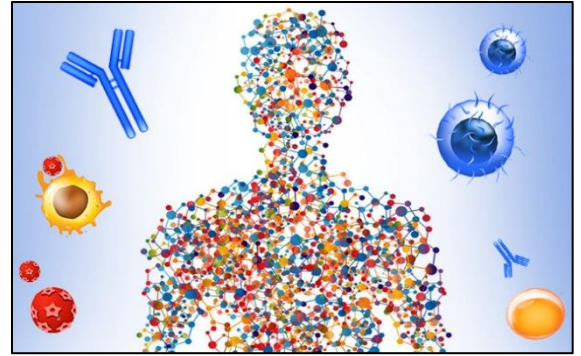


Immunology (BI315)

Fall 2020



Course Information Lecture (3 hrs)
Lecture Times: MWF 10:00-10:50a
Room: **STD 406 and 407**

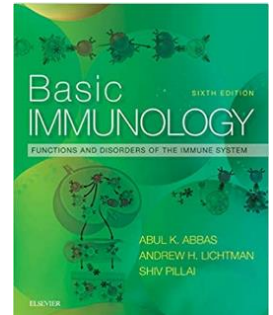
Instructor **Dr. Terese M. Zidon**
Office: STD 325
Office Phone: 660-248-6339
E-mail: tzidon@centralmethodist.edu

Instructor Availability: To facilitate communication, please contact me via the “private discussion forum” in myCMU or before or after class with any questions or schedule a meeting to discuss course material as needed. It is important to me that each of you does well in the course and I am willing to assist you in any way I can! **Get help early and as often as you need it!!!**

Website: **MyCMU**, the course learning management system, **is required** for lecture handouts and/or articles, useful internet links related to content discussed in class, and grade information.

Zoom Office Hours **MF 1:00-3:00p in STD 205** (lab) or by appointment by Zoom meeting.

Textbook Required: *Basic Immunology, 6th Edition**
Authors: Abul K Abbas MBBS, Andrew H. Lichtman MD/PhD, and Shiv Pillai PhD
Publisher: Elsevier
ISBN: 0323549438
**If you have an earlier edition of the textbook, that will work great too!*



Prerequisites/ Co-requisites:

Prerequisites: Must have completed **BI101** General Biology I and **BI102** General Biology II.

Course Description and Objectives

This is a **college course** designed to provide you with a theoretical foundation of immunology at the molecular, cellular, tissue level, and disease of the immune system. The overall goal of this course is for you to become knowledgeable in the general aspects of the immune system for a future career in health care related field. You will also gain experience reading and reviewing peer-reviewed articles to enhance your scientific knowledge about the immune system and be versed in current topics.

Course Learning Objectives:

- Develop a basic understanding of fundamental immunological processes and terminology
- Identify the major cellular and tissue components of innate and adaptive immunity
- Acquire a basic understanding of the fundamentals of the major histocompatibility complex
- Understand how the immune responses by CD4 and CD8 T cells and B cells are initiated and regulated
- Be able to discuss how the immune system distinguishes self from non-self
- Describe the differences and be able to integrate innate and adaptive immunity
- Describe major modern techniques used in and influenced by immunology
- Know why and how the immune system is selective, tolerant and has memory
- Explore how immunity relates to disease and apply the concepts to specific cases
- Understand how infectious microbes interact with the immune system

Course Expectations:

Expectations

This is a college classroom and you have the opportunity to learn material that will prepare you for your future career. You will learn the most if you attend each class session, are on time, and if we are all respectful to each other. Reading the assigned materials will help you grasp concepts covered in lecture and retain them for the tests and in future courses. Being an active participant in class, asking questions, and engaging in class discussions will also increase your understanding and retention of material. I will be prepared for each class session, too, so we can work together on building your knowledge. In addition, I am available to assist you outside of class via e-mail or, in person, or by appointment.

Learning, studying, and understanding the anatomy course content is your responsibility. Final course grades are assigned objectively and without regard to student's academic standing or to the requirements of other departments or programs. It is your responsibility (as a CMU student) to see that you are above any minimum requirements that may apply.

