

**SYLLABUS**  
**IMMUNOLOGY-Fall 2024** (MBIO-602-01-4248)  
Department of Microbiology and Immunology  
University of Louisville School of Medicine

**Instructors**

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**Course Content**

MBIO 602 (3 credit hours) is an intensive lecture course designed to teach immunology to advanced PhD students from graduate programs related to biomedical research. Students will learn how the immune system works in health, and how its dysfunction is involved in many diseases.

**Prerequisites**

Approval to register for the course generally requires that students currently be in PhD-level graduate programs in the life sciences or are well-versed in biochemistry/molecular cell biology from previous course work. Class size is limited to 10 and requires approval of the course co-directors.

**Classes**

Mondays and Wednesdays at 11AM - 1PM in conference room 601, CTR building, 505 S Hancock St, or by remote livestream at the discretion of the instructors (see course schedule below). Lectures are presented in a standard PowerPoint format based primarily on content derived from the textbook. Attendance is required.

**Course Materials**

The required textbook for the class is [Cellular and Molecular Immunology, 10th edition](#), Abbas, Lichtman and Pillai, Elsevier Saunders, ©2022; ISBN: 978-0-323-75748-5, which is available as a free ebook for UofL students who navigate to the link from within the UofL network. The overall lecture organization follows the textbook chapter sequence, Chapters 1-21. All students must register for a Top Hat account by entering join code 415340 via the [Tophat registration portal](#) to participate in activities associated with lectures.

**Exams and Grading**

Four in-class exams will test comprehension of the material. Exams I, II and III cover Chapters 1-6; 7-13, 16; and 14,17-21, respectively, with most questions requiring written responses in the form of phrases, sentences, or short paragraphs. Exam IV is a comprehensive final consisting of multiple-choice questions about all course material. A final percent score will be calculated from the average of the four exam scores and used to assign a grade as shown below. The grade scale shown here is an estimate based on scales used in recent years and may vary somewhat from year-to-year at the discretion of the course co-Directors.

Course grade	Approximate % score
A+	98-100
A	94-97
A-	90-93
B+	87-89
B	84-86
B-	80-83
C+	77-79
C	74-76
C-	70-73
D	69-65
F	<65

**Diversity Statement**

The University of Louisville strives to foster and sustain an environment of inclusiveness that empowers us all to achieve our highest potential without fear of prejudice or bias. We commit ourselves to building an exemplary educational community that offers a nurturing and challenging intellectual climate, a respect for the spectrum of human diversity, and a genuine understanding of the many differences-including race, ethnicity, gender, socio-economic status, national origin, sexual orientation, disability, and religion that enrich a vibrant metropolitan research university. We expect every member of our academic family to embrace the underlying values of this vision and to demonstrate a strong commitment to attracting, retaining, and supporting students, faculty, and staff who reflect the diversity of our larger society.

### **Title IX/Clery Act Notification**

Sexual misconduct (including sexual harassment, sexual assault, and any other nonconsensual behavior of a sexual nature) and sex discrimination violate University policies. Students experiencing such behavior may obtain confidential support from the PEACC Program (852-2663), Counseling Center (852-6585), and Campus Health Services (852-6479). To report sexual misconduct or sex discrimination, contact the Dean of Students (852-5787) or University of Louisville Police (852-6111).

Disclosure to University faculty or instructors of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on campus, in a University-sponsored program, or involving a campus visitor or University student or employee (whether current or former) is not confidential under Title IX. Faculty and instructors must forward such reports, including names and circumstances, to the University's Title IX officer. For more information, see the [Sexual Misconduct Resource Guide](#).

### **Disabilities**

Students who have a disability or condition that might impair their abilities to complete assignments or otherwise satisfy course criteria are encouraged to meet with the course instructor to identify, discuss, and document any feasible instructional modifications or accommodations. The student should notify the instructor no later than the end of the second week after such disability or condition is diagnosed. Contact the University of Louisville's [Disabilities Resource Center](#) for more information.

### **Disclaimer**

The instructors reserve the right to make changes in the course schedule when necessary to meet learning objectives, to compensate for missed classes, or for similar reasons.

### **COVID-19 precautions**

#### **Please wear masks if requested**

As a Community of Care, students are asked to limit exposure of others in the class to SARS-CoV-2 variants.

