



School of Molecular & Cellular Biology

MCB 246, Spring 2025

Human Anatomy and Physiology-II, 3 Credit Hours

Instructor/ Instructional Team

Dr. Bharathi Aravamudan

217B Burrill Hall

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217-265-0018

Office hours: Tuesdays 10 a.m. - Noon; Thursdays 10 a.m. - Noon

If you are unable to meet with me during office hours, please email me and I can set up an in-person or Zoom meeting at an alternate time

- For course administrative questions, please contact: mcb246@mcb.illinois.edu

MCB Instructional Program Office

127 Burrill Hall

ipsupport@mcb.illinois.edu

phone/voicemail:217-244-6239

Class Meeting Schedule (all times are Central)

Scheduled Class Time: Tuesday and Thursday 2pm - 3:20pm in Foellinger Auditorium. Exams will be held during class time on the following Tuesdays: 2/4, 3/4 and 4/8; final exam (TBA)

Class begins Tuesday, January 21st, 2025 and the last day of class is Tuesday May 6th, 2025.

- Feb. 3, 2025 is the deadline for adding or changing sections via self-service.
- Friday, March 14, 2025 is the last day to drop or elect credit/no credit
- Spring Break March 15-23
- Final exams will be held May 12-16, specific date and time TBD.
- Deadline for any web gradebook corrections is May 6, 2025.

Course Overview and Description

MCB 246 is the second lecture course in a two-semester sequence designed to cover human anatomy and physiology. MCB 246 emphasizes the study of human anatomy and physiology at the histological and organ systems level of the cardiovascular, immune, digestive, respiratory, urinary and reproductive systems. Where relevant, discussions of pathological diseases associated with these systems will also be addressed. Learning objectives for the course are aligned with the Human Anatomy and Physiology Society national standards.

Course Prerequisites: MCB 244 and credit or concurrent enrollment in CHEM 101, CHEM 102, or equivalent, or consent of instructor. This course meets part of the major requirements for students in Kinesiology and Community Health.

Student Learning Outcomes

At the end of the course, through assignments, discussions, activities and assessments, students will be able to:

- describe anatomical structures of the cardiovascular, immune, digestive, respiratory, urinary and reproductive systems.
- explain the integration between the physical characteristics and properties of a given structure (cell, tissue organ) and how they contribute to and guide its range of physiological functions.
- Recognize how the body's organ systems function through homeostatic regulatory processes and feedback systems.

Course Text/Materials Information

- MCB246 is participating in the Day1Access Program. All students enrolled in this course are automatically enrolled in Day1Access Program so they can get immediate access to the digital materials. Students will have the discounted course materials billed to their bursar account. Students who wish not to participate in this program may opt out.

Hard copy material can be purchased at local campus bookstores:

<https://bookstore.illinois.edu/>

1) Textbook (REQUIRED): Anatomy & Physiology: An Integrative Approach, 4th edition by McKinley, O'Loughlin & Bidle with access to McGraw Hill's Connect platform (online resource); can also be purchased from connect website: <https://connect.mheducation.com/>

2) Recommended text: Atlas of Human Anatomy, 5th edition; Netter

- **Reading Assignments:** Before each topic is covered in the class lecture, the instructor will assign material from the required textbook. Reading this material is essential for keeping up with the lecture content.

Course Website, Course Tools

- Canvas will be our home base for communication. Here you will find: Important announcements, TA contact information and office hours, syllabus, links, Power Point slides of lectures, videos, study guides, and other helpful course materials. Please log in frequently and stay as up to date as possible.
- Course gradebook is here: <https://apps.atlas.illinois.edu/Gradebook/>
- Course CONNECT site is accessed through Canvas
- For DRES accommodations, students MUST submit their letter to the instructor well in advance (more than one week) of the exam. We suggest you provide your letter to the instructor during the first week.
- Students with DRES accommodation and those requesting alternate dates/times for exams (Exam conflict) must contact MCB246@mcb.illinois.edu or MCB Instructional Program office (127 Burrill Hall; ipsupport@mcb.illinois.edu) with their requests

Grading Information and Breakdown

- **Exams (125 pts each):** 3 mid-semester examinations will be administered and proctored during class time on Tuesdays (2/3, 3/3, and 4/7). Exams are based on the material covered by 3 resources available to students: reading assignment pages from the textbook, lecture slides and the class lectures. Students will have 80 minutes to complete 65 questions (60

multiple-choice and 5 true-false, matching, etc.). If a student misses an exam due to unforeseen emergencies or illness, it will be prorated at the end of the semester.