Course Evaluation

Lecture:

Unit Exams (Exams 1-4)	4 @ 100 pts	400 pts
Quizzes (2 dropped)	10 @ 10 pts	100 pts
HW assignments	4 @ 25 pts	100 pts
		600 pts

Grading Scale:

A = 537-600 pts (90-100%)
B = 477-536 pts (80-89%)
C = 417-476 pts (70-79%)
D = 357-416 pts (60-69%)
F = ≤ 356 pts (<59%)

Grades and points are final and non-negotiable.

Exams (100 pts each) are in-seat and may contain multiple choice, matching, fill in the blank, and/or short answer. They cover material from previous lectures, as written on the schedule (amended as needed and discussed content in class).

****NOTE:** Cell phones or any other electronic devices (including ipads, laptops, smart watches on wrist, etc.) out during an exam will result in a zero for the exam.

Exam material is primarily from the lectures, homework, handout materials, classroom discussions, and the textbook. Bonus essay questions may be added to exams at the discretion of the instructor, but the "extra" points opportunity will only be added to the specific exam, meaning no exam will exceed 100 points.

ELEVEN In-class quizzes (10 pts each) will be administered during the semester (*see semester schedule below*) to assess individual knowledge and understanding of immunological terminology and content and the lowest quiz score will be dropped.

Make up exams and/or in-class quizzes are to be completed ahead of time for any college duty absence (sports, concerts, etc). An excused absence after the assessment date requires documentation (Dr.'s note, etc) and an exam or quiz must be made up (*see Illness Policy*). For all make-up exams or in-class quizzes it is your responsibility to contact the Center for Learning and Teaching to schedule an appointment. Call: #660-248-6890 or visit their website. CLT website:

<https://centralmethodist.edu/academics/learning-teaching/index.php>

Homework Assignments on MyCMU:

Assignment formatting will be discussed in class yet completed on your own outside of class and available on MyCMU one week prior to the assignment due date. It may contain various questions or case studies pertaining to immunological content covered in class to assess your content knowledge and your integration/application skills. There will be four assignments over the course of the semester. Each assignment is due on the due date (see

schedule of topics), no exceptions. **Late assignments will not be accepted for any reason** (excused or unexcused) as all assignments are due online and will be discussed in class. (*See Illness Policy*)

Class Cancellation:

On occasion it will be necessary to cancel a class unexpectedly due to weather, illness, or other life situations and you will be immediately notified via an announcement in class, on MyCMU announcement blog, and an e-mail.

Athletic or Club Accommodations (College duty):

The student's responsibility for being an active member of a sports team or taking a special trip for a club is to choose classes for the semester that minimize potential absences as much as possible. The student must anticipate and plan for any advanced absences for the upcoming semester, and make arrangements with the instructor about each absence ONE WEEK in advance. **The student must make up any exams or quizzes BEFORE the event takes place**. Failure to inform the instructor prior to the student's absence is an unexcused absence and will result in a zero for an exam.

Instructor's Course Notes:

Illness Policy (*formerly known as Attendance Policy*):

Attendance in lecture is highly recommended to learn the material and gain insightful knowledge into the world of immunology. Students are to contact other students in case of absences to determine what was missed during a class period. If there is a serious reason for missing an exam or quiz, or in-class assessment, you must contact the instructor at least **24 hours prior** to the examination. The excuse's validity is at the discretion of the instructor and may require documentation (e.g., Dr's note, etc.).

COVID-19 Attendance Policy Updates: Use the following guidelines if you are ill this semester:

- Email me within 24 hours of missing a scheduled quiz or exam to schedule a time to take it.
- Being absent does not excuse you from turning in homework to myCMU on time. If there are extenuating circumstances, contact me within 24 hours of the missed deadline. It would be wise to complete and submit work as early as possible to avoid an emergency.
- If you are in quarantine, accommodations will be determined in partnership with the Center for Learning and Teaching. These issues will be dealt with on a case-by-case basis.
- To earn points for in-class activities in which you cannot participate, you must contact me within 24 hours of your absence to learn specifically what should be covered on a particular assignment.
- As a responsible student and an avid learner, you will only miss classes if you are legitimately sick, displaying any symptoms of COVID-19, or participating in a University Sanctioned Event. Missing class to finish homework or to take a friend to a doctor is not a wise choice and will be considered.

