



Approved List of Advanced Courses for MCB Majors and Minors
Revised and Effective for Spring 2023

Only courses from this approved list will count for the advanced hour requirement in the MCB major.

The MCB major requires at least 15 hours (minimum of 4 courses) at the 300- or 400-level *from this approved list*. One advanced laboratory course must be included in the 15 hours. Courses marked with an asterisk (*) are approved advanced lab courses. Courses not on this list will not count, even if they are 300- or 400-level MCB courses (e.g., MCB 492 does not count as an advanced course in the MCB major). The College of LAS, for its Sciences and Letters Curriculum, requires each student to earn at least 21 hours in advanced courses. MCB advanced hours count toward this total. Visit www.las.uiuc.edu/students/requirements/minimum for more information about college requirements.

This document was last updated on October 27, 2022

Note: schedule is subject to change

Term (s) Offered	Course	Course Title	Cr Hr s	* Lab Course	Instructors (Coordinator)	Cross Listed Courses
FA, SP	MCB 300	Microbiology	3		Steven Blanke and Cari Vanderpool (R. Alt, Coord.)	
FA, SP	MCB 301	Experimental Microbiology	3	*	Jack Ikeda and Renee Alt	
FA	MCB 314	Introduction to Neurobiology	3		Daniel Llano	NEUR 314
FA	MCB 316+ <i>See note below</i>	Genetics and Disease	4		Mary Schuler	
SP, SU	MCB 317+ <i>See note below</i>	Genetics and Genomics	4		David Rivier	
FA	MCB 320	Mechanisms of Human Disease	3		Eric Bolton	
FA, SP	MCB 364	Eukaryotic Cell Biology Laboratory	2	*	Lyne Levesque	
FA <small>(not offered FA22)</small>	MCB 400	Cancer Cell Biology	3		Supriya Prasanth	
FA	MCB 401	Cellular Physiology	3		Catherine Christian-Hinman	
SP	MCB 402	Sys & Integrative Physiology	3		Erik Nelson and Nien-Pei Tsai	
SP	MCB 406	Gene Expression & Regulation	3		Hong Jin	BIOC 406
FA	MCB 408	Immunology	3		Beth Stadtmueller	
SP	MCB 410	Developmental Biology, Stem Cells and Regenerative Medicine	3		Xin Li	
FA	MCB 413	Endocrinology	3		Milan Bagchi and Lori Raetzman	
FA	MCB 421	Microbial Genetics	3		Andrei Kuzminov	
SP	MCB 424	Microbial Biochemistry	3		William Metcalf	
SP	MCB 426	Bacterial Pathogenesis	3		Thomas Kehl-Fie	
FA	MCB 428	Microbial Pathogens Laboratory	2	*	Jack Ikeda	
SP	MCB 430	Molecular Microbiology	3		Raven Huang	
FA	MCB 431	Microbial Physiology	3		Paolo Mera	
FA	MCB 432	Computing in Molecular Biology	3		Mengfei Ho	
SP	MCB 435	Evolution of Infectious Disease	3		Rachel Whitaker	IB 442
FA	MCB 436	Global Biosecurity	1		B. Wilson, et al.	
SP	MCB 442	Comparative Immunobiology	4		A. Steelman	ANSC 450, PATH 410
FA	MCB 461	Cell & Molecular Neuroscience	3		Hee Jung Chung	NEUR 461
SP	MCB 462	Integrative Neuroscience	3		Martha Gillette and Rhanor Gillette	NEUR 462
SP	MCB 465	Human Metabolic Disease	3		Sayee Anakk	

Term (s) Offered	Course	Course Title	Cr Hrs	* Lab Course	Instructors (Coordinator)	Cross Listed Courses
						Over →
SP	MCB 466	Neuro & Molecular Pharmacology	3		Erik Nelson and Nien-Pei Tsai	
NCBO	MCB 471	Cell Structure and Dynamics	3		William Brieher	
SP	MCB 480	Eukaryotic Cell Signaling	3		Jie Chen	
FA, SP	MCB 493 APL	Advanced Physiology Lab	2	*	Chester Brown	
SP	MCB 493 CPP	Cancer Pathophysiology	3		Eric Bolton	
FA	MCB 493 EPI	Epigenetics	3		Andrew Belmont	
FA	MCB 493 GDC	Genetic Disorders and Counseling	3		Stephanie Ceman	
SP	MCB 493 NMI	Neurobiology of Mental Illness	3		Patrick Sweeney	
SP	MCB 493 NOS	Neurobiology of Senses	3		Benjamin Auerbach	
FA	MCB 493 PBC Previously BIOC 440B	Physical and Biological Chemistry	4		Emad Tajkhorshid	
SP	MCB 493 REM	Research Experience in Microbiology	3		Asma Hatoum	
FA	MCB 493 VIR	Virology	3		Christopher Brooke	
	BIOCHEMISTRY					
NCBO†	BIOC 440B†	Physical Chemistry Principles	4			
SP	BIOC 446	Physical Biochemistry	3		Kai Zhang	MCB 446, CHEM 472
SP	BIOC 455 <small>Limited seats available</small>	Techniques in Biochem & Biotech	4	*	Dustin Buntrock	
FA	BIOC 460 <small>Limited seats available</small>	Biochemistry Senior Seminar, Advanced Composition	3		David Shapiro	
	BIOPHYSICS					
FA	BIOP 401	Introduction to Biophysics	3		Nicholas Wu	
	NEUROSCIENCE					
See note below†	NEUR 413†	This course has changed significantly and no longer counts as advanced MCB. See below.	3			PSYC 413
SP	NEUR 414	Brain, Learning, and Memory	3		James Hinman	PSYC 414

FA: Fall; SP: Spring; NCBO: Not Currently Being Offered

†MCB 316 and 317: Credit is not given for both MCB 316 and MCB 317. Students can take one or the other course, but not both.

†BIOC 440B will only count for students who took it prior to spring 2021. The course content is now being taught in MCB 493 PCC during fall semesters.

†NEUR 413 has undergone significant content changes as well as a name change. Effective spring 2022, the course will no longer count as an approved advanced course in the MCB major or for the Neuroscience Certificate. Only students who took the course prior to spring 2022 may use it for advanced hours in the major and/or for the certificate.

Note: MCB 492 will NOT count as advanced MCB hours. Any 300- or 400- level course not on the above list will NOT count as advanced MCB hours. Graduate level courses (500- or 600- level) will NOT count as advanced MCB hours. Only courses from this approved list will count for the advanced hour requirement in the MCB major.

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