

DEPARTMENTAL PLAN FOR ASSESSMENT OF STUDENT LEARNING
2004-2005 ACADEMIC YEAR

Department: Physics

Program: Doctor of Philosophy (Physics)

Mission Statement

The primary functions of the Physics Department are teaching, research and service. In accordance with the mission of the University, the department provides courses for physics majors and minors, and service courses to students in other programs in the College of Arts & Sciences and other units of the University.

Student Learning Goals

Student Learning Goal 1: Students will acquire competency in graduate level physics including mechanics, electromagnetism, quantum mechanics, statistical physics, and theoretical methods.

Student Learning Goal 2: Students will acquire skills to carry out programs of independent research at a research laboratory or as a university faculty member.

Student Learning Goal 3: Students will acquire skills in oral presentations and acquire experience in writing research papers.

Student Learning Goal 4: Students will develop analytical skills needed as a professional physicist.

| Student Learning Goals and Program Objectives | Educational Experiences | Assessment Methods | Timeline | Responsibility | Use of Results and Process of Documentation and Decision Making |
|--|--|---|--|---|--|
| 1. Students will acquire competency in graduate level physics including mechanics, electromagnetism, quantum mechanics, statistical physics and theoretical methods. | Physics graduate courses, 509, 510, 539, 540, 541, 542, 543, 545. | a) Average examination scores, samples of student work. b) Qualifying and comprehensive Examinations | a) Test scores and samples each semester. b) After completing required courses. | a) Instructors, b) Graduate Committee. Physics department. | a) Make adjustments to the course content and instructional method. b) Decide students qualifications |
| 2. Students will acquire skills to carry out programs of independent research at a research laboratory or as a university faculty member. | Physics course 590, 550 | Review of research project and dissertation | As directed | Doctoral committee | Contributions to the field of physics. |
| 3. Students will acquire skills in oral presentations and acquire experience in writing research papers. | Present papers to meetings and conferences Writing research papers and dissertation | Accepted papers Dissertation defense and oral presentations | As directed | Doctoral Advisor | Provide opportunities for practice and provide feedback. |
| 4. Students will develop analytical skills needed as a professional physicist. | All graduate classes | Examinations and homework. | Each semester | Course Instructors, Faculty research advisors | Adjustments to Pedagogy and the level and type of examinations homework. |