

**UNIVERSITY OF CALIFORNIA, SAN DIEGO
EDUCATIONAL EFFECTIVENESS REVIEW
PRESCRIBED EXHIBITS AND DATA DISPLAYS**

**Table 7.1b
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Inventory of Educational Effectiveness Indicators - Graduate
(as of 06/2015)

Department/ Program	Degree Type	Degree	(2) What are these learning outcomes? Where are they published?			(3) What data/evidence is used to determine that graduates have achieved the stated outcomes?	(4) Who interprets the evidence? What is the Process?	
				Program Website	Catalog Copy			
Physics (1) Formal learning outcomes? Yes (6) Date of last Academic Senate Review: 2011-12	Master of Science	Physics	Be knowledgeable about the field of physics and biophysics	Program Website	Catalog Copy	Comprehensive examination	Department Faculty	Complete coursework and pass comprehensive exam
		Physics with Specialization in Materials Physics	Be knowledgeable about the field of physics with a special concentration in material physics.	Program Website	Catalog Copy	Comprehensive examination	Department Faculty	Complete coursework and pass comprehensive exam
	Doctor of Philosophy	Physics	Understand a broad advanced education in physics while also emphasizing their special interests.	Program Website	Catalog Copy	Written examination, physics teaching, written thesis and oral defense	Department Faculty and Doctoral Committee	Pass all examinations, complete all requirements and training, write dissertation and defend in an oral examination.
		Physics Biophysics	Be prepared for a career in biophysics.	Program Website	Catalog Copy	Written examination, physics teaching, written thesis and oral defense	Department Faculty and Doctoral Committee	Pass all examinations, complete all requirements and training, write dissertation and defend in an oral examination.
		Physics with Specialization in Bioinformatics	Be equipped with interdisciplinary skills needed in businesses such as the pharmaceutical industry, agrobusiness, and biotechnology companies, or in academia, where there is a great need for academic faculty who have broad, interdisciplinary training.	Program Website	Catalog Copy	Qualifying examinations, teaching requirement, research training, written dissertation and oral examination in defense of dissertation	Interdisciplinary Doctoral Committee comprised of members of home department, Bioinformatics, and other faculty.	Pass all examinations, complete requirements and training for both departments, write dissertation and defend in an oral examination.

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Physics (continued)		Physics with Specialization in Quantitative Biology	Equip students of strong quantitative background with knowledge and skills necessary to lead quantitative, multi- facet investigation of living systems	Program Website	Catalog Copy	Qualifying examinations, teaching requirement, research training, written dissertation and oral examination in defense of dissertation	Department Faculty and Doctoral Committee	Pass all examinations, complete all requirements and training, write dissertation and defend in an oral examination.
		Physics with Specialization in Computational Science	This Ph.D. specialization is designed to allow students to obtain standard basic training in their chosen field of science, mathematics, or engineering with a specialization in computational science integrated into their graduate studies.	Program Website	Catalog Copy	Qualifying examinations, teaching requirement, research training, written dissertation and oral examination in defense of dissertation	Department Faculty, Doctoral Committee	Pass all examinations, complete all requirements and training, write dissertation and defend in an oral examination.
		Physics with Specialization in Multi-Scale Biology	The training outcomes (as summarized on the program website and catalog pages) include (1) experience in cross- disciplinary science at the interfaces between two or more scientific disciplines; (2) hands-on experience in specialized research technologies for probing biological structure and function at multiple scales of biological organization; and (3) familiarity with integrative, quantitative analysis from molecule to organism scales.	Program Website	Catalog Copy	Qualifying examinations, teaching requirement, research training, written dissertation and oral examination in defense of dissertation	Interdisciplinary doctoral committee comprised of re-quired co-mentor(s) from outside the home department, as well as members of home depart-ment, and other faculty per UCSD committee standards.	Complete both home department requirements and Interfaces Ph.D. Specialization in Multi- Scale Biology program requirements and training, write dissertation and defend in an oral examination.