

Optics and Optical Engineering Program Assessment Plan

Program Learning Objectives

1. Strong understanding of the fundamental science, mathematics, and processes that underlie optics and optical engineering.
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3. Ability to analyze measurements using appropriate theoretical models and error analysis.
4. Ability to design and validate optical systems subject to external constraints.
5. Effective teamwork skills for solving technical problems and delivering final products.
6. Ability to communicate ideas and research findings effectively in written reports, oral presentations, and graphical summaries.
7. Appreciation of the ethical, societal, environmental, and life-long-learning responsibilities of engineering professionals.

Program Assessment Methods

Each program learning objective will be assessed using the following methods:

- Embedded test questions in core and restricted elective courses in the major will assess each program learning objective. Faculty will write a Course Reflective Memo in which they review assessment data and determine if course improvements are needed to improve student learning and performance. (each term)
- Senior capstone scoring for each program learning objective, as demonstrated by senior engineering capstone design projects, by professional engineering and faculty review team (annual).
- Senior Survey questions ask students to self-assess learning (annual).
- Alumni Survey questions ask alumni to self-assess learning (every 3 years).
- The Optics and Optical Engineering Undergraduate Committee will review assessment data annually and determine if curricular changes in addition to course improvements are needed.