Physics Outcomes/Goals

For students in any physics class:

- The student will demonstrate the ability to think critically and to use appropriate concepts to analyze qualitatively problems and/or situations involving physics.
- The student will demonstrate the ability to use appropriate mathematical techniques and concepts to obtain quantitative solutions to problems in physics.
- Convert a physical situation articulated in English to a mathematical formulation, and then analyze it quantitatively.
- In courses involving laboratory, the student will demonstrate the ability to collect and analyze data and to prepare coherent reports of his or her findings.

For physics majors in particular:

- The student will demonstrate the ability to use appropriate calculator and/or computing tools to solve problems encountered in course work or in supervised study.
- The student will demonstrate the ability to synthesize appropriate concepts and methods from different courses in the solution of problems. Majors will demonstrate deeper understanding, and more complex problem solving skills with particular emphasis in the fundamental areas of classical mechanics, quantum mechanics, and electromagnetism.
- If working on a research project, the student will demonstrate the ability to perform a literature search, to make use of appropriate computational and/or laboratory skills, and to make an effective written and/or oral presentation of the results of the project.
- The student will be able to design and carry out experimental investigations, analyze data with appropriate treatment of errors and uncertainties, and form conclusions based on the data and analysis.
- Students will communicate physics concepts, processes, results, and issues effectively both orally and in writing.
- Students will be successful in pursuing graduate studies in physics, pursuing professional studies, or obtaining employment in a scientific environment.