This includes:

- 1) Wearing of cloth/paper masks (covering nose and mouth) when in class.
- 2) Staying home when sick—any UofL community member experiencing fever, consistent dry cough, or other symptoms of contagious disease should remain at home until symptoms subside or advised that it is safe to return by a medical professional.
- 3) Practicing good hygiene and responsibility for one's own surrounding:
  - a. Cover sneezes and coughs
  - b. Wash hands frequently with soap and water or hand sanitizer when soap/water not available
  - c. Wipe frequently touched surfaces with an appropriate disinfectant.
  - d. Maintain 6 feet of physical distance when possible. (Note: the currently designated classroom, 601 CTRB, may need to be changed to comply with this guideline, depending on student numbers. An alternate location will be announced if needed.)

## COURSE SCHEDULE

### IMMUNOLOGY-Fall 2024 (MBIO-602-01-4248)

MW 11:00AM - 12:50PM, MicroImm conference room, 601 CTR Bldg.

Course directors: Profs. Michele M. Kosiewicz and Thomas C. Mitchell

Required textbook: [Cellular and Molecular Immunology, 10th edition](#)

Abul K. Abbas, Andrew H. Lichtman and Shiv Pillai.

Wk	Day	Date	Instructor	Reading	Description
1	Mon	19-Aug	-	-	<i>No class</i>
	Wed	21-Aug	Kosiewicz	Ch. 1	Overview of Immune Responses*
2	Mon	26-Aug	Kosiewicz	Ch. 2	Cells and Tissues of the Immune System*
	Wed	28-Aug	Fernandez	Ch. 3	Leukocyte Circulation & Migration into Tissues
3	Mon	2-Sep	-	-	<i>Labor Day Holiday</i>
	Wed	4-Sep	Alard	Ch. 4	Innate Immunity (Recognition of Microbes)
4	Mon	9-Sep	Alard	Ch. 4	Innate Immunity (Inflammatory Responses)
	Wed	11-Sep	Kosiewicz	Ch. 5	Antibodies and Antigens
5	Mon	16-Sep	Mitchell	Ch. 6	Antigen Presentation to T Lymphocytes and MHC
	Wed	18-Sep	-	-	<i>No class</i>
6	Mon	23-Sep	<b>EXAM I</b>	<b>Ch. 1-6</b>	<b>EXAM I (Ch. 1-6)</b>
	Wed	25-Sep	Mitchell	Ch. 7	Immune Receptors and Signal Transduction
7	Mon	30-Sep	K/F/A/M	-	Post-exam discussion
	Wed	2-Oct	Mitchell	Ch. 8	Lymphocyte Receptors & Gene Rearrangement
8	Mon	7-Oct	Mitchell	Ch. 8, 9	Activation of T lymphocytes
	Wed	9-Oct	Kosiewicz	Ch. 10, 11	Differentiation & Function of Effector T Cells
9	Mon	14-Oct	Mitchell	Ch. 12	B Cell Activation and Antibody Production
	Wed	16-Oct	Alard	Ch. 13	Effector Mechanisms of Humoral Immunity
10	Mon	21-Oct	Alard	Ch. 16**	Immunity to Microbes
	Wed	23-Oct	-	-	<i>No class</i>
11	Mon	28-Oct	<b>EXAM II</b>	<b>Ch. 7-13, 16</b>	<b>EXAM II (Ch. 7-13, 16)</b>
	Wed	30-Oct	Kosiewicz	Ch. 14	Epithelial and Immune-Privileged Tissues
12	Mon	4-Nov	M/K/A	-	Post-exam discussion
	Wed	6-Nov	Kosiewicz	Ch. 15	Immunologic Tolerance and Autoimmunity
13	Mon	11-Nov	Alard	Ch. 17	Transplantation Immunology
	Wed	13-Nov	Kosiewicz	Ch. 18	Immunity to Tumors
14	Mon	18-Nov	Kosiewicz	Ch. 19	Hypersensitivity Disorders
	Wed	20-Nov	Kosiewicz	Ch. 20	Allergy
15	Mon	25-Nov	Kosiewicz	Ch. 21	Congenital and Acquired Immunodeficiencies
	Wed	27-Nov	-	-	<i>Thanksgiving holiday</i>
16	Mon	2-Dec	<b>EXAM III</b>	<b>Ch. 14, 17-21</b>	<b>EXAM III (Ch. 14, 17-21)</b>
	Wed	4-Dec	-	-	<i>No class</i>
17	Mon	9-Dec	K/A	-	Post-exam discussion
	Wed	11-Dec	<b>EXAM IV</b>	-	<b>EXAM IV (Comprehensive)</b>

\*These lectures will be livestreamed; see Blackboard for access to link

\*\*Note that the Ch. 16 lecture is out of sequence