Student Learning Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

SLO 1: Advanced understanding of concepts
EES Graduate students will acquire an advanced understanding of concepts in areas related to their thesis research and area of specialty.

**Related Measures**

**M 1: Research project**
All graduate students will complete a research project, requiring the collection and interpretation of data. This will result in the construction of a thesis, which will be orally defended in front of the thesis committee and public.

Source of Evidence: Academic direct measure of learning - other

**Target:**
A majority vote of the thesis committee, approved by the graduate school, will find the work scientifically sound, noteworthy, and presented well in oral and written format.

**M 2: Abstract**
90% of graduate students will submit a minimum of one abstract to a peer-reviewed professional meeting or society.

Source of Evidence: Academic direct measure of learning - other

**Target:**
Students will have their peer-reviewed abstract accepted for presentation, either orally or as a poster, at a professional scientific meeting or society.

SLO 2: Presentation
EES Graduate students will be able to construct and effectively competently present Earth and Environmental Science information and concepts information and concepts visually and verbally through oral PowerPoint presentations.

**Related Measures**

**M 3: Presentations**
Students in 6000-level graduate courses will be required to submit a minimum of two oral PowerPoint presentations regarding a topic of relevance to the course.

Source of Evidence: Presentation, either individual or group

**Target:**
80% of the students will achieve a B or better on their PowerPoint presentations using a grading rubric developed by faculty consensus.

**M 4: Final grade percentage derived from presentation**
Students in 4000(G)-level courses will have a minimum of 20% of the final grade derived from PowerPoint presentations.

Source of Evidence: Academic direct measure of learning - other

**Target:**
80% of the students will achieve a B or better on their PowerPoint presentations.

SLO 3: Technical writing
EES Graduate students will be able to explain in technical written format an advanced understanding of concepts in areas related to their thesis research and area of specialty.

**Related Measures**

**M 5: Written assignment**
All graduate students will complete an oral and written assignment in the required Graduate Seminar course.

Source of Evidence: Written assignment(s), usually scored by a rubric

**Target:**
80% of the students will be rated satisfactory on their oral and written presentations.

SLO 4: Student satisfaction
The department of EES will maintain high graduate student satisfaction with the program.

**Related Measures**

**M 7: Course evaluations**
Students in 4000G and 6000 graduate level classes will report a satisfaction rating of 2.8 out of 5 for overall quality.

Source of Evidence: Student satisfaction survey at end of the program

**Target:**
All concentration level and elective courses required of the degree will achieve at least 2.8 out of 5.0 for overall quality of course.