

**Outcome EE-b.** An ability to design and conduct experiments, as well as to analyze and interpret data.

Course	Performance indicators
PHYS 111, PHYS 112, Chemistry 115, EE 222, EE 224, EE 252, EE 328, EE 336, EE 356, CpE 311, EE/CpE 480, EE/CpE 481	Specifically assess in selected classes the students' ability to design and conduct engineering and scientific experiments. Grades in the chemistry, physics, and engineering labs courses are used where a course outcome specifically points to this program outcome.
EE/CpE 480, EE/CpE 481	Observe students engaged in their capstone design course to determine their abilities to design and implement laboratory performance tests to verify system performance and troubleshoot hardware and debug software. This assessment is carried out by the faculty acting as the monitor for the project as well as using input from other faculty members who have made direct observations.
	Ask graduating seniors to describe their ability to design and conduct experiments in their engineering discipline during the exit interview.

Tools used: Final course grades in selected classes, Undergraduate In-Course Program Outcomes Assessment Form, Graduating Senior Survey

Data Collection: The data are collected every semester based on the course offerings.

Frequency of data collection: The data are collected every time courses are taught.

Data Analysis: The data obtained are analyzed every semester.

Closing the loop: This outcome is subject to review every year based on performance criteria and metrics and specific action items are developed, if necessary, to revise the content of the courses. The analyzed data are presented separately to the following groups in meetings.

- a) Faculty
- b) Advisory Board

*Performance criteria and metrics:*

- a) Grades in PHYS 111, PHYS 112, CHEM 115 with average semester grades  $\geq$  D.
- b) Grades in EE 222, EE 224, EE 252, EE 328, EE 336, EE 356, CpE 311, EE/CpE 480, EE/CpE 481 with average semester grades  $\geq$  C.
- c) Grades in EE/CpE 480 and EE/CpE 481 on Undergraduate In-Course Program Outcome Assessment Form corresponding to program outcome EE.b1  $\geq$  C.
- d) Self-assessment data from pertinent questions of Graduating Senior Survey with a response of 3.0 or higher.