- **Online Quizzes (20 pts each):** There will be 11 online review quiz assignments for the entire semester. Questions will be based on both the Anatomy and Physiology subject material covered in the readings, lecture slides and in-class lectures. Each quiz will remain open Saturday through Tuesday. The top 10 quiz scores will be counted toward your total grade at the end of the semester (i.e., you can drop one). Due to this drop availability, no extensions or re-opening of the quizzes will be allowed.

- **In-class Quizzes (10 pts each):** In addition to the online quizzes, there will also be 12 in-class quizzes during the semester. These unannounced quizzes will test the material covered during the current class (and the relevant reading assignment), and the questions will be interspersed among the lecture slides. Students will use the iClicker app to answer these questions. The top 10 quiz score grades will be counted toward your total quiz score at the end of the semester (i.e., you can drop two). Due to the nature of these questions being asked/answered in real-time the possibility for extensions or re-opening of these quizzes is not possible.

- **Online Group Discussion Forums (40 pts each):** There will be 5 online discussion forums during the semester. Students will be divided in to several groups and must work together as they participate in these discussions. For every forum, the instructor will post a particular topic relevant to the material covered in the previous few classes. Working with their team members, students must post at least ONE original contribution to the topic (8-10 sentences) and two feedback comments on other teams' postings. Original remarks and the feedback comments should be posted before the forum close deadline to be awarded full points.

- **Final Exam (125 pts):** The final exam will adhere to the same format as the three mid-semester exams, except that students will have 180 minutes to finish it. It will be a proctored, non-comprehensive exam given during the scheduled final exam times as determined by the campus. This is a closed, summative final exam and will not be available for students.

- To check scores, sign on to <https://apps.atlas.illinois.edu/Gradebook/>. Students are responsible for checking their scores on the ATLAS Web Gradebook after each exam. Students are encouraged to keep all submission records of online assignments until after final grades are issued.

All point totals are estimates and may be altered slightly during the course of the semester

Grade Item	Points Available	Percentage Breakdown
Exams (125 pts each)	500	50%
Online Quizzes- 11; drop 1 (20 pts each x 10)	200	20%
In-class Quizzes- 12; drop 2 (10 pts each x 10)	100	10%
Online Discussion Forums (40 pts each x 5)	200	20%
Total	1000	

MCB 246 Standard Grade Scale:

Letter Grade	Point Ranges	Grade Point Value
A+	950-1000	4.000
A	930-949	4.000
A-	900-929	3.667
B+	870-899	3.333
B	830-869	3.000
B-	800-829	2.667
C+	770-799	2.333
C	730-769	2.000
C-	700-729	1.667
D+	670-699	1.333
D	630-669	1.000
D-	600-629	0.667
F	0-599	0.000

1. Tests will not be curved
2. There will be no “bumping up” of grades once final letter grades have been determined (i.e., even 1 point shy of an A- will earn you only a B+). The instructor will not raise the grading scale. If required based on performance, the instructor reserves the right to lower the scale.

