

BS Biotechnology Curricular Grid

Year 1					
Fall Semester			Credits		
BIO 111	General Biology I		4		
CHE 111	General Chemistry I		4		
ENG 101	First Year Writing		3		
HUM 115	Voice and Identity		3		
PBH 102	First Year Experience		1		
	Total		15		

Spring Semester			Credits		
BIO 121	General Biology II		4		
BIO 1XX	Intro to Biotechnology		3		
CHE 121	General Chemistry II		4		
HUM XXX	Humanities Selective*		3		
MAT XXX	Calc I or Algebra		3		
	Total		17		

Year 2					
Fall Semester			Credits		
BIO 210	General Microbiology		4		
CHE 211 OR CHE 245	Organic Chemistry I OR Survey of Organic Chemistry		4		
HUM XXX	Humanities Selective**		3		
PSY OR SOC 101	General Psychology OR Intro to Sociology		3		
	Free Elective 1		3		
	Total		17		

Spring Semester			Credits		
BIO 346	Cell Biology		3		
MAT 145	Elementary Statistics		3		
	Directed Elective 1		3		
	Free Elective 2		3		
	Free Elective 3		3		
	Total		15		

Year 3					
Fall Semester			Credits		
BIO 350	Biomedical Lab Techniques I		3		
CHE 203/204	Quantitative Analysis		4		
CHE 311	Biochemistry		3		
CLS 337	Clinical Immunology		3		
	Total		13		

Spring Semester			Credits		
BIO 355	Biomedical Lab Techniques II		3		
BIO 4XX	Bioinformatics		3		
CHE 301/302	Instrumental Analysis		4		
	Directed Elective 2		3		
	Total		13		

Year 4					
Fall Semester			Credits		
BIO 631G	Mammalian Cell Culture		3		
ETH 310	Bioethics		3		
PSC 345	Techniques in Molecular Biology		3		
	Directed Elective 3		3		
	Free Elective 4		3		
	Total		15		

Spring Semester			Credits		
BHS740 G	Genetics and Molecular Basis of Disease		3		
BIO 349	Virology		3		
BIO 4XX	Applied Biotechnology		3		
BIO 648G	Microbial Fermentation		3		
PSC 620G	Downstream Processing of Biopharmaceutical Products		3		
	Total		15		

TOTAL CREDITS = 120

Courses count for both BS and MS in dual degree program

B.S. BIOTECHNOLOGY

Required Courses: 120 credits

Humanities & Communication: 19 credits

ENG 101: First Year Writing (3)
ETH 310: Bioethics (3)
HUM 115: Voice and Identity (3)
HUM 1XX or 2XX: Humanities: Methods and Approaches Selective (3)
HUM 2XX: Science and Health through the Humanities Lenses Selective (3)
PBH 102: First Year Seminar (1)
PSY 101 or SOC 101: Introduction to Psychology (3) **OR** Introduction to Sociology (3)

Basic Sciences: 39 credits

BIO 111 and 121: General Biology I and II (4, 4)
BIO 210: Microbiology (4)
BIO 346: Cell Biology (3)
CHE 111 and CHE 121: General Chemistry I and II (4,4)
CHE 211: Organic Chemistry I (4) **OR** CHE 245: Survey of Organic Chemistry
CLS 337: Clinical Immunology (3)
MAT 145: Elementary Statistics (3)
Additional Math: Calculus I (4) **OR** College Algebra (3)
CHE311: Biochemistry (3)

Biotechnology: 41 credits

BIO 1XX: Introduction to Biotechnology (3)
BIO 331: Mammalian Cell Culture (3)
BIO 348: Microbial Fermentation (3)
BIO 349: Virology (3)
BIO 350 and 355: Biomedical Laboratory Techniques I and II (3, 3)
BHS 740G: Genetics and Molecular Basis of Disease (3)
BIO 4XX: Applied Biotechnology (3)
BIO 4XX: Bioinformatics (3)
CHE 203 and CHE 204: Quantitative Analysis Lecture and Lab (3, 1)
CHE 301 and CHE 302: Instrumental Analysis Lecture and Lab (3, 1)
FSC 345: Techniques in Molecular Biology (3)
PSC 320: Downstream Processing of Biopharmaceutical Products (3)

Electives: 21credits

Directed Electives: 9 credits
Free Electives: 12 credits

[Questions?](#)

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