

# MOLECULAR BIOLOGY - DOCTOR OF PHILOSOPHY

Prefix	Title	Credits
<b>Phase I Core Courses</b>		
MOLB 520	Molecular Cell Biology	3
MOLB 542	Biochemistry I	3
MOLB 545	Molecular and Biochemical Genetics	3
<b>Molecular Biology Tier II Courses</b>		
Select at least 9 credits from the following:		9
AGRO 516	Molecular Analysis of Complex Traits	
ANSC 602	Advanced Reproductive Physiology	
ANSC 621	Metabolic Functions and Dysfunctions	
GENE 486	Genes and Genomes	
BCHE 546	Biochemistry II: Central and Intermediary Metabolism	
BCHE 647	Physical Biochemistry	
BIOL 451	Physiology of Microorganisms	
BIOL 470	Developmental Biology	
BIOL 474	Immunology	
BIOL 475	Virology	
BIOL 477	Applied and Environmental Microbiology	
BIOL 478	Molecular Biology of Microorganisms	
BIOL 490	Neurobiology	
BIOL 541	Professional Development Seminar	
BIOL 550	Special Topics	
BIOL 577	Advanced Topics in Environmental Microbiology	
BIOL 590	Neuroscience	
BIOL 698	Selected Topics	
EPWS 486	Plant Virology	
MOLB 546	Biochemistry II	
MOLB 650	Advanced Topics in Molecular Biology	
TOX 461	Toxicology I	
<b>Other Course Requirements</b>		
A ST 505	Statistical Inference I (or equivalent course)	4
BIOL 540	Science and Ethics	1-3
BIOL 490	Neurobiology	3
MOLB 590	Discussions in Molecular Biology	1
MOLB 597	Laboratory Rotations/Research Discussions	1-3
Dissertation		18
MOLB 700	Doctoral Dissertation Research	
<b>Total Credits</b>		<b>46-50</b>

<sup>1</sup> PhD candidates must enroll for 18 credits MOLB 700 Doctoral Dissertation Research. May register for additional credits to maintain full-time status.

The Molecular Biology program also offers formal minors in molecular biology or bioinformatics.