Tentative Lecture Schedule

Week	Tuesday	Thursday
Jan 21	Jan 21: Cardiovascular System- Blood Reading Assignment 1	Jan 23: Immunology Reading Assignment 2
Jan 27	Jan 28: Immunology Online Quiz 1 due Reading Assignment 3	Jan 30: Lymphatic System
Feb 03	Feb 04: Exam 1 (Blood; Immunology; Lymphatic System) Reading Assignment 4	Feb 06: Cardiovascular System- Heart Discussion Forum1 closes
Feb 10	Feb 11- Heart Online Quiz 2 due Reading Assignment 5	Feb 13- Heart
Feb 17	Feb 18- Heart Online Quiz 3 due Reading Assignment 6	Feb 20 Cardiovascular System- Blood vessels
Feb 24	Feb 25- Blood vessels Online Quiz 4 due Reading Assignment 7	Feb 27- Blood vessels Discussion Forum 2 closes
March 03	March 04: Exam 2 (Heart; Blood vessels) Reading Assignment 8	March 06: Respiratory System
March 10	March 11: Respiratory System Online Quiz 5 due Reading Assignment 9	March 13: Respiratory System Discussion Forum 3 closes
March 15 - March 23	Spring Break No Class	Spring Break No Class

March 24	March 25: Urinary System Online Quiz 6 due Reading Assignment 10	March 27: Urinary System
March 31	Apr 01: Urinary System Online Quiz 7 due Reading Assignment 11	Apr 03: Fluids & Electrolytes
Apr 07	Apr 08: Exam 3 (Respiratory & Urinary Systems; Fluids & Electrolytes) Reading Assignment 12	Apr 10: Digestive System Discussion Forum 4 closes
Apr 14	Apr 15: Digestive System Online Quiz 8 due Reading Assignment 13	Apr 17: Digestive System
Apr 21	Apr 22: Digestive System Online Quiz 9 due Reading Assignment 14	Apr 24: Nutrition Reading Assignment 15
Apr 28	Apr 29: Reproductive System Online Quiz 10 due	May 1: Reproductive System Discussion Forum 5 closes Reading Assignment 16
May 5	May 6: Development, Pregnancy and Heredity Online Quiz 11 due	
	Final Exam (Digestive System; Nutrition; Reproductive System; Development, Pregnancy and Heredity)	

Course Policies

Regardless of whether a student has read the Course Policies for MCB 246, a student is expected to have knowledge of them. These policies were developed in agreement with the 2024-2025 Illinois Student Code.

Academic Integrity:

The Student Code will be applied in all instances of academic misconduct committed by students. This applies to all exams, presentations, assignments, and materials distributed or used in this course. You can review these polies in the Student Code, specifically (<https://studentcode.illinois.edu/article1/part4/1-401/>) Ignorance is not an excuse for any academic dishonesty. It is your responsibility to read this policy to avoid any misunderstanding. Do not hesitate to ask the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity.

Religious Observances and Practices

It is the policy of the University of Illinois Urbana-Champaign to reasonably accommodate its students' religious beliefs, observances, and practices that conflict with a student's class attendance or participation in a scheduled examination or work requirement, consistent with state and federal law.

Students must request a reasonable accommodation for their religious belief, observance, and practice in advance of the conflict to allow time for both consideration of

the request and alternate procedures to be prepared. Not requesting an accommodation reasonably in advance of the conflict may result in a delay or denial of the accommodation. A reasonable accommodation for a religious belief, observance, and practice is defined as a change that allows the student to participate in their religious belief, observance, and practice and which does not fundamentally alter the educational requirement or place an undue hardship on an instructor, department, or office.

Students must direct a request for a reasonable accommodation for a religious belief, observance, and practice to the instructor(s) of the affected course(s), who shall review the request and determine whether a reasonable accommodation can be made. This form serves as a resource to assist students as they are making such requests to their instructors. PLEASE NOTE: This form asks you to clarify whether you are requesting an absence or an accommodation other than absence.

Once submitted, students will receive a copy of this request form. Students must then forward the form to each instructor in order to request the accommodations.

