

Graduate Degree & Subject: MS in Physics/Astronomy
Graduate Director: William Oliver

REPORT FOR AY 2011-2012

INDIRECT DATA: Answer this set of questions (i.e., complete this chart) for EACH of the indirect assessments you used.

	QUESTIONS TO ANSWER	PLEASE WRITE OR TYPE THE INFORMATION IN THIS COLUMN The boxes will expand as you type.
Objectives for Assessment	List the objective(s) assessed.	<ol style="list-style-type: none"> 1. Satisfaction with program at time of graduation 2. Success in chosen career
INDIRECT DATA Collection & Review	Briefly describe the assessment. <i>I.e., written survey; focus group; conversation with advisor, alumni survey, count of graduates' peer reviewed journal articles in the first five years after graduation, leadership roles ten years after graduation...</i>	<ol style="list-style-type: none"> 1. Graduate Exit Survey 2. Alumni survey
	At what point in your students' program was this indirect assessment conducted? <i>I.e., just prior to graduation after all degree requirements have been completed; upon completion of the comprehensive exams; five years after graduation; in the required research methods course generally taken in the first semester of the program...</i>	<ol style="list-style-type: none"> 1. Just prior to graduation 2. At the present time
	Briefly describe how the data was collected.	<ol style="list-style-type: none"> 1. From the Graduate Exit Survey conducted by the Tufts Office of Institutional Research and Evaluation 2. Primarily from the Tufts Graduate Alumni Office
	When was the data collected? <i>I.e., month or semester and year.</i>	<ol style="list-style-type: none"> 1. 2010 – 2011 2. Spring 2012
	Who reviewed the aggregated data for this assessment to determine trends in student learning? <i>Provide the role of the individual(s) rather than their names.</i>	The Director of the Graduate Program

DIRECT DATA: Answer this set of questions (i.e., complete this chart) for EACH of the direct assessments you used.

	QUESTIONS TO ANSWER	PLEASE WRITE OR TYPE THE INFORMATION IN THIS COLUMN
Objectives for Assessment	List the objective(s) assessed.	Ability to use advanced mathematics to model, describe, and analyze physical phenomena.
DIRECT DATA Collection & Review	Briefly describe the student work that was used for this assessment. <i>I.e., written comprehensive exam question; dissertation defense, master's thesis, performance...</i>	Performance on the final exams for Physics 145 and Physics 163 in December 2011
	At what point in their program did the students complete this work? <i>I.e., just prior to graduation after all degree requirements have been completed; upon completion of the comprehensive exams; five years after graduation; in the required research methods course generally taken in the first semester of the program...</i>	After the first semester of course work
	Briefly describe how the student work samples were collected.	The instructors in the course made copies of the final exams submitted
	When were the student work samples collected? <i>I.e., month or semester and year.</i>	December 2011
	Briefly describe the review process used. <i>I.e., number of reviewers, role of the reviewers, and any tools like a rubric or checklist.</i>	The instructor in each of the two courses evaluated the student performance based on a rubric adopted by the Department
	Who reviewed the aggregated data for this assessment to determine trends in student learning? <i>Provide the role of the individual(s) rather than their names.</i>	The Director of Graduate Studies

ASSESSMENT RESULTS:

	QUESTIONS TO ANSWER	PLEASE WRITE OR TYPE THE INFORMATION IN THIS COLUMN
STRENGTHS & CHALLENGES IDENTIFIED	What strengths were identified? <i>Strengths are areas where the students met or exceeded the degree of sophistication or the standard of performance you were hoping to see, or where students express great satisfaction with their learning experience.</i>	The mathematical abilities of the students met the standard of performance required in the two courses.
	What challenges were identified? <i>Challenges are areas where you would like to improve your students' learning experience, degree of sophistication or standard of performance.</i>	The students need further development of their physical intuition.
TARGETS FOR IMPROVEMENT	What challenges were targeted for improvement?	Development of physical intuition.
	What individual or group determined the strategies used to address the challenges? <i>Provide the role of the individual(s) rather than their names.</i>	The Director of the Graduate Program and the two instructors.

CHALLENGES ADDRESSED: Answer this set of questions (i.e., complete this chart) for EACH of the challenges you chose to address.

	QUESTIONS TO ANSWER	PLEASE WRITE OR TYPE THE INFORMATION IN THIS COLUMN
STRATEGY FOR IMPROVEMENT	Challenge	Development of physical intuition
	What strategies were implemented to address this challenge?	One possibility is to extend the lecture time to enable the instructor to discuss with the students the application of the theory to interesting physical systems
	What resources were needed to implement the strategies?	The instructors would have to work slightly longer hours
	Were those resources available/approved?	Availability of the resources will be discussed in a department meeting in fall 2012

DATA SHARING:

	QUESTIONS TO ANSWER	PLEASE WRITE OR TYPE THE INFORMATION IN THIS COLUMN
REPORTING ASSESSMENT RESULTS	When and in what forum were the <u>assessment results</u> reported to the faculty and administration?	The assessment results will be discussed in a department meeting in fall 2012
	When and in what forum were the <u>strategies to address challenges</u> reported to the faculty and administration?	For now the strategies have been reported to the department faculty by email