UNIVERSITY OF CALIFORNIA, SAN DIEGO
EDUCATIONAL EFFECTIVENESS REVIEW
PRESCRIBED EXHIBITS AND DATA DISPLAYS
Table 7.1b

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?	
Chemistry and Biochemistry **(1) Formal learning outcomes?** Yes **(6) Date of last Academic Senate Review:** 2007-08 Joint Doctoral Program Review: 2009-10	Master of Science	Chemistry	Designed for students who wish to earn a thesis or coursework M.S. in Chemistry as a stepping stone to jobs in industry, higher education, or teaching careers.	Program Website	Catalog Copy	Plan 1: Written master's thesis; Plan 2: American Chemical Society Exam (must pass 3 out of 5 exams). For doctoral students earning the M.S. on the way to the Ph.D., the departmental examination fulfills this requirement.	Plan 1: Thesis Committee. Plan 2: American Chemical Society	Plan 1: Write master's thesis and oral examination in defense of thesis. Plan 2: Must pass three of five exams.
	Doctor of Philosophy	Chemistry	Be prepared for careers in science by expanding their knowledge of chemistry while developing their ability for critical analysis, creativity, and independent study.	Program Website	Catalog Copy	Placement, departmental, and qualifying exams, teaching requirement, written doctoral dissertation, and oral examination in defense of the dissertation	Faculty and Doctoral Committee	Pass exams, fulfill teaching requirement, write dissertation, and successfully defend it in an oral examination.
		Chemistry (Joint Doctorate with SDSU)	Designed for students who, after completing a year of master's level studies in the Chemistry Department at San Diego State University, wish to pursue a doctoral degree in preparation for careers in academia or industry.	Program Website	Catalog Copy	Qualifying examinations, written dissertation and oral examination in defense of dissertation	Doctoral Committee (UCSD and SDSU faculty). The thesis adviser is an SDSU faculty member.	Pass examinations, write dissertation, and defend dissertation in an oral examination

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Chemistry and Biochemistry (continued)		Chemistry 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.
		Chemistry 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, Interdisciplinary Doctoral Committee	Pass all examinations, complete all requirements and training, write dissertation and defend in an oral examination.
		Chemistry 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.

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Chemistry and Biochemistry (continued)		Chemistry with Specialization in Quantitative Biology	This Ph.D. specialization is designed to train students to develop and apply quantitative theoretical and experimental approaches to studying fundamental principles of living systems.	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.	Pass all examinations, complete requirements and training for both departments, write dissertation and defend in an oral examination.