Request to Instructor Religious Accommodation form:

https://cm.maxient.com/reportingform.php?UnivofIllinois&layout_id=42

Disability Resources and Educational Services (DRES) Accommodations

1. We are committed to providing a learning environment where our students can succeed. If you require special accommodations, please contact us and DRES as soon as possible.
2. Information is available at <https://dres.illinois.edu>.
3. To contact DRES, you may visit 1207 S. Oak Street, Champaign, call 217-333-4603, or email disability@illinois.edu.
4. We will try to meet all accommodations once the process has started. Please note that accommodations are not retroactive to the beginning of the semester, but begin the day you contact your professor, instructor, or coordinator with a current letter of accommodation from DRES.
5. If a student has DRES accommodations, documentation should be submitted as soon as possible preferably during the first week of class.
6. If a student believes that they need DRES accommodations, they should contact DRES at disability@illinois.edu.

Contacting MCB Course Personnel

1. MCB course personnel are more than happy to assist students.
2. Emails to instructors, TAs, or course coordinators will only be answered if they come from an @illinois.edu account. As a student, please remember that when you email a staff member, it is important to include all pertinent information so that we can assist you in the most efficient and effective manner possible. This information includes:
 - The course rubric in the subject line
 - Your full first and last name
 - Your NetID (the first part of your illinois.edu email account)
 - Your UIN (9-digit number that you use to register for classes)
 - The course that you are concerned about (the course personnel often work with multiple courses)
 - Your section letter/number

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- The previous email "thread" or previous communicated information pertinent to the situation

3. Your cooperation will help us respond much more quickly to your concerns.

FERPA (Family Educational Rights and Privacy Act)

Any student who has suppressed their directory information pursuant to Family Educational Rights and Privacy Act (FERPA) should self-identify to the coordinator for the course to ensure protection of the privacy of their attendance in this course. See <https://registrar.illinois.edu/academic-records/ferpa/> for more information on FERPA.

Disruptive Behavior

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office for Student Conflict Resolution (<https://conflictresolution.illinois.edu>; conflictresolution@illinois.edu; 333-3680) for disciplinary action.

Electronic Media/Device Use

- Use of any social or electronic media to share information, request information or make confidential information public is prohibited. Any use of this type may earn you a zero or a more extreme penalty at the discretion of the instructor on an assignment or assessment.
- Any violation of the social media policy on your account may result in a zero on an assignment or exam or a more extreme penalty at the discretion of the instructor.
- Any social media sites created in relation to MCB courses must grant access to course personnel upon request. Failure to provide access will result in a failing grade in the course for the group/site's administrator(s).
- No electronic devices, including smart watches, are allowed at exams.

Course Material

- The material recorded is intellectual and copyrighted property of the University of Illinois Board of Trustees and may be made for personal use only.
- Video recordings of any kind are strictly forbidden.
- Posting of audio recordings or transcriptions on social or electronic media platforms is strictly prohibited.
- Recording material from this course (including lectures, discussions, or other activities) is forbidden.
- Any violation of these policies will be forwarded to the Office of Student Conflict Resolution for disciplinary action.

Inclusivity Statement

The effectiveness of this course is dependent upon the creation of an encouraging and safe classroom environment. Exclusionary, offensive, or harmful speech (such as racism, sexism, homophobia, transphobia, etc.) will not be tolerated and in some cases may subject to university harassment procedures. We are all responsible for creating a positive and safe

environment that allows all students equal respect and comfort. Students are expected to help establish and maintain an environment where you and your peers can contribute without fear of ridicule or intolerant or offensive language.

Student Resources/Where to go for Help:

Community of Care

As members of the Illinois community, we each have a responsibility to express care and concern for one another. If you come across a classmate whose behavior concerns you, whether in regards to their well-being or yours, we encourage you to refer this behavior to the Connie Frank CARE Center (217-333-0050 or <http://odos.illinois.edu/community-of-care/referral/>). Based on your report, the staff in the Connie Frank CARE Center reaches out to students to make sure they have the support they need to be healthy and safe.

Further, as a Community of Care, we want to support you in your overall wellness. We know that students sometimes face challenges that can impact academic performance (examples include mental health concerns, food insecurity, homelessness, personal emergencies). Should you find that you are managing such a challenge and that it is interfering with your coursework, you are encouraged to contact the Connie Frank CARE Center (SAC) in the Office of the Dean of Students for support and referrals to campus and/or community resources.

