

MOLECULAR CELLULAR AND DEVELOPMENTAL BIOLOGY

<http://www.mcdb.ucsb.edu>

College of Letters and Science

University of California, Santa Barbara

Student Name: _____ Perm: _____ Qtr/Yr Enrolled: _____

DOCTOR OF PHILOSOPHY – MOLECULAR, CELLULAR AND DEVELOPMENTAL BIOLOGY – 2018-19

In addition to departmental requirements, candidates for graduate degrees must fulfill University requirements described in the “Graduate Education” section of the UCSB General Catalog.

Ph.D. students in the program are required to demonstrate competency in fundamental areas of molecular, cellular and developmental biology by completing a minimum of 30 units distributed as follows: core course modules (16 units), other required courses (2 units), elective courses, literature courses and research (12 units). Courses must be completed with an average of a B or better in the core course modules given each quarter with no grade lower than a "C" in a module, and a B or better in elective courses. It is expected that all Ph.D. students are enrolled as full-time students and earn a minimum of 12 course units each quarter, and that most of the core requirements will be completed during the first year of graduate study. Time-to-Degree: 3 years to advance to candidacy, 6 years to complete the degree

CORE COURSES (16 units)				
COURSE #	COURSE NAME	UNITS	QTR/YR	GRADE
MCDB 229	Protein Biochemistry	2	F	
MCDB 235	Experimental Strategies in Molecular Genetics	1	F	
BMSE 205A	Biochemical Techniques	1	F	
MCDB 220A	Chromosomes and Cell Cycle	2	W	
MCDB 220B	The Cytoskeleton	2	W	
MCDB 220C	From RNA to Membranes	2	W	
MCDB 230	Gene Regulation	2	W	
MCDB 223	Signal Transduction	2	S	
MCDB 225	Development	2	S	
OTHER REQUIRED COURSES (2 units)				
MCDB 221	Preparation and Evaluation of Research Proposals	2	S	
ELECTIVE COURSES (≥3 units)				
At least 3 additional units of MCDB graduate lecture courses, or other courses approved by petition to the Graduate Advisor, are required.				

LITERATURE COURSES (4 units)					
Two graduate literature courses (MCDB 265, 266, 268, 595) must be taken each year until Advancement to Candidacy. <u>Up to 4 units</u> of graduate literature courses may be counted toward the degree unit requirement.					
COURSE #	QUARTER/YEAR	UNITS	COURSE #	QUARTER/YEAR	UNITS

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LABORATORY ROTATIONS

MCDB students in the MCDB doctoral program (Ph.D. or M.A./Ph.D.) who are supported wholly or in part by institutional funds (including University and departmental fellowships, traineeships, etc.) are expected to complete three one-quarter long laboratory rotations during their first year of study. For first-year students supported entirely by faculty research grants, the three rotations are not required. Lab rotation consists of 3 units of MCDB 596 per qtr.

COURSE #	QUARTER/YEAR	UNITS	ADVISOR	GRADE
MCDB 596				
MCDB 596				
MCDB 596				

TEACHING REQUIREMENT

All MCDB students are required to serve as teaching assistants for at least two quarters during their entire course of study at UCSB, and to complete MCDB 500, 502, and 2 quarters of MCDB 501 (4 units=50% TAship, no credit towards degree).

COURSE #	COURSE NAME	QTR/YEAR	GRADE	COURSE #	COURSE NAME	QTR/YEAR	GRADE
MCDB 500	TA Orientation			MCDB 501	Practicum in Instruction		
MCDB 502	Teaching Techniques			MCDB 501	Practicum in Instruction		

SEMINAR REQUIREMENTS

Students are expected to enroll & regularly attend MCDB 262 (Research Progress in MCDB (FNS)) as well as MCDB's weekly research seminars MCDB 260 and MCDB 263 each quarter. After Advancement to Candidacy, students are expected to present a formal seminar annually in MCDB 262 (FNS), and are required to meet annually with their Ph.D. dissertation committee until completion and defense of the Ph.D. dissertation.

COURSE #	REQUIREMENT	FULFILLED	COURSE #	REQUIREMENT	FULFILLED
MCDB 262	FNS Seminar, 1 unit each quarter		MCDB 260	Research Seminar, 1 unit each quarter	
MCDB 262	Presentation of one seminar per year after Advancement		MCDB 263	Research Seminar, 1 unit each quarter	

RESEARCH PROPOSITION EXAM

Students must receive a passing evaluation for performance on the proposition exam. The exam focuses on a research proposition by the student in an area that is different from their dissertation research. The exam consists of a written research proposition by the student, followed by an oral defense of the research proposition, and includes evaluation of general knowledge in MCD Biology.

Date Exam Completed: _____

ADVANCEMENT TO CANDIDACY

Students must receive a passing evaluation on the Advancement to Candidacy appraisal. The assessment consists of a formal conference with the student's dissertation committee focusing on the dissertation prospectus and subject matter appropriate to the area of research.

Date Exam Completed: _____

DISSERTATION

An approved written dissertation, final Ph.D. seminar and oral defense of the dissertation.

Dissertation Committee: Chair: _____

Member: _____

Member: _____

Member: _____

Date Requirement Completed: _____