**Geology Major B.A.**

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|  | | Credits | Course Title | Requirements / Notes |
| Required Courses: (25 credits) | | | | |
|  | GEO 151 | 4 | Introduction to Geology | Or GEO 153 or 120 |
|  | GEO 152 | 4 | Historical Geology | GEO 151 or equivalent |
|  | GEO 215 | 4 | Mineralogy | GEO 151 or 153 or 120 and CHEM 101 or concurrently |
|  | GEO 252 | 4 | Geomorphology | GEO 120 or GEO 151 or 153 |
|  | GEO 316 | 4 | Igneous and Metamorphic Petrology | GEO 215 |
|  | GEO 317 | 4 | Sedimentation and Stratigraphy | GEO 215 or concurrent |
|  | GEO 387 | 1 | Geology as Vocation | Junior or senior standing |
|  |  |  |  |  |
|  | At least 1 credit of Geology Field Experience | | | GEO 153, 181, 323, 341 or another advisor-approved internship or course. |
|  |  |  |  |  |
| At least 8 credits of electives from: | | | | |
|  | GEO 212 | 4 | Tectonics | GEO 152 |
|  | GEO 251 | 4 | Oceanography | High school chemistry & sophomore standing |
|  | GEO 304 | 4 | Geochemistry | GEO 215 or GEO 151 plus CHEM 102 or permission |
|  | GEO 312 | 4 | Environmental Geology | GEO 252 |
|  | GEO 313 | 4 | Paleontology | GEO 152 or BIOL 160 & 161 |
|  | GEO 322 | 4 | Coastal Geomorphology | GEO 252 |
|  | GEO 325 | 4 | Hydrogeology | CHEM 101 and GEO 252, or ENGR 306 or 320;  MATH 132 or 171 recommended |
|  | GEO 341 | 1, 2, 4 | Geology Field Methods | Junior or senior standing |
|  | GEO 390 | 2-4 | Independent Study | Permission of faculty |
|  | GEO 396 | 2-4 | Research in Geology | Permission of faculty |
|  | An advisor approved elective | | |  |
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| Required Cognates: (12 credits) | | | | |
|  | CHEM 101 | 4 | General Chemistry I |  |
|  | GEO 260 | 4 | Geographic Information Systems (GIS) and Cartography |  |
|  | STATS 143  *or* MATH 132  *or* MATH 171 | 4  4  4 | Introduction to Probability and Statistics  Calculus for Management, Life, and Social Sciences  Calculus I | see catalog for requirements |
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**Geology Major B.S.**

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|  | | Credits | Course Title | Requirements / Notes |
| Required Courses: (21 credits) | | | | |
|  | GEO 151 | 4 | Introduction to Geology | Or GEO 153 or 120 |
|  | GEO 152 | 4 | Historical Geology | GEO 151 or equivalent |
|  | GEO 215 | 4 | Mineralogy | GEO 151 or 153 or 120 and CHEM 101 or concurrently |
|  | GEO 252 | 4 | Geomorphology | GEO 120 or GEO 151 or 153 |
|  | GEO 317 | 4 | Sedimentation and Stratigraphy | GEO 215 or concurrent |
|  | GEO 387 | 1 | Geology as Vocation | Junior or senior standing |
|  |  |  |  |  |
|  | Approved Geology Field Experience | | | Either 3 credits at 200-level or above OR GEO 181 (5) plus 1 credit at 200-level or above |
|  |  | | |  |
| Required Cognates (for all concentrations): (20 credits) | | | | |
|  | CHEM 101 | 4 | General Chemistry I |  |
|  | CHEM 102  Or ENGR 205 | 4  4 | General Chemistry II  Principles of Materials Science |  |
|  | GEO 260 | 4 | Geographic Information Systems (GIS) and Cartography |  |
|  | MATH 171 | 4 | Calculus I |  |
|  | PHYS 133 | 4 | Introductory Physics: Mechanics and Gravity |  |

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| Environmental Geology Emphasis | | | |  | Earth and Planetary Studies Emphasis | | | |
|  | | Cr. | Course Title |  |  | | Cr. | Course Title |
|  | ENST 210 | 4 | Human Impacts on the Env. |  |  | GEO 212 | 4 | Tectonics |
|  | ENST 302 | 2 | Environmental Law |  | Elective Group I: Planetary Sciences (10 credits, at least 6 credits at the 300-level) | | | |
| Elective Group I: Surficial Processes (at least 8 credits) | | | |  |  | ASTR 211 | 4 | Planetary & Stellar Astronomy |
|  | GEO 251 | 4 | Oceanography |  |  | GEO 250 | 4 | Meteorology |
|  | GEO 312 | 2-4 | Special Topics in Environmental Geology |  |  | GEO 251 | 4 | Oceanography |
|  | GEO 322 | 4 | Coastal Geomorphology |  |  | GEO 304 | 4 | Geochemistry |
|  | GEO 325 | 4 | Hydrogeology |  |  | GEO 316 | 4 | Igneous and Metamorphic Petrology |
|  | ENST 301 | 2 | American Environmentalism |  |  | GEO 322 | 2 | Coastal Geomorphology |
|  |  |  |  |  |  | GEO 323 | 2 | Coastal Geomorphology Methods |
| Elective Group II: Internal Processes (at least 8 credits) | | | |  | Elective Group II (at least 8 credits) | | | |
|  | GEO 212 | 4 | Tectonics |  |  | CS 106 | 4 | Scientific Computation and Modeling |
|  | GEO 304 | 4 | Geochemistry |  |  | GEO 313 | 4 | Paleontology |
|  | GEO 316 | 4 | Igneous and Metamorphic Petrology |  |  | GEO 361 | 4 | Advanced GIS |
|  |  |  |  |  |  | GEO 362 | 4 | Remote Sensing |