Sexual Misconduct Reporting Obligation at Illinois:

The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University's Title IX Office. In turn, an individual with the Title IX Office will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options.

A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: wecare.illinois.edu/resources/students/#confidential.

Other information about resources and reporting is available here: wecare.illinois.edu.

Mental Health

Significant stress, mood changes, excessive worry, substance/alcohol misuse or interferences in eating or sleep can have an impact on academic performance, social development, and emotional wellbeing. The University of Illinois offers a variety of confidential services including individual and group counseling, crisis intervention, psychiatric services, and specialized screenings which are covered through the Student Health Fee. If you or someone you know experiences any of the above mental health concerns, it is strongly encouraged to contact or visit any of the University's resources provided below. Getting help is a smart and courageous thing to do for yourself and for those who care about you.

- Counseling Center (217) 333-3704
- McKinley Health Center (217) 333-2700
- National Suicide Prevention Lifeline (800) 273-8255

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- Rosecrance Crisis Line (217) 359-4141 (available 24/7, 365 days a year)

If you are in immediate danger, call 911.

The Office of the Vice Chancellor for Diversity, Equity and Inclusion:

- <https://diversity.illinois.edu>
- Discrimination & Harassment Prevention
- Title IX
- Accessibility & Accommodations
- Inclusive Illinois

The Jeffries Center (TJC)

The Jeffries Center (formally known as OMSA) offers free tutoring and academic services. Matched tutoring, online self-paced workshops and academic skills coaching are among the services featured in The Jeffries Center (TJC) located at 1103 W. Oregon, Suite E, Urbana, IL. TJC's services are designed to help students excel in college. As you have probably already noticed, college-level learning is different from what it was in high school. No matter how well you performed before attending Illinois, there is always room to hone your study skills.

- To learn more about TJC's tutoring services and to sign up for a tutor, visit <https://jeffriescenter.illinois.edu/academic-services-center/tutoring/tutoring>.
- To learn more about the self-paced workshops and to take advantage of this opportunity, visit: <https://jeffriescenter.illinois.edu/academic-services-center/tutoring/workshops>.

You are encouraged to make the most of your tutoring and workshop session(s) by:

- Requesting a tutor at the beginning of the term before tutors' work schedules are booked up.
- Come to each of your tutoring or workshop sessions prepared. Preparation includes having your textbooks, notes, and specific questions concerning the material. The more you prepare, the more you will get out of the session.
- Tutors do not serve as a substitute for our instructional faculty. Tutors will not "lecture" or "re-teach." They will provide strategies to help you improve your approach to mastering your course content. Tutoring is not a substitute for missed classes. If you miss class, make sure you get notes from a classmate and meet with your professor during office hours.

University Resources Contact Information

<u>University Police Department</u>	Emergency, 9-911 Non-emergency, 217-333-8911
University Fire Department	Emergency 9-911
<u>Rosecrance Crisis Line</u>	217-359-4141
<u>Emergency Dean</u>	300 Turner Student Services Bldg., 610 E. John St., 217-333-0050
<u>Counseling Center</u>	110 Student Services Bldg., 610 E. John St., 217-333-3704
<u>McKinley Health Center</u>	217-333-2700
<u>McKinley Mental Health Center</u>	1109 S. Lincoln, 217-333-2705

Psychological Services Center 3rd Floor, 505 E. Green St., 217-333-0041

Local Sexual Assault Center, RACES 217-384-4444

Women's Resources Center 703 South Wright Street, 2nd Floor, 217-333-3137

Suicide and Crisis Lifeline 988

SafeRides (free nighttime campus ride program) 217-384.8188

SafeWalks (free walking escort service by Student Patrol 9 PM - 2:30 AM) 217-333-1216

Student Services and Advocacy

Office of the Dean of Students 300 Student Services Bldg., 610 E. John St., 217-333-0050

Classroom Support, Teaching Skills, and Instructional Strategies

Center for Innovation in Teaching & Learning (CITL) 249 Armory Building, 217-333-1462

