

Montana State University College of Engineering
Learning Outcomes Assessment Plan

Program: **College of Engineering**
Degree: **Ph.D. in Engineering (with options)**

| Program Learning Outcomes Students will be able to: | Performance Indicators (What would you see if the student has learned?) | Measures (What is the measure and where, how, and when is data collected?) | Use of the Information (Who collects and compiles, who reviews) |
|--|---|---|--|
| Demonstrate technical expertise in emphasis area | <p>Students successfully pass written qualifying exam.</p> <p>Students successfully complete courses specified in program of study.</p> <p>Students successfully pass written and oral portions of comprehensive exam.</p> | <p>Annual pass rate (% of students passing) on Qualifying Exam.</p> <p>Annual pass rate (% of students passing) on Comprehensive Exam.</p> <p>Annual % of grad students with gpa equal or above 3.0 in all courses in Program of Study.</p> | PhD Option Coordinators collect data from appropriate sources and review annually. |
| Effectively communicate research to a scientific audience | <p>Students successfully communicate orally at public comprehensive seminar.</p> <p>Students successfully communicate their research in writing through their dissertation document.</p> <p>Students successfully communicate their research work orally at the public final defense.</p> | <p>Annual pass rate (% of students passing) on Comprehensive Exam.</p> <p>Annual % of students submitting final signed dissertation.</p> <p>Annual pass rate (% of students passing) of defense of dissertation.</p> | PhD Option Coordinators collect data from appropriate sources and review annually. |
| Independently perform quality original research | <p>Students successfully pass written and oral portions of comprehensive exam.</p> <p>Students successfully defend the originality and quality of their research at the public final defense</p> | <p>Annual pass rate (% of students passing) of defense of dissertation.</p> <p>Annual % of students submitting final signed dissertation.</p> | PhD Option Coordinators collect data from appropriate sources and review annually. |

