

## BS in Molecular Biology

### College and university requirements for all majors (25 credit hours)

ENGL 1, 2	Composition and Literature (6)
	First Year Seminar (3)
	Social Sciences (8)
	Humanities (8)

### Major Requirements

Mathematics (11-12 credit hours)	
MATH 21, 22	Calculus I, II (8) or
MATH 51, 52	Survey of Calculus I, II (7)
BIOS 130	Biostatistics (4)

<b>Chemistry (16 credit hours)</b>	
CHM 30	Introduction to Chemical Principles (4)
CHM 31	Chemical Equilibria in Aqueous Systems (4)
CHM 110, 112	Organic Chemistry I, II (6)
CHM 111, 113	Organic Chemistry Laboratory (2)

<b>Physics (9-10 credit hours)</b>	
PHY 10 (or 11)	General Physics I (4)
PHY 12	Introductory Physics Laboratory I (1)
PHY 13 (or 21)	General Physics II (3 or 4)
PHY 22	Physics Lab II (1)

<b>Biology (46-47 credit hours)</b>	
BIOS 41, 42	Biology Core I: Cellular and Molecular (3) and Lab (1)
BIOS 115, 116	Biology Core II: Genetics (3) and Lab (1)
BIOS 121, 122	Biology Core III: Integrative and Comparative (3) and Lab (1)
BIOS 324	Microbiology (3) or
BIOS 328	Immunology (3) or
BIOS 353	Virology (3)
BIOS 325	Bacteriology Lab (2) or
BIOS 368	Cell Biology Lab (2) or
BIOS 377	Biochemistry Lab (3)
BIOS 371	Elements of Biochemistry I (3)
BIOS 372	Elements of Biochemistry II (3)
BIOS 345, 346	Molecular Genetics (3) and Lab (2)
BIOS 367	Cell Biology (3)
BIOS 381	Physical Biochemistry (3)
BIOS approved Molecular Biology electives (12 credit hours)	

Continued.....

**Recommended sequence for the B.S. in Molecular Biology**

Freshman Year	BIOS 41 - Biology Core I: Cellular and Molecular (3) BIOS 42 - Biology Core I: Cellular and Molecular Laboratory (1) MATH 21, 22 - Survey of Calculus I, II (7) CHM 30 - Introduction to Chemical Principles (4) CHM 31 - Chemical Equilibria in Aqueous Systems (4)
Sophomore Year	BIOS 115 - Biology Core II: Genetics (3) BIOS 116 - Biology Core II: Genetics Laboratory (1) CHM 110, 111, 112, 113 - Organic Chemistry and Laboratory (8) PHY 10, 12 - General Physics I and Lab (5) PHY 13, 22 - General Physics II and Lab (4)
Junior and Senior Years	BIOS 121, 122 - Biology Core III: Integrative and Comparative and Laboratory BIOS 324 - Microbiology (3) or BIOS 328 - Immunology (3) or BIOS 353 - Virology (3) BIOS 325 - Bacteriology Laboratory (2) or BIOS 368 - Cell Biology Laboratory (2) or BIOS 377 - Biochemistry Laboratory (3) BIOS 345 - Molecular Genetics (3) BIOS 346 - Molecular Genetics Laboratory (2) BIOS 371, 372 - Elements of Biochemistry I, II (6) BIOS 367 - Cell Biology (3) BIOS 381 - Physical Biochemistry (3) BIOS Approved Molecular Biology Electives (12)