Disability Services

Disability Resources and Educational Services (DRES) 1207 S. Oak St., 217-333-1970

Gender & Sexuality Resource Center

Gender & Sexuality Resource Center 323 Illini Union, 1401 W. Green St., 217-244-8863

Veterans Services

Chez Veterans Center 908 Nevada Street, 217-300-3515

General Study Skills Assistance

The Jeffries Center 130 Turner Student Services Bldg., 610 E. John St, 217-333-0054

The Jeffries Center Tutoring & Academic Services 1103 W. Oregon Street Suite E, 217-333-7547

Writer's Workshop 100b Main Library, 1408 W. Gregory Dr., 217-333-8796

**Additional academic assistance may be available through individual departments

Health Resources

Health Education, McKinley Health Center 1109 S. Lincoln Ave., 217-333-2700

Alcohol & Other Drug Outreach Team Counseling Center, 610 E. John St., 217-333-3704

Sexual Health Educator McKinley Health Center, 1109 S. Lincoln Ave., 217-333-2700

<u>Dial-A-Nurse, McKinley Health Center (24-hour)</u>	1109 S. Lincoln Ave., 217-333-2700
Health Resource Center, McKinley Health Center, Main Lobby	1109 S. Lincoln Ave., 217-333-6000 Monday-Friday 9:00 AM - 5:30 PM
Health Resource Center, Room 40 Illini Union,	1401 W. Green St., 217-244-5994
<u>Other Campus Locations Self Care Stations (FA/SP Semesters) locations and hours</u>	Bruce Nesbitt African American Cultural Center Asian American Cultural Center La Casa Cultural Latina, Library 2 nd Floor Native American House, Main Library

Sexual Harassment/Assault & Acts of Intolerance/Hate Crimes

Office of the Dean of Students 300 Students Services Bldg., 610 E. John St., 217-333-0050

University Information of Student Safety - Active Threats:

- General Emergency Response Recommendations (Emergency Response Guide):
- Security Threat. The Department of Homeland Security and the University of Illinois at Urbana-Champaign Office of Campus Emergency Planning recommend the following three responses to any emergency on campus: RUN > HIDE > FIGHT
- Only follow these actions if safe to do so. When in doubt, follow your instincts - you are your best advocate!
- RUN – Action taken to leave an area for personal safety.
 - Take the time to learn the different ways to leave your building before there is an emergency.
 - Evacuations are mandatory for fire alarms and when directed by authorities! No exceptions!
 - Evacuate immediately. Pull manual fire alarm to prompt a response for others to evacuate.
 - Take critical personal items only (keys, purse, and outerwear) and close doors behind you.
 - Assist those who need help, but carefully consider whether you may put yourself at risk.
 - Look for Exit signs indicating potential egress/escape routes.
 - If you are not able to evacuate, go to an Area of Rescue Assistance, as indicated on the front page of this plan.
 - Evacuate to Evacuation Assembly Area, as indicated on front page of this plan.
 - Remain at Evacuation Assembly Area until additional instructions are given.
 - Alert authorities to those who may need assistance.
 - Do not re-enter building until informed by emergency response personnel that it is safe to return.
 - Active Threat: IF it is safe to do so, run out of the building. Get as far away as possible. Do NOT go to the Evacuation Assembly Area.
- HIDE – Action taken to seek immediate shelter indoors when emergency conditions do not warrant or allow evacuation.
 - Severe Weather:

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- If you are outside, proceed to the nearest protective building.
 - If sheltering-in-place due to severe weather, proceed to the identified Storm Refuge Area or to the lowest, most interior area of the building away from windows or hazardous equipment or materials.
 - Active Threat:
 - Lock or barricade your area.
 - Get to a place where the threat cannot see you.
 - Place cell phones on silent.
 - Do not make any noise.
 - Do not come out until you receive an Illini-Alert advising you it is safe.
 - FIGHT – Action taken as a last resort to increase your odds of survival.
 - Active Threat: If you cannot run away safely or hide, be prepared to fight with anything available to increase your odds for survival.