Cell, Molecular, and Developmental Biology (CMDB): Tentative Course Offerings

Schedule subject to change.

Core Curriculum							
Course Number	**Course Name**	**Units**	**Prerequisite**	**Fall**	**Winter**	**Spring**	**Summer**
BIOL 102	Introductory Genetics	4	BIOL5B (C- or better)	✓	✓	✓	✓
BIOL 107A*	Molecular Biology	4	BIOL5C; MATH7B or 9B; CHEM1C; CHEM8C/8LC; PHYS 2C/2LC; BCH100 or 110A	✓	✓	✓	✓
CBNS 101	Fundamentals of Cell Biology	4	CHEM8C/8LC; BCH100 or BCH110A (may be taken concurrently)	✓	✓		✓
CBNS 108	Intro to Developmental Biology	4	BIOL102; CHEM8C/8LC; or consent of instructor			✓	
Major Electives - Cellular Emphasis (pick at least 1, need 24 Major Elective units total)							
Course Number	**Course Name**	**Units**	**Prerequisite**	**Fall**	**Winter**	**Spring**	**Summer**
BCH 180G	Advanced Methods in Biochemistry: Cell Signaling	2	BCH197 (may be taken concurrently) or BIOL107A or BCH110C (C- or better); Upper division standing	See schedule of classes			
BIOL/MCBL 121	Introductory Microbiology	4	BIOL5C; MATH7B or 9B; CHEM1C; PHYS2A/2LA (may be taken concurrently); BCH100 or 110A (may be taken concurrently); STAT10	✓	✓	✓	✓
BIOL/CBNS 128	Immunology	4	BIOL5C; PHYS2C/2LC; BCH100 or 110A	✓		✓	✓
BPSC 135	Plant Cell Biology	4	BIOL5C; BCH100 or 110A; or consent of instructor		✓		
CBNS 106	Intro to Neuroscience	4	BIOL5B (C- or better); CHEM1C; or consent of instructor	✓	✓	✓	✓
CBNS/PSYC 120	Cellular Neuro: Membrane and Synaptic Phenomena	4	CBNS106		✓	✓	
CBNS 165	Stem Cell Biology	4	CBNS101 or consent of instructor		✓		
Major Electives - Molecular Emphasis (pick at least 1)							
Course Number	**Course Name**	**Units**	**Prerequisite**	**Fall**	**Winter**	**Spring**	**Summer**
BCH 180E	Advanced Methods in Biochemistry: Gene Regulation	2	Upper-division standing; concurrent enrollment in BCH197 or equivalent or BCH110C (C- or better) or BIOL107A (C- or better)	✓			
BIOL 107B	Advanced Molecular Biology	4	BIOL107A or BCH110C or equivalents			✓	
BIOL 119	Intro to Genomics and Bioinformatics	4	BIOL5C (C- or better); BIOL102; CHEM8C/8LC; MATH7B or 9B; PHYS2C/2LC; BCH100 or 110A	✓	✓		
BIOL/MCBL 124	Medical Microbiology	4	BIOL5C; MATH7B or 9B; PHYS2C/2LC; BCH 100 or 110A; STAT10		✓		
BIOL/BPSC 155	Chromosomes	4	BIOL5C; CHEM8C/8LC; MATH 7B or 9B; PHYS2C/2LC; BCH100 or BCH110A (may be taken concurrently); or consent of instructor			✓	
BPSC/CBNS 109	Epigenetics	4	BIOL 102	See schedule of classes			
CBNS/ENTX 150	Cancer Biology	4	BCH110C or BIOL107A or CBNS101 (may be taken concurrently with consent of instructor)			✓	

Major Electives - Developmental Emphasis (pick at least 1)							
Course Number	**Course Name**	**Units**	**Prerequisite**	**Fall**	**Winter**	**Spring**	**Summer**
BCH/BPSC 183	Plant BCH and Pharmacology of Plant Metabolites	4	BCH110A; BCH110B; or BCH100		✓		
BIOL 115	Human Genetics	4	BIOL102; BCH100 or 110A		✓		
BIOL/MCBL/ PLPA 123	Introd to Comparative Virology	4	BIOL5C; MATH7B or 9B; PHYS2C/2LC; BCH100 or 110A; STAT004 or equivalent	✓	✓	✓	
BIOL/BPSC 132	Plant Anatomy	4	BIOL5B; BPSC104 or BIOL104; or consent of instructor		✓		
CBNS/PSYC 121	Developmental Neuroscience	4	CBNS 106	✓	✓		
CBNS 169	Human Embryology	4	BIOL5C	See schedule of classes			
Major Electives - Laboratory Courses (pick at least 2)							
Course Number	**Course Name**	**Units**	**Prerequisite**	**Fall**	**Winter**	**Spring**	**Summer**
BIEN 155	Biotechnology Laboratory	2	BIEN175A (C- or better or taken concurrently); BIEN101; BIEN125	✓			
BIOL/BPSC 104	Foundations of Plant Biology	4	BIOL5C	✓	✓	✓	
BIOL 118	Methods in Molecular Ecology and Evolution	4	BIOL5C (C- or better); CHEM8C/8LC; MATH7B or 9B; PHYS2C/2LC; STAT 10; BCH100 or 110A	See schedule of classes			
BIOL/MCBL 121L	Microbiology Laboratory	3	BIOL/MCBL 121 (C- or better)	✓	✓	✓	
BIOL/BPSC 132	Plant Anatomy	4	BIOL5B; BPSC/BIOL104; or consent of instructor		✓		
BIOL/BPSC 143	Plant Physiology	4	BIOL5C; CHEM8C/8LC; MATH7B or 9B; PHYS2C/2LC; BCH100 or BCH110A (may be taken concurrently); BIOL/BPSC104	✓			
BIOL 161A	Functional Anatomy of the Vertebrates	5	BIOL5C; CHEM8A/8LA; MATH7B or 9B; PHYS2A/2LA - all need C- or better	See schedule of classes			
BIOL171A	Human Anatomy	4	BIOL5C; CHEM1C/1LC; CHEM8B/8LB; MATH7B or 9B; PHYS2B/2LB	✓			
CBNS/PSYC 120L	Neuroscience Laboratory	4	CBNS 120/PSYC 120 (may be taken concurrently)	✓	✓	✓	
CBNS 130L/ PSYC123L	Computational Neurophysiology Lab: Simulating Neuronal Membrane Properties	4	CBNS106; CBNS120 (may be taken concurrently) or PSYC 120 (may be taken concurrently); and consent of instructor		✓	✓	
GNBT 114	Molecular Genetics Laboratory	4	BIOL102 (C- or better); BIOL 107A (may be taken concurrently)	See schedule of classes			
GBNT 120	Analysis of Genomes Laboratory	4	BIOL5C; BIOL102; MATH7B or 9B - all need C- or better		✓		
Research**	Life Science Research	3–8	Please see individual lab course descriptions for pre-reqs	✓	✓	✓	✓

** BCH 110C can substitute for BIOL107A*

***A minimum of three units of BCH 197, BIOL 197, BMSC197L, BPSC 197, CBNS 197, ENTM 197, PLPA 197, MCBL 197, NEM 197, BCH 199, BIOL 199, BPSC 199, CBNS 199, ENTM 199, PLPA 199, MCBL199, or NEM 199 may substitute for one required lab course, but not both.*

*** A maximum of 8 units of 190–199 courses, including no more than 4 units of 198 courses, may count toward the major elective requirement. An additional 1 unit may apply to the depth area.*