

Physics MS

Expanded Statement of Institutional Purpose

Institutional Mission Reference

The MS program of the Department of Physics offers graduate students high-quality instruction at an advanced professional level that meets national standards of excellence. This program supports the University's mission of providing advanced scientific education for the region, state, and nation.

Institutional Goal(s) Supported

This program supports the University's goals of high-quality graduate programs and high-quality teaching.

Intended Educational (Student) Outcomes, Methods for Assessment, Criteria for Success, Assessment Results, and Use of Results

Intended Outcome 1

Students must demonstrate the ability to communicate orally about topics in advanced physics.

Method for Assessing Outcome 1 and Criterion for Success: All students must complete one semester of a graduate seminar in which they are each required to make presentations on assigned topics. Their performances are judged by assigned faculty members. The presentation of a research paper at a national physics meeting can be substituted for one semester of this seminar.

Summary of Assessment Data Collected for Outcome 1: During the 2000-2001 academic year, four M.S. degrees were awarded in Physics. All of these students had successfully completed the seminar requirement for this degree.

Alternate Method for Assessing Outcome 1 and Criterion for Success: A student who chooses the thesis-option must defend the thesis in an oral examination conducted by his or her faculty advisory committee.

Summary of Assessment Data Collected, Alternate Method for Outcome 1: This option was not exercised by any students during this reporting period.

Intended Outcome 2

Students must demonstrate the ability to communicate in writing about topics in advanced physics.

Method for Assessing Outcome 2 and Criterion for Success: All students must complete a prescribed core of courses in advanced physics in which writing is a significant component.

Summary of Assessment Data Collected for Outcome 2: The four students receiving M.S. degrees during the 2000-2001 academic year have satisfactorily completed the requisite advanced courses.

Alternate Method for Assessing Outcome 2 and Criterion for Success: A student who chooses the thesis-option must submit a thesis based on his or her research, and the quality of the writing is one of the criteria used to approve that thesis.

Summary of Assessment Data Collected, Alternate Method for Outcome 2: No students chose to complete their degree via the thesis option during the current reporting period.

Intended Outcome 3

Students must demonstrate mastery of physics at an advanced level.

Method for Assessing Outcome 3 and Criterion for Success: A student who chooses the no-thesis option for completing the MS must pass a comprehensive written examination in advanced physics.

Summary of Assessment Data Collected for Outcome 3: A total of nine students took the M.S. level written examination during the 2000-2001 academic year. Of these seven passed and two failed.

Alternate Method for Assessing Outcome 3 and Criterion for Success: A student who chooses the thesis-option must complete and present a thesis based on his or her research. A faculty advisory committee must approve the thesis and conduct a final oral examination in which the student defends the thesis.

Summary of Assessment Data Collected, Alternate Method for Outcome 3: This option was not exercised by any students during this reporting period.

Alternate Method for Assessing Outcome 3 and Criterion for Success: All students must pass a core of prescribed courses in advanced physics with an average grade of B or better.

Summary of Assessment Data Collected, Alternate Method for Outcome 3: The four students receiving M.S. degrees during the 2000-2001 academic year completed the core courses with an average grade in excess of B.