COVID Symptoms List: The symptoms of COVID-19 are many and varied, but may include the following:

Fever, dry cough, unusual tiredness, gastro-intestinal distress, change in sense of smell or taste, etc.

A more thorough list of symptoms is available at:

<https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>

Student Responsibilities:

We will start lecture promptly at 10:00am. If you need to arrive late or leave early for any reason, please come in quietly to minimize interruptions. Late arrivals and early departures are disruptive and disrespectful to the entire class and can impede your and other students learning. I highly encourage open discussion during lecture yet please do so with the utmost respect to all individuals in the classroom. If you have a question or concern about a lecture topic please raise your hand. **A good learning environment requires respect for your fellow students and your instructor.** If talking or inappropriate behavior becomes a problem, I will ask the offenders to leave the classroom and proper actions will proceed.

Learning and understanding the course content is your responsibility! I, as the instructor, am here to facilitate your learning and help you when needed. As a student enrolled in this course, **it is your responsibility to judge whether or not you have the skills to succeed in this course.** You must carefully assess your own skill level and knowledge of chemistry, biology, and essay writing and test taking. As always, there is assistance

in the areas of writing, math, etc. available (and free of charge) at the writing or tutoring center on campus for you. **Please be proactive and ask for assistance early.**

Wear a face mask during class: All students are required to wear a face mask while in class, there are no exceptions. Wearing a face mask is about protecting others, our Central Methodist Community and the communities we work in. The primary purpose of wearing a face mask is to reduce the probability of virus spreading from the wearer (who may not know they are spreading the virus) into the environment and to others. The secondary purpose of the face covering is to reduce the likelihood that large droplets containing virus that are spread by others may enter the nose and mouth of the wearer. The use of a face mask does not replace the continued need to maintain physical distances from others, at least 6 feet, but instead augments physical distancing and helps us further reduce the likelihood of virus transmission.

A face mask is a cloth, bandana, or other type of material that covers an individual's mouth and nose. The CDC lists five criteria for "cloth face coverings," which should:

- Fit snugly but comfortably against the side of the face
- Be secured with ties or ear loops
- Include multiple layers of fabric
- Allow for breathing without restriction
- Be able to be cleaned or laundered and machine-dried without damage or change to shape.



Image: www.groovebags.com

The complete CMU Face Mask Policy is available at:

https://www.centralmethodist.edu/about/offices/human-resources/_docs/FaceCoveringPolicy.pdf

CMU Best practices for students on Zoom during the regularly scheduled class time.

- Be early to class so you are in a mindset that is conducive to learning.
- Have your class materials organized and accessible during your scheduled class period
- Dress as you would for a face-to-face class
- Sit upright with the lights on to help you stay focused while learning remotely
- Test your microphone and speakers for Zoom so you can hear well and can be heard
- Use your first and last names as you sign in, do not leave the name as "iPad" or use something amusing (*this is important for attendance taking*)
- Use the Chat function or "raise your hand" as necessary to ask questions

Technology Policy:

Tablets (iPads) will be permitted during class to access the course notes or the eTextbook. These devices should be used only in conjunction with exercises directly related to class activity. I recognize that tablets can be a useful way to take notes or even to search out additional information during class. However, inappropriate use—defined as use that inhibits the learning experience for you OR for others in the room—is prohibited! If you are using your tablet inappropriately you will be asked to leave the classroom and are prohibited from using the tablet and/or tablet for the remainder of the session.

ALL CELL PHONES must be turned off or muted during lecture! Use of cellular phones for entertainment purposes (internet and/or texting) in any way during the lecture sessions is extremely disrespectful and will be noted, which may affect your final grade if excessive use is examined. If there is some pressing issue that requires you to have your phone on, please set your phone to vibrate, inform the instructor, and leave the class if you have to take a call.

Academic Integrity:

CMU students are required to comply with the Academic Conduct Policy stated in the student handbook is expected at all times