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)*			
(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)			

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			
EITHER: MCDB 300b Biochemistry ***OR:*** MB&B 300a Principles of Biochemistry I						

GENERAL ELECTIVES: *(2 Total)*				***Course #***	***Semester***	***Grade***
Required Track Course: MCDB 370b Biotechnology						
AND Choose 1 additional elective below						
BENG 351a	Biomedical Engineering I	CENG 412b	Chemical Engineering Laboratory			
BENG 352b	Biomedical Engineering II	CPSC 437a	Introduction to Databases			
BENG 410a	Basis of Bioimaging & 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***
BS: *(2 terms of Research)*				
MCDB 475 a or b	Independent Research MCDB			
MCDB 485/486	Senior Requirement MCDB BS Major			
**MCDB 485/486 is preferred - but 2 terms of MCDB 475 (+ summer) will satisfy this req*				
BS INT: *(2 terms of Intensive Research)*				
MCDB 495/496	Senior Requirement MCDB BS INT Major			