Geology and Earth Science, B.A.

Program Objectives
The primary mission of our B.A. geology program is to provide a broad educational experience that prepares men and women for careers in earth science-related fields. We expect that our graduate should:

- Have the basic knowledge and skills demanded for entry-level competence in typical careers in earth science related fields.
- Be able to apply their knowledge to specific situations or problems.
- Cultivate the skills and ethics that will allow them effectively to serve their employers and to enhance their own career development.
- Develop increased capacity for independent learning, critical thinking, and problem solving.
- Develop basic numerical skills and computer literacy as part of an undergraduate program designed to deliver a current and relevant knowledge of their discipline.
- Communicate effectively and professionally through oral, written, and graphical means and to participate effectively in the work environment, both in individual and team-related activities.
- Have the broad general education needed to appreciate the role of Earth Sciences in the societal context and appreciate the importance of ethics in the practice of the profession.

Program Goals
The department of Geology and Geophysics has the following specific goals for its B.A. program:

- Students in the B.A. program will receive a broad preparatory education in earth science and related fields that is current, relevant, practical, and personal.
- B.A. students who graduate with appropriate grades will be able to compete successfully for positions at graduate schools nationwide.
- B.A. students who graduate with appropriate grades will be well prepared for entry-level positions in the geosciences and other related disciplines.

Required Courses
Each of the following:

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Term Taken</th>
<th>Grade</th>
<th>Gen Ed</th>
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<tbody>
<tr>
<td>GEOL 1000-level intro lab course(s)</td>
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<td>GEOL2000 - Geochemical Cycles and the Earth System</td>
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<td>GEOL2010 - Mineralogy</td>
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<td>GEOL2020 - Introduction to Petrology</td>
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<tr>
<td>GEOL2100 - Stratigraphy and Sedimentation</td>
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<tr>
<td>GEOL2080 - General Field Geology</td>
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<td>GEOL4820 - Capstone</td>
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<tr>
<td>LIFE1010 - General Biology</td>
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<td>CHEM1020 - General Chemistry I</td>
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<td>PHYS1110 - General Physics I</td>
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<tr>
<td>MATH1405 - Trigonometry</td>
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<td>OR MATH1450 - Algebra and Trigonometry</td>
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Six Courses from the Following

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<td>ATSC2000 - Introduction to Meteorology</td>
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<td>GEOG3450 - Weather and Climate</td>
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<td>ECON2400 - Economics of the Environment</td>
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<td>GEOG3010 - Geomorphology of Earth’s Dynamic Landscapes</td>
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<td>GEOL 2005 - Intro to Geophysics</td>
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<td>GEOL3005 - Principles of Geophysics</td>
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<td>GEOL2050 - Principles of Paleontology</td>
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<td>Earth and Mineral Resources</td>
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<td>Energy for Society: Addressing the Energy Grand Challenge</td>
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<td>Geologic Hazards: A Historical and Scientific Review</td>
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<td>GEOL3500</td>
<td>Global Change: A Geological Perspective</td>
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<td>Structural Geology and Tectonics</td>
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<td>GEOL4835</td>
<td>Applied/Exploration Geophysics</td>
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<td>POLS4051</td>
<td>Environmental Politics</td>
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<td>SOIL4120</td>
<td>Genesis, Morphology and Classification of Soils</td>
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<td>ECON4410</td>
<td>Natural Resource Economics</td>
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**Additional Electives**

*Additional 12 hours of electives with adviser consultation, at least 6 hours of which must be taken outside of the Department of Geology and Geophysics.*

**Notes:**