The Earth Science program is an interdisciplinary field of study that focuses on our planet’s interconnected natural systems that make up our environment. Majors in Earth Science gain expertise in the physical science that governs the processes that operate within Earth’s natural systems. Through understanding Earth Science, students learn about environmental issues impacted by and that impact human populations like: climate change, natural disasters, natural resource management, and more.

DEGREES OFFERED
- Earth Science, BS
- Earth Science Teaching (5-12)
- Geomorphology and Earth Surface Processes Certificate
- Earth Science Minor

REAL-WORLD EXPERIENCES
- Applied and theoretical research opportunities
- Potential internships
- Field trips and field studies

EMPLOYERS
- Museums and libraries
- Colleges and universities
- Government agencies
- Non-profit organizations
- Research labs and organizations
- Science and nature centers
- University extension programs
- Environmental engineering and consulting
- Conservation organizations
- Tourism industry

CAREERS
- Conservation scientist*
- Educator – K-12
- Outdoor educator
- Forest/park ranger
- Forester
- Geographer
- Geomorphologist
- Grant writer
- Meteorologist*
- Climatologist*
- Naturalist
- Environmental consultant
- Environmental engineer*
- Environmental scientist*
- Natural resource management
- Natural resource exploration
- Natural hazards consultant
- Hydrologist*
- Professor*
- Research scientist*
- Soil scientist*

*Advanced Education Preferred

SKILLS AND TALENTS
- Scientific research
- Communication skills
- Data synthesis and interpretation
- Computer skills
- Geospatial technology skills
- Scientific methods
- Scientific writing
- Field research
- Critical thinking
- Problem solving
- Environmental awareness
- Natural resource management and conservation
- Natural hazard assessment and evaluation

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### Sample Four-Year Course Plan for BS Earth Science

<table>
<thead>
<tr>
<th>First Year Semester 1</th>
<th>First Year Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 101 Intro to Phys. Geog. (3)</td>
<td>AST 102 Intro to Planets (3)</td>
</tr>
<tr>
<td>AST 101 Intro to Astronomy (3)</td>
<td>MATH 115 Pre-Calc (4)</td>
</tr>
<tr>
<td>ENG 101 Composition (4)</td>
<td>Gen Ed 11 (2-3)</td>
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<tr>
<td>Gen Ed 5 (3)</td>
<td>Gen Ed 6 (3)</td>
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<tr>
<td>FYEX 100 First Year Experience</td>
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<table>
<thead>
<tr>
<th>Second Year Semester 1</th>
<th>Second Year Semester 2</th>
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<tbody>
<tr>
<td>CHEM 201 General Chemistry 1 (5)</td>
<td>GEOL 122 Earth History (4)</td>
</tr>
<tr>
<td>GEOL 121 Physical Geology (4)</td>
<td>BIOL 100 Our Natural World (4)</td>
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<tr>
<td>Gen Ed 7 (3)</td>
<td>Gen Ed 8 (3+)</td>
</tr>
<tr>
<td>Gen Ed 1 pt. B (3+)</td>
<td>Gen Ed 9 (3+)</td>
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<tr>
<th>Third Year Semester 1</th>
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<tbody>
<tr>
<td>PHYS 211 Principals of Physics (4)</td>
<td>GEOG 373 GIS (4)</td>
</tr>
<tr>
<td>GEOG 315 Geomorphology (3)</td>
<td>Gen Ed 5 (3+)</td>
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<tr>
<td>GEOG 217 Weather (4)</td>
<td>Gen Ed 6 (3+)</td>
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<tr>
<td>GEOG 210W Landscapes and Places (3)</td>
<td>GEOG 416W (4)</td>
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</table>

<table>
<thead>
<tr>
<th>Fourth Year Semester 1</th>
<th>Fourth Year Semester 2</th>
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</thead>
<tbody>
<tr>
<td>GEOG 410 (3)</td>
<td>Elective for Major 2 (3)</td>
</tr>
<tr>
<td>GEOL 201 (4)</td>
<td>Other Electives (10+)</td>
</tr>
<tr>
<td>Elective for Major 1 (3)</td>
<td></td>
</tr>
<tr>
<td>Other Electives (4+)</td>
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</tbody>
</table>

**GEOMORPHOLOGY AND EARTH SURFACE PROCESSES (CERT) Program Requirements**

**Major Common Core**
- Take either GEOG 315 or GEOG 415 and GEOG 410
- GEOG 315: Geomorphology (3)
- GEOG 410: Climatic Environments (3)
- GEOG 415: Earth Surface Processes (4)

**Major Restricted Electives**
- Choose 3 - 4 Credit(s)
- GEOG 411: Soils Geomorphology (4)
- GEOG 416W: Fluvial Geomorphology and Hydrology (4)

**Major Unrestricted Electives**
- Choose 6 Credit(s)
- Choose courses from two of the three listed departments
- GEOG 411 and GEOG 416 can be taken as an unrestricted elective if they were not taken as a restricted elective.
- ANTH 331: Environmental Anthropology (3)
- GEOG 411: Soils Geomorphology (4)
- GEOG 416W: Fluvial Geomorphology and Hydrology (4)
- GEOG 440: Field Studies (1-4 credits)
- GEO 201: Elements of Mineralogy (4)
- GEO 320W: Sedimentology and Stratigraphy (4)

More information: sbs.mnsu.edu/earth-science  geography@mnsu.edu