

**ASSESSMENT REPORT  
2015-2016**

**Natural Sciences: Environmental Science and Management M.S.**

**Program Mission:**

The mission of the M.S. Natural Sciences-Environmental Science & Management Concentration is to provide students with pre-professional and post-graduate education in environmental science and management, including engagement in graduate-level coursework, practice in teaching undergraduate biology, forestry and geology laboratory sections, and participation in thesis research.

**Student Learning Outcome 1:** Competency in graduate level coursework.

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

- Mastery of Content Knowledge and Skills

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

Maintenance of a 3.0 GPA for graduate level coursework.

**Summary of Data:**

Number of Students Meeting Criterion:	8	Number of Students Not Meeting Criterion:	0
Total Number of Students Assessed:	8	Percent of Students Meeting Criterion:	100%

**Interpretation of Results for Outcome 1:** *Environmental Science & Management students consistently demonstrate the ability to succeed in graduate-level coursework. The Natural Resources Management – Forestry faculty selects only qualified applicants into the graduate program with an undergraduate academic record and/or applied experience that demonstrate potential to succeed in graduate level coursework. If student performance begins to slip, faculty intervene quickly to determine the problem and ensure corrective actions are being taken. Only students enrolled in courses are counted for this outcome.*

**Student Learning Outcome 2:** Competency in teaching assistantship.

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

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

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

Success in delivering lab introductions, grading and returning student materials, maintaining office hours, and making meaningful contributions to laboratory section, as reported by faculty instructors.

### Summary of Data

Number of Students Meeting Criterion:	4	Number of Students Not Meeting Criterion:	0
Total Number of Students Assessed:	4	Percent of Students Meeting Criterion:	100%

**Interpretation of Results for Outcome 2:** *Environmental Science & Management graduate students consistently do well in their teaching assistantships. The Natural Resources Management – Forestry faculty meet regularly with and mentors graduate students in aspects of teaching (lecture preparation, material delivery, one-on-one student interaction, and grading) to help with teaching assistantship professional development. Students are selected for these positions based on performance.*

**Student Learning Outcome 3:** Progress and proficiency in thesis research, including the design, defense, and execution of a thesis project.

### NMHU Traits Specifically Linked to Student Learning Outcome 3

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

### First Means of Assessment for Outcome 3:

Writing of a thesis proposal, defense of the thesis proposal, and progress in the thesis research as reported by graduate thesis advisors.

### Summary of Data

Number of Students Meeting Criterion:	13	Number of Students Not Meeting Criterion:	2
Total Number of Students Assessed:	15	Percent of Students Meeting Criterion:	87%

**Interpretation of Results for Outcome 3:** *The majority of Environmental Science & Management graduate students consistently do well, in collaboration with their graduate thesis advisors, in designing, defending, and initiating thesis research projects. Students are able to formulate a problem and collect data to analyze the problem. The challenge comes when students begin to write their thesis document. This barrier is reflected in the relatively low numbers for Student Learning Outcome 4. One student not meeting the criteria this past year has had a number of health problems. The other student left campus to pursue a long term internship opportunity.*

**Student Learning Outcome 4:** Successful completion of a Master’s thesis within 3-year (6-semester) timeframe.

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

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

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

Completion of a M.S. thesis project and paper within 3-year (6-semester) timeframe.

**Summary of Data**

Number of Students Meeting Criterion	2	Number of Students Not Meeting Criterion:	5
Total Number of Students Assessed	7	Percent of Students Meeting Criterion:	71%

**Interpretation of Results for Outcome 4:** *The ESM program currently has 15 graduate students who are still “active” on the books. Only 9 of these students, however, were still taking courses and were actively working with faculty to complete their thesis or project in 15/16. Only one student graduated in 2015/16. Three of the students are still “active” but not apparently making progress towards completion of their thesis. While some of the reason for being stalled may be a lack of momentum and focus on the part of the students, part may be a lack of ongoing, clear guidance from faculty. These three students all have the same chair who is not a member of the forestry faculty. Students who are in progress but have not reached the three-year mark are not assessed. It does appear that six students currently active will be finishing within three years but will not graduate until 2017.*