

# Biotechnology Track Worksheet

20\_\_\_\_\_

MCDB

BS & BS INT

SID \_\_\_\_\_

Research Lab Mentor: \_\_\_\_\_

Student: \_\_\_\_\_

MCDB Faculty Advisor: \_\_\_\_\_

BIOL Prerequisites:		Placement Exam Score	Course #	Semester	Grade	Place Out
BIOL 101	Biochemistry and Biophysics		BIOL 101			
BIOL 102	Prin of Cell Biology & Membrane Phys		BIOL 102			
BIOL 103	Genes and Development		BIOL 103			
BIOL 104	Prin of Ecology & Evolutionary Biology		BIOL 104			
GEN CHEM Prerequisites:			Course #	Semester	Grade	Place Out
General Chemistry (2 terms -161/165; or 163/167; or its equivalent)						
General Chemistry Labs (2 terms - 134L/136L)						
ORG CHEM Prerequisites (BS & BS/INT only)			Course #	Semester	Grade	
Organic Chemistry (1 term - 174a; or 175b; or 220a)						
Organic Chemistry Lab (1 term - 222L; or 223L; or 226L)						
<i>(BS/BS INT only: Completion of the Freshman Organic Chemistry sequence 174/175 and 222L/223L satisfies all of the Chemistry prerequisites for the MCDB major)</i>						
PHYSICS Prerequisites:			Course #	Semester	Grade	Place Out
Physics (170/171; or180/181; or 200/201; or 260/261)						
BS & BS INT: 2 terms						
MATH Prerequisites:			Course #	Semester	Grade	Place Out
Math 115 or higher (1 term - not including Math 190)						
CORE COURSES: (BS & BS INT - Choose any 3)			Course #	Semester	Grade	
MCDB 200b	Molecular Biology	MCDB 290b	Microbiology			
MCDB 202a	Genetics	MCDB 310a	Physiological Systems			
MCDB 205b	Cell Biology	MCDB 320a	Neurobiology			
MCDB 210a	Developmental Biology	MCDB 430a	Biology of the Immune System			
<i>EITHER: MCDB 300b Biochemistry OR: MB&amp;B 300a Principles of Biochemistry I</i>						
GENERAL ELECTIVES: (2 Total)			Course #	Semester	Grade	
<b>Required Track Course: MCDB 370b Biotechnology</b>						
<b>AND Choose 1 additional elective below</b>						
BENG 351a	Biomedical Engineering I	CENG 412b	Chemical Engineering Laboratory			
BENG 352b	Biomedical Engineering II	CPSC 437a	Introduction to Databases			
BENG 410a	Basis of Biomaging & Biosensing	CPSC 445b	Introduction to Data Mining			
BENG 435b	Biomaterial - Tissue Interactions	CPSC 470a	Artificial Intelligence			
BENG 457b	Biomechanics	CPSC 475b	Comp. Vision & Bio Perception			
BENG 464b	Tissue Engineering	MBB 420a	Macromolecular Structure			
CENG 210a	Chem Eng & Process Modeling	MBB 421b	Macromolecular dynamics			
CENG 411a	Separation & Purification Processes	MBB 443b	Eukaryotic Molecular Biology			
SPECIAL ELECTIVES:			Course #	Semester	Grade	
BS & BS INT: Choose 1 from MCDB 350 or above						
LABS:			Course #	Semester	Grade	
BS & BS INT: Choose 2 labs (must be from MCDB)						
SENIOR REQUIREMENT:			Course #	Semester	Grade	
<b>BS: (2 terms of Research)</b>						
MCDB 475 a or b	Independent Research MCDB					
MCDB 485/486	Senior Requirement MCDB BS Major					
<i>*MCDB 485/486 is preferred - but 2 terms of MCDB 475 (+ summer) will satisfy this req</i>						
<b>BS INT: (2 terms of Intensive Research)</b>						
MCDB 495/496	Senior Requirement MCDB BS INT Major					