

Graduate Program Assessment

Program Learning Outcomes:

At the Master's level:

1. Conduct research resulting in original thesis or professional paper
2. Demonstrate mastery of subject matter content
3. Demonstrate mastery of one or more methods of inquiry appropriate to Earth Science subdiscipline
4. Demonstrate effective written communication of substantive content
5. Demonstrate effective oral communication of substantive content
6. Familiarity with guiding principles and strategies in the ethical conduct of research and/or teaching
7. *Knowledge of the pathways and key skills required to securing a professional or academic position appropriate to Master's degree holders*

At the PhD level:

1. Produce and defend an original and significant contribution to knowledge in the form of a dissertation (which may or may not include professional publications)
2. Demonstrate ability to design and execute an independent research exercise
3. Demonstrate mastery of subject matter content
4. Demonstrate mastery of one or more methods of inquiry appropriate to the student's Earth Science subdiscipline
5. Demonstrate effective written communication of substantive content
6. Demonstrate effective oral communication of substantive content
7. Familiarity with guiding principles and strategies in the ethical conduct of research and/or teaching
8. *Knowledge of the pathways and key skills required to securing a professional or academic position appropriate to PhD degree holders*
9. *Capacity to develop effective proposals for external funding*
10. *Documented engagement with professional field in Earth Science subdiscipline as demonstrated through publications, presentations, and professional association activities*

Methods of assessment.

Individual students are assessed on the learning outcomes above through the degree granting process, with the exception of the items shown in italics.

A basic assessment approach, therefore, will focus on degrees granted as a metric of success and time to completion as an informative metric. Additional primary data collected through surveys of current students and recent alumni (completion years 2012-2015) can help gauge progress toward professional development criteria represented in italics above.

Suggested data requests

From OPA, enrolled students by MSc/PhD and Advisor (for purpose of identifying subfield); enrollment date and defense date

From current students:

Create an online survey including reported metrics of

- Number of proposals for internal or external funding
- Number of conference presentations
- Checklist of relevant conferences attended/presented?
- Qualitative/subjective measure of: Through seminar, advising and other activities in the MSU Dept of Earth Sciences, I am familiar with the pathways and key skills required to securing a professional or academic position relevant to my desired degree
- Number of reports and white papers authored/co-authored
- Number of peer-reviewed publications authored/co-authored

From former students:

Create an online survey including reported metrics of

- Current employment by industry/sector
- Relevance of MSU degree to securing current employment (high/medium/low)
- Relevance of MSU professional network to securing current employment (high/medium/low)