

Department of Physics, Astronomy and Engineering Science

May 2010

Department Student Learning Outcomes:

1. Students will make inferences and deductions based on knowledge of physics.
2. Students will demonstrate experimental, computational and laboratory skills.
3. Students will communicate ideas and processes of physics, clearly and precisely, orally and in writing
4. Students will demonstrate the processes and skills associated with physics research, including an integrated working knowledge of instrumentation and physical processes.

Optics Minor Assessment Matrix

| Course | Outcome 1 | Outcome 2 | Outcome 3 | Outcome 4 |
|----------|-----------|-----------|-----------|-----------|
| Phys 234 | a,e | b | | |
| Phys 235 | a,e | b | | |
| Phys 333 | d,e | d | d | d |
| Phys 338 | e | | | |
| Phys 435 | d,e | b,d | d | d |
| Phys 436 | d,e | b,d | d | d |
| Phys 445 | d,e | b,d | d | d |
| Engr 332 | e,b,d | e,b,d | | |
| Engr 425 | d,e | b,d | d | d |
| Phys 447 | d,e | b,d | d | |

Assessment Tools

- a) Force Concept Inventory standardized exam
- b) Performance on laboratory reports
- c) Conceptual Survey of Electricity and Magnetism standardized exam
- d) Analysis of calculations and writing in reports
- e) Homework and exams graded and returned

Timeline

The student learning outcomes in all the core courses will be assessed multiple times in a six year period. The FCI and CSEM exam results (tools a and c) will be assessed every other year starting Fall 2008; the remaining tools will be assessed every other year starting Fall 2009.