|-----|-----|-------------------------------------|---|
| CE | 421 | Engineering Hydrology | 3 |
| GEO | 409 | Global Climate Change & Variability | 3 |
| GLG | 413 | Groundwater Contamination | 3 |
| GLG | 471 | Applied Geophysics | 4 |
| GLG | 481 | Reservoirs & Aquifers | 3 |

(2) Geochemical Systems

| | | | |
|-----|-----|-------------------------------------|---|
| CE | 481 | Environmental Engineering Chemistry | 3 |
| CEM | 251 | Organic Chemistry I | 3 |
| CSS | 455 | Pollutants in the Soil Environment | 3 |

(3) Geobiological Systems

| | | | |
|-----|-----|---------------------------------------|---|
| ENT | 319 | Introduction to Earth Systems Science | 3 |
| FW | 420 | Stream Ecology | 3 |
| MMG | 425 | Microbial Ecology | 3 |
| MMG | 426 | Biogeochemistry | 3 |

Complete additional credits in Geological Science courses at the 300-400 level to total 40 credits. Credits used to satisfy this requirement may be used to satisfy either the requirements for the Geological Sciences major or the requirements for the Environmental Geosciences major, but not both of these requirements.

Concentration in Geophysics

A concentration in geophysics is also available. Students must complete all of the following courses. Courses that are used to satisfy the requirements for the concentration may also be used to satisfy the requirements for the Bachelor of Science degree in Environmental Geosciences. The concentration will be noted on the student's transcript.

Complete ALL of the following courses (22 cr.)

| | | | |
|-----|-----|---------------------------------|---|
| GLG | 470 | Principles of Modern Geophysics | 3 |
| GLG | 471 | Applied Geophysics | 4 |
| LB | 220 | Calculus III* | 4 |
| MTH | 235 | Differential Equations | 3 |
| LB | 273 | Physics I† | 4 |
| LB | 274 | Physics II‡ | 4 |

*MTH 234 may be substituted for LB 220

†PHY 183 may be substituted for LB 273

‡PHY 184 may be substituted for LB 274

IMPORTANT: These guidelines are presented for planning purposes only. Students MUST consult a department advisor for confirmation of major requirements.