

## CELL AND MOLECULAR BIOLOGY, PHD

The Department of Cell and Molecular Biology offers a Doctor of Philosophy degree. The active research opportunities in the department are mostly concentrated in two fields, developmental biology and neuroscience.

Over the course of their first two years, students will take classes aligned with their backgrounds and interests, attend seminars, and serve as teaching assistants. In their first year of the doctoral program specifically, students are expected to rotate through labs within the department and join a lab in which they will continue their dissertation research. Typically, students complete a prospectus in the third year and complete a dissertation in the fifth year.

### Requirements

Students will complete 48 credit hours of course work with at least a 3.0 GPA (FIRM). Credit hours should be complete by the end of second year (4th semester).

Core required courses include: Cell Biology CELL 6750, CMB Doctoral Seminar CELL 7870, Advanced Molecular Biology (CELL 6440), and a journal club course (NSCI 6040 or CELL 6840).

Course ID	Title	Credits
CELL 6000		3
CELL 6010/4010	Cellular Biochemistry	3
CELL 6030/3030	Molecular Biology	3
CELL 6035/3035	Molecular Biology Lab	1
NSCI 6040	Trends In Neuroscience	1
CELL 6050/3050	Foundations of Pharmacology	3
CELL 6070	Neurobiology of Aging	3
CELL 6080	Adv Dev & Cell Biol II	3
CELL 6110/4110	Human Histology	4
CELL 6130/4130	Embryology	3
CELL 6160/4160	Developmental Biology	3
CELL 6180	Biomedical Research in Animals	3
CELL 6200/4200	General Endocrinology	3
CELL 6210/3210	Physiology	3
CELL 6220/4220	Microbiology	3
CELL 6225/4225	Microbiology lab	1
CELL 6230	Virology	3
CELL 6310/3310	Cellular Neuroscience	3
CELL 6320/3320	Systems Neuroscience	3
CELL 6340/4340	Neurobiology of Disease	3
CELL 6350/4350	Developmental Neurobiol	3
CELL 6370/4370	Molecular Neurobiology	3
CELL 6400/3400	Regenerative Biology	3
CELL 6440/4440	Adv Molecular Biology	3
CELL 6550	Synaptic Organization of the Brain	3
CELL 6710/4710	Molecular Biology of Cancer	3
CELL 6750/3750	Cell Biology	3
CELL 6755/3755	Cell Biology Lab	1
CELL 6840	Current Topics Dev Biol	2
CELL 7110	Research Rotations	3
CELL 7120	Research Rotations	3
CELL 7130	Research	2-10
CELL 7260	Graduate Communications	3
CELL 7450/6450/4450	Genome Biology	3

CELL 7870

Doctoral Seminar

1

CELL 9990

Dissertation Research

3