

**Assessment Activities
Physics**

<i>University Assessment Goals</i>	<i>Program Outcomes</i>	<i>Assessment Procedures and Criteria</i>	<i>Assessment Results</i>	<i>Use of Assessment Results/Change</i>
1. Graduates will demonstrate disciplinary competence and/or professional proficiency.	Students will have demonstrated the skills appropriate to graduate-level physics, including conceptual problem solving ability, proficiency in advanced mathematics, proficiency in theoretical or experimental project design, expertise in employing computer software, proficiency in communication through writing and oral presentations.	Students will pass the Graduate Comprehensive Exams in physics. Students will successfully complete the core courses in physics. Students will complete and defend a thesis (Plan A) or a research report (Plan B). Students will present seminars in PHY 791 each semester. Students will give presentations at local, regional, or national meetings.	A total of 33 exams were taken by 14 students during the assessment period. 73% of the exams had passing scores. After the allowed 3 attempts, only one student was unable to pass all three parts. This case was favorably resolved by an oral exam conducted by the student's thesis committee. One student was dismissed for poor grades. The others successfully completed their courses. Only one student had to change from Plan A to Plan B in completing the M.S. degree. All students are active in giving seminars and other presentations.	We give remedial assistance to students who failed a part of the Comprehensive Exam. This procedure was crucial in enabling one student to pass the exams after several failures. The level of the core courses is appropriate to graduate-level course work with positive outcomes for the students Careful monitoring of progress of students towards finishing Plan A needs to be sustained. Students are benefiting from giving presentations on their research.
2. Graduates will demonstrate critical thinking skills.	Students will complete a thesis (Plan A) or a research report (Plan B).	Students will defend their thesis as judged by a three-member thesis committee (Plan A). In Plan B, the student's research advisor will review and approve the research report which is then documented by the program director.	All Plan A student successfully completed and defended their theses. Plan B students were successful in completing their research reports.	The systems are working well.
3. Graduates will demonstrate Ignatian values, to include but not limited to a commitment to an exploration of faith and the promotion of justice.	Students will understand the value of ethical action, both in their personal lives and in their professional lives.	Evaluation of focus papers on specific ethical issues in science in PHY 791(Seminar). Participation in the annual physics department retreat in which the focus is on a particular ethical issue related to science.	All of the focus papers were graded as acceptable. There was full participation at the annual retreat.	Upon review, no change is anticipated.
4. Graduates will demonstrate the ability to communicate clearly and effectively.	Students will register in Seminar each semester to present a progress report on their research and to be able to formulate appropriate questions to ask other presenters.	The Seminar audience fill out a critique form that is collected by the moderator. The results are shared with the student presenter in order to determine where improvement is needed.	Improvement is monitored each semester by the moderator. Participation by students asking questions is also monitored.	The system is working well, so no major change is anticipated.
5. Graduates will demonstrate deliberative reflection for personal and professional formation.	Students will take PHY 591 for one semester in which they will get experience in writing a resume and how to conduct a job interview. Graduate Teaching Fellows will take PHY 785 in	Students will pass the requirements for PHY 591. Students will pass PHY 785 and demonstrate effectiveness in teaching physics through personal observation by faculty	All students successfully completed these courses.	Feedback from faculty and students led to the development of a week-long TF training workshop in lieu of PHY 785. This was first conducted in August 2011. We anticipate

	which they will be exposed to the theory and practice of teaching physics.	and through student evaluations.		continuing with the workshop format instead of the required 785 course. Feedback is given to the Teaching Fellows through discussion with faculty observers and through results of the evaluations.
6. Graduates will demonstrate the ability to work effectively across race, ethnicity, culture, gender, religion, and sexual orientation.	Students are assigned work groups in most core courses and laboratory courses so that they can work as a team. Our student body is a mixture of genders, religions, races, ethnicity, and, perhaps, sexual orientation. Students also share office space with each other.	Teachers in the affected courses monitor and assess effective team work. The program director gets spontaneous feedback from students about shared office experiences.	There have been no problems noticed in this area.	These mechanisms are working well and need no major changes.