

Physics BS
2016-2017 Student Learning Outcomes

| Outcome | Assessment Methods |
|---|---|
| 1 <i>Students will demonstrate basic conceptual understanding of topics, for example, special relativity, wave-particle duality, properties of quantum mechanical wavefunctions, and limitations of classical physics.</i> | <i>Final exam questions Mid-term exam questions</i> |
| 2 <i>Students will apply their numerical and computational skills to solve complex problems involving, for example, Lagrangian mechanics, non-inertial reference frames, time evolution of a quantum state (computational), operators and commutators, spin, Maxwell's equations, and Laplace's equation (computational).</i> | <i>Final exam Homework assignments/projects</i> |
| 3 <i>Students will perform an advanced experimental project and data analysis, including, for example, distinguishing statistical and systematic errors, propagating errors, and representing data graphically.</i> | <i>Formal project report Oral presentation of project</i> |
| 4 <i>Students will successfully pursue graduate education after completing BS in physics</i> | <i>Survey Exit interviews</i> |
| 5 <i>Students will demonstrate a basic understanding of the research process.</i> | <i>Research proposal Homework assignment</i> |
| 6 <i>Students will apply modern techniques and methodologies to collect/produce data as well as to analyze and interpret it</i> | <i>Research reports Survey</i> |
| 7 <i>Students will demonstrate the ability to communicate their research findings to the department</i> | <i>Research reports Oral presentation of research</i> |