

2008

Mission

The mission of the Department of Physics is to provide students with an education in the fundamental processes of the physical world with thorough study in both the classroom and laboratory.

Goals and Outcomes

Goal 1: Physics majors will finish the program sufficiently well grounded in the fundamentals of physics so that they are prepared for graduate study or professional work in physics, engineering, education and related fields.

Outcome 1: Students will demonstrate knowledge of Waves.

Outcome 2: Students will demonstrate knowledge of Mechanics.

Outcome 3: Students will demonstrate knowledge of Electricity and Magnetism.

Outcome 4: Students will demonstrate knowledge of Modern Physics.

Outcome 5: Students will demonstrate knowledge of Thermal Physics.

Goal 2: Physics majors will finish the program with wide-ranging analytical and problem solving skills.

Outcome 6: Students will demonstrate the ability to analyze a variety of physics problems.

Goal 3: Physics majors will acquire the skills necessary to investigate and communicate scientific results.

Outcome 7: Students will be able to investigate an area of physics and explain that research to other students at a similar level.

Goal 4: Physics majors will acquire the technical and analytical skills necessary to test physics in the laboratory.

Outcome 8: Students will demonstrate technical skills needed for lab work in Physics.

Assessment Plan

Outcome 9: Students will demonstrate analytical skills needed for lab work in Physics.

Goal 5: Physics majors will have the skills necessary to participate in research projects.

Outcome 10: Participating students will demonstrate the ability to independently take, analyze, evaluate and/or explain data concerning a question of current research interest.

Course/Program Alignment

Outcomes will be introduced, developed and practiced with feedback, and demonstrated at their highest levels as shown below. Outcomes 1-5 are assessed with an exam that is part of the comps requirement. This exam is given in P390/391. Outcome 6 is also assessed with this exam, plus alumni feedback obtained via survey. Outcome 7 is assessed in P390/391 using a rubric. Outcomes 8 and 9 are assessed using a practicum exam at the end of the lab associated with P240. Outcome 10 is assessed for participating students by successful completion of research programs, and resulting conference presentations, honors theses, and published papers.

(Key: I= Introduced, D=Developed and practiced with feedback; M=Demonstrated at a specified mastery level)

	Outcomes									
	1	2	3	4	5	6	7	8	9	10
P106	I,D					I,D		I,D	I,D	I,D
P110		I,D				D		D	D	D
P120	D		I,D			D		D	D	D
P240	D			I,D		D		D,M	D,M	D
P250					I,D	D				D
P310	D	D	D	D		D				D
P315/P316						D		D	D	D
P320		D				D				D
P330	D		D			D				D
P340	D			D		D				D
P390	M	M	M	M	M	M	I,D			D
P391	M	M	M	M	M	M	M			D

Implementation of Assessment

Responsibility for implementing the assessment lies with the entire department. Confident that outcomes are reflected in actual coursework of your major/program, describe the mechanisms for assessment. Think of assessing your outcomes on a 4 or 5 year cycle. (If you have 10 outcomes assessing 2 a year is ideal.) This part of your assessment plan must include the answers to the following questions:

Assessment Cycle

AY 2006-2007 – Outcomes 2 and 3. Assessed using scores on different sections of the Comps exam.

AY 2007-2008 – Outcomes 4 and 5. Assessed using scores on different sections of the Comps exam.

AY 2008-2009 – Outcomes 1. Assessed using scores on the Comps exam.
Outcome 6. Assessed using total scores on the Comps exam and alumni feedback obtained via survey.

AY 2009-2010 – Outcome 8. Assessed using a practicum exam associated with the lab component of 240.
Outcome 9. Assessed using a practicum exam associated with the lab component of 240.

AY 2010-2011 – Outcome 7. Assessed using the rubrics in 390/391.
Outcome 10. Assessed using numbers of students participating in research projects (on or off campus), making presentations at local or national conferences, co-authoring published papers and/or completing theses.

Data for all outcomes will be collected every year, except for the alumni survey associated with Outcome 6. This will be collected every other year when we collect information for our alumni newsletter. Analysis of the data will follow the schedule given above.

The department chair is responsible for gathering the assessment data and insuring that discussion takes place. This year (2007-08), Dennis Eggleston will do this.

Results will be shared in department meetings. This will occur near the end of the academic year as soon as comps exam data for the year are available.