

Spring 2014 Molecular Biology Major Courses

1. Mathematics

Subject Descr	Number	Course Title	Credits
MATH	211	Calculus	5
MATH	213	Calc/Intro-Differntl Equats	3
MATH	217	Calc with Algebra & Trig II	5
MATH	221	Calculus&Analytic Geometry	5
MATH	222	Calculus&Analytic Geometry	4
STATISTICS	301	Intro-Statistical Methods	3
STATISTICS	371	Intro Applied Stats-Life Sci	3

2. Chemistry

a. General and Analytical Chemistry

Subject Descr	Number	Course Title	Credits
CHEMISTRY	103	General Chemistry	4
CHEMISTRY	104	General Chemistry	5
CHEMISTRY	116	Chemical Principles II	5
CHEMISTRY	327	Fundamentals of Analytical Sci	4
CHEMISTRY	329	Fundamentals of Analytical Sci	4

b. Organic Chemistry

Subject Descr	Number	Course Title	Credits
CHEMISTRY	343	Intro Organic Chemistry	3
CHEMISTRY	344	Intro Organic Chemistry Lab	2
CHEMISTRY	345	Intmed Organic Chemistry	3

3. Physics

Subject Descr	Number	Course Title	Credits
PHYSICS	201	General Physics	5
PHYSICS	202	General Physics	5
PHYSICS	207	General Physics	5
PHYSICS	208	General Physics	5

4. Introductory Biology

a. General Biology and Genetics

Subject Descr	Number	Course Title	Credits
BIO/BOT/ZOO	151	Introductory Biology	5
BIO/BOT/ZOO	152	Introductory Biology	5
BIOCORE	383	Cellular Biology	3
BIOCORE	384	Cellular Biology Lab	2
BOTANY/GENETICS/ZOOLOGY	466	General Genetics	3

b. Biochemistry

Subject Descr	Number	Course Title	Credits
BIOCHEMISTRY	501	Introduction-Biochemistry	3
BIOCHEMISTRY	508	General Biochemistry II	3
BIOMOLECULAR CHEM	503	Human Biochemistry	3

c. Molecular Biology

Subject Descr	Number	Course Title	Credits	Hon in Maj?
BIOCHEMISTRY/PHARMACOLOGY	620	Eukaryotic Molecular Biology	3	Yes
GENETICS	545	Genetics Laboratory	2	
HORTICULTURE/PATHO-BIO SCI	500	Molecular Biology Techniques	3	

5. Advanced Courses

a. Development

Subject Descr	Number	Course Title	Credits	Hon in Maj?
BOTANY	500	Plant Physiology	4	Yes
ZOOLOGY	470	Intro to Animal Development	3	Yes

b. Microbiology

Subject Descr	Number	Course Title	Credits	Hon in Maj?
BIOCHEMISTRY//MED MICRO	575	Biology of Viruses	2	
BOTANY/ENTOMOLOGY/PLANT PATH	505	Plant-Microbe Interactions	3	Yes
MICROBIOLOGY	303	Biology of Microorganisms	3	
MICROBIOLOGY	304	Biology of Microorganisms Lab	2	
MICROBIOLOGY	330	Host-Parasite Interactions	3	

c. Genetics

Subject Descr	Number	Course Title	Credits	Hon in Maj?
AGRONOMY/HORTICULTURE	338	Plant Breeding&Biotechnolgy	3	
BOTANY/GENETICS/HORTICULTURE	561	Introductory Cytogenetics	3	Yes
GENETICS	566	Advanced Genetics	3	
MICROBIOLOGY	470	Micro Genetics & Mol Machines	3	

d. Cell Biology (Endocrinology, Neurobiology, Immunology)

Subject Descr	Number	Course Title	Credits	Hon in Maj?
BIOCORE	587	Biological Interactions	3	
MM&I	341	Immunology	3	
PATH & LAB MED	750	Cellulr & Moleclr Biol/Path	3	

e. Biochemistry and Physical Chemistry

Subject Descr	Number	Course Title	Credits	Hon in Maj?
BIOCHEMISTRY/NUTRI SCI	510	Biochm Prin-Human&Anml Nutr	3	
BIOCHEMISTRY	550	Topics in Medical Biochem	2	Yes
BIOCHEMISTRY/BOTANY	621	Plant Biochemistry	3	Yes
BIOCHEMISTRY	651	Biochemical Methods	3	Yes
CHEMISTRY	561	Physical Chemistry	3	Yes

f. Quantitative and Computational Sciences

Subject Descr	Number	Course Title	Credits	Hon in Maj?
BIOSTAT/COMP SCI	776	Advanced Bioinformatics	3	Yes
F&W ECOLOGY/HORTICULTURE/STATS	572	Stat Meth for Bioscience II	4	Yes
STATISTICS	333	Applied Regression Analysis	3	

6. Lab Courses or Independent Research

Subject Descr	Number	Course Title	Credits
BIOCHEMISTRY	651	Biochemical Methods	3
BIOMOLECULAR CHEM	504	Human Biochemistry Lab	2
HORTICULTURE/PATHO-BIO SCI	500	Molecular Biology Techniques	3
MICROBIOLOGY	304	Biology of Microorganisms Lab	2
MOLECULAR BIOLOGY	681	Senior Honors Thesis	3
MOLECULAR BIOLOGY	682	Senior Honors Thesis	3
MOLECULAR BIOLOGY	691	Senior Thesis	3
MOLECULAR BIOLOGY	692	Senior Thesis	3
MOLECULAR BIOLOGY	699	Directed Studies-Molec Biol	1 to 4

Hon in Maj? Yes: indicates that the course automatically counts for Honors in the Major