

**Assessment Plan  
(2018-2019 Academic Year)**

**Environmental Geology**

(Instructional Degree Program)

**B.S.**

(Degree Level)

**Program Mission:**

The mission of the Environmental Geology B.S. Program is to provide students with a rigorous, high-quality education in environmental geology.

**Student Learning Outcome 1:**

Classify and identify geologic materials, including soils, minerals, and rocks.

**NMHU Traits Specifically Linked to Student Learning Outcome 1:**

- Mastery of Content Knowledge and Skills
- Critical and Reflective Thinking Skills

**First Means of Assessment for Outcome 1:**

Earn  $\geq 75\%$  cumulative laboratory exercise grade from GEOL 325: Earth Materials. Laboratory series emphasizes hand specimen description and identification.

**Second Means of Assessment for Outcome 1:**

Earn  $\geq 75\%$  average of 3 laboratory assignments in GEOL 301: Environmental Geology that emphasize mineral and rock identification.

**Student Learning Outcome 2:**

Read and evaluate relevant professional literature.

**NMHU Traits Specifically Linked to Student Learning Outcome 2:**

- Mastery of Content Knowledge and Skills
- Critical and Reflective Thinking Skills
- Effective Communication Skills

**First Means of Assessment for Outcome 2:**

Earn  $\geq 75\%$  on term paper from GEOL 317: Depositional Environments describing a regional rock formation and its depositional environment.

**Second Means of Assessment for Outcome 2:**

Earn  $\geq 75\%$  on term paper ("Adopt a Mineral") from GEOL 325: Earth Materials describing the physical, chemical, and structural properties of a mineral.

**Third Means of Assessment for Outcome 2:**

Earn  $\geq 75\%$  on project report in GEOL 301: Environmental Geology on an environmental geology issue.

**Student Learning Outcome 3:**

Effectively communicate scientific ideas, information, and results, both verbally and in writing that (1) demonstrate consistent logic; (2) are well organized; (3) state and defend a thesis; and (4) demonstrate competent use of language.

**NMHU Traits Specifically Linked to Student Learning Outcome 3:**

- Mastery of Content Knowledge and Skills
- Critical and Reflective Thinking Skills
- Effective Communication Skills

**First Means of Assessment for Outcome 3:**

Earn  $\geq 75\%$  on class presentation in GEOL 325: Earth Materials on mineral term project.

**Second Means of Assessment for Outcome 3:**

Earn  $\geq 75\%$  on summary report in GEOL 495: Senior Geology Applications project.

**Student Learning Outcome 4:**

Competently use appropriate tools from geology, chemistry, physics, and mathematics to solve discipline-specific problems.

**NMHU Traits Specifically Linked to Student Learning Outcome 4:**

- Mastery of Content Knowledge and Skills
- Critical and Reflective Thinking Skills
- Effective Use of Technology

**First Means of Assessment for Outcome 4:**

Earn  $\geq 75\%$  on the course grade for GEOL 424: Environmental Geophysics.

**Second Means of Assessment for Outcome 4:**

Earn  $\geq 75\%$  on the course grade for GEOL 425: Geomorphology.

**Student Learning Outcome 5:**

Competently use appropriate laboratory and field methods and instrumentation.

**NMHU Traits Specifically Linked to Student Learning Outcome 5:**

- Mastery of Content Knowledge and Skills
- Critical and Reflective Thinking Skills
- Effective Use of Technology

**First Means of Assessment for Outcome 5:**

Earn  $\geq 75\%$  on the course grade for GEOL 435: Physical Volcanology demonstrating proficiency in using a Brunton compass, Jacob staff, and hand-held GPS unit for field data collection, as well as abilities in stereographic projections, geologic mapping of volcanic terrains, and report writing.

**Student Learning Outcome 6:**

Attain employment in geology, environmental science, or related fields and/or obtain admission to graduate school.

**NMHU Traits Specifically Linked to Student Learning Outcome 6:**

- Mastery of Content Knowledge and Skills
- Critical and Reflective Thinking Skills
- Effective Communication Skills

**First Means of Assessment for Outcome 6:**

All (100%) of graduates from the Environmental Geology Program will find placement in geology-related jobs or graduate school within 3 months of graduation.

**Utilization of Results:**

**Changes to Program Based on Results:**

**Retention Strategies:**