



**Approved List of Advanced Courses for MCB Majors and Minors**  
**Revised and Effective for Spring 2018**

The MCB major requires at least 15 hours (minimum of 4 courses) at the 300- or 400-level *from this approved list*. One course with a laboratory component is required. Those courses, which count as an advanced laboratory course, are marked with an asterisk (\*). 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). Please visit [www.las.uiuc.edu/students/requirements/minimum](http://www.las.uiuc.edu/students/requirements/minimum) for more information about the college requirements. *Only courses from this approved list will count for the MCB advanced hour requirement. Graduate level courses (500- or 600- level) will NOT count as advanced MCB hours.*

***This document was last updated on October 6, 2017***

***Note: schedule is subject to change***

| Term (s) Offered        | Course                     | Course Title  | Cr Hrs | * Lab Course | Instructors (Coordinator)                             | Cross Listed Courses               |
|-------------------------|----------------------------|---|--------|--------------|---|------------------------------------|
| FA, SP                  | MCB 300                    | Microbiology  | 3      |              | SP: Steven Blanke & Carin Vanderpool (R. Alt, Coord.) |                                    |
| FA, SP                  | MCB 301                    | Experimental Microbiology                                   | 3      | *            | Jack Ikeda (Renee Alt, Coordinator)                   |                                    |
| FA                      | MCB 314                    | Introduction to Neurobiology                                | 3      |              | Mark Nelson   | NEUR 314                           |
| FA                      | MCB 316†<br>See note below | Genetics and Disease  | 4      |              | Mary Schuler  |                                    |
| SP                      | MCB 317†<br>See note below | Genetics and Genomics                                       | 4      |              | David Rivier  |                                    |
| SP                      | MCB 320                    | Mechanisms of Human Disease                                 | 3      |              | Eric Bolton and Daniel Llano                          |                                    |
| FA<br>(not FA17)        | MCB 400                    | Cancer Cell Biology   | 3      |              | Supriya Gangadharan Prasanth                          |                                    |
| FA                      | MCB 401                    | Cell & Membrane Physiology                                  | 3      |              | Claudio Grosman                                       |                                    |
| SP                      | MCB 402                    | Sys & Integrative Physiology                                | 3      |              | Erik Nelson and Nien-Pei Tsai                         |                                    |
| SP                      | MCB 406                    | Gene Expression & Regulation                                | 3      |              | Hong Jin  | BIOC 406                           |
| SP                      | MCB 408                    | Immunology  | 3      |              | Gregory Freund (Alejandra Stenger, Coordinator)       |                                    |
| SP                      | MCB 410                    | Developmental Biology, Stem Cells and Regenerative Medicine | 3      |              | Xin Li  |                                    |
| FA                      | MCB 413                    | Endocrinology   | 3      |              | Milan Bagchi, Eric Bolton and Lori Raetzman           |                                    |
| SP                      | MCB 419                    | Brain, Behavior & Info Process                              | 3      |              | Mark Nelson   | BIOE 419,<br>BIOP 419,<br>NEUR 419 |
| SP<br>(not SP18)        | MCB 421                    | Microbial Genetics  | 3      |              | John Cronan   |                                    |
| SP<br>(even years only) | MCB 424                    | Microbial Biochemistry                                      | 3      |              | William Metcalf                                       |                                    |
| FA                      | MCB 426                    | Bacterial Pathogenesis                                      | 3      |              | Brenda Wilson   |                                    |
| FA                      | MCB 428                    | Microbial Pathogens Laboratory                              | 2      | *            | Jack Ikeda  |                                    |
| SP                      | MCB 429                    | Cellular Microbiology & Disease                             | 3      |              | Thomas Kehl-Fie                                       |                                    |
| FA<br>(odd years only)  | MCB 431                    | Microbial Physiology  | 3      |              | Carin Vanderpool                                      |                                    |
| SP<br>(not SP18)        | MCB 432                    | Computing in Molecular Biology                              | 3      |              | TBD   |                                    |
| SP                      | MCB 433†<br>See note below | Virology & Viral Pathogenesis                               | 3      |              | Dongwan Yoo and Daniel L. Rock                        | PATH 433                           |
| SP<br>(not SP18)        | MCB 435                    | Evolution of Infectious Disease                             | 3      |              | Rachel Whitaker                                       | IB 442                             |
|                         |                            |   |        |              |   | Over →                             |

