

Biochemistry and Molecular Biology

Biochemistry and molecular biology involve the interdisciplinary study of the chemical and physical properties of living matter and the chemical changes that take place during life processes. This field requires preparation in chemistry and biology as well as biochemistry and molecular biology. Careers exist in medical, pharmaceutical, food processing, and agricultural laboratories. Graduates also will have excellent preparation for graduate school or schools of medicine, dentistry, veterinary science, and business.

B.S. in Biochemistry and Molecular Biology,		Credits	
First Year		F	S
Biol 150	General Biology I	3	
Biol 150L	General Biology Lab I	1	
Chem 150, 151 (or Chem 121, 122)	Principles of Chemistry I, II	3	3
Chem 160, 161 (or Chem 121L, 122L)	Principles of Chemistry I, II Labs	1	1
Engl. 120	College Composition	3	
Math 165, 166	Calculus I, II	4	4
Gen. Educ.**	Wellness and General Ed. Electives		6
		15	15
Second Year			
Comm 110	Fund. Public Speaking		3
Chem 341, 342	Organic Chemistry I, II	3	3
Chem 353, 354	Organic Chemistry I, II Majors Labs	1	2
Biol 315*	Genetics	3	
Phys 251, 252	University Physics I, II	4	4
Phys 251L, 252L	University Physics Laboratory I, II	1	1
Gen. Educ.**	General Ed. and other Electives	3	3
		15	16
Third Year			
Bioc 460, 461	Biochem/Molec. Biol. I, II	3	3
Bioc 460L	Found. Biochem. I Lab	1	
Chem 431	Analytical Chemistry	3	
Chem 380	Junior Chem./Bioc. Seminar		1
Micr 350, 350L	Gen. Microbiol.	4	
Bioc 474	Recombinant DNA Tech.		3
Science Electives***	Science Electives***		3
Engl. 324	Writing in the Sciences	3	
Stat. 330	Intro. Statistics		3
Gen. Educ.**	General Ed. and other Electives		3
		14	16
Fourth Year			
Bioc 473	Meth. Biochem Research	3	
Bioc 483	Cell. Sig. Trans. Metabl.		3
Chem 465	Survey of Physical Chemistry	4	
Bioc 487	Molec. Biol. Gene Expr.	3	
Chem 491	Senior Chem./Bioc. Seminar		2
Science Electives***	Science Electives***	3	3
Gen. Educ.**	General Ed. and other Electives	3	6
		16	14
Curriculum Totals		121	

*Biol 315 (Genetics) was previously named Zool 315.

**General Education Electives must include 18 credits in humanities and social sciences; six of these must be in humanities/fine arts, and six in social sciences. In addition, three credits must have a global perspective and three must be in the cultural diversity category.

*** Upper Division science electives. 9 additional credits of 300- or 400- level courses in BIOL, BIOC, BOT, ZOO, CHEM, CSCI, MICR, PSCI, PHYS, PPTH, or STAT. No more than 6 credits from one prefix may apply. Research credits (CHEM 494/BIOC 494) may count towards up to 3 of these credits.