| Term (s) Offered        | Course      | Course Title   | Cr Hrs | * Lab Course | Instructors (Coordinator)                                 | Cross Listed Courses  |
|-------------------------|-------------|--|--------|--------------|---|-----------------------|
| FA                      | MCB 436     | Global Biosecurity                                   | 1      |              | S. Blanke, C. Brooke, J. Shisler, J. Slauch and B. Wilson |                       |
| SP<br>(even years only) | MCB 442     | Comparative Immunobiology                            | 4      |              | A. Steelman   | ANSC 450,<br>PATH 410 |
| SP                      | MCB 446     | Physical Biochemistry                                | 3      |              | Kai Zhang   | BIOC 446,<br>CHEM 472 |
| SP                      | MCB 458     | Basic Human Pathology                                | 3      |              | Gregory Freund (Alejandra Stenger, Coordinator)           |                       |
| 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      |              | Jongsook Kemper   |                       |
| FA                      | MCB 471     | Cell Structure and Dynamics                          | 3      |              | William Brieher   |                       |
| SP                      | MCB 480     | Eukaryotic Cell Signaling                            | 2      |              | Jie Chen  |                       |
| FA, SP                  | MCB 493 ECB | Experimental Cell Biology                            | 2      | *            | Lyne Levesque   |                       |
| SP<br>(not SP18)        | MCB 493 EGD | Exploring Genome Data                                | 1      |              | Rachel Whitaker   |                       |
| SP                      | MCB 493 EPI | Epigenetics  | 3      |              | Andrew Belmont  |                       |
| SP                      | MCB 493 FIP | Frontiers in Physiology                              | 2      |              | Lori Raetzman   |                       |
| FA                      | MCB 493 HMG | Human Medical Genomics                               | 3      |              | Derek Wildman   |                       |
| FA, SP                  | MCB 493 VIR | Viral Pathogenesis & Evolution                       | 3      |              | Christopher Brooke  |                       |
|                         |             |  |        |              |   |                       |
| FA                      | BIOC 440B†  | Physical Chemistry Principles                        | 4      |              | Emad Tajkhorshid  | CHEM<br>440B          |
| SP                      | BIOC 455    | Techniques in Biochem & Biotech                      | 4      | *            | Lici Schurig Briccio                                      |                       |
| FA                      | BIOC 460    | Biochemistry Senior Seminar,<br>Advanced Composition | 3      |              | David Shapiro   |                       |
|                         |             |  |        |              |   |                       |
| FA                      | BIOP 401    | Introduction to Biophysics                           | 3      |              | Paul Selvin   | PHYS 475              |
|                         |             |  |        |              |   |                       |
| FA                      | NEUR 403†   | Memory and Amnesia                                   | 3      |              | Hillary Schwarb   | PSYC 403              |
| SP                      | NEUR 413    | Psychopharmacology                                   | 3      |              | Joshua Gulley   | PSYC 413              |
| FA                      | NEUR 414    | Brain, Learning, and Memory                          | 3      |              | Sean Collins  | PSYC 414              |

FA: Fall; SP: Spring; NCBO: Not currently being offered on a regular basis; TBD: To be determined.

†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.

†MCB 433/PATH 433: This course is only approved as advanced hours for students with a catalog year prior to fall 2016. Please check with an MCB advisor to confirm that this will count as an approved advanced course for you before enrolling.

†BIOC 440B: Only Section B is approved as an advanced MCB course.

†NEUR 403: This course is only approved as advanced hours for students with a catalog year prior to fall 2016. Please check with an MCB advisor to confirm that this will count as an approved advanced course for you before enrolling. Section UG3, which is 3 credit hours, is intended for undergraduate students. MCB students should take this section. Section G4, which is 4 credit hours, is restricted to graduate students.

**Note: graduate level courses (500- or 600- level) Will NOT count as advanced MCB hours, but students are welcome to enroll in them with permission from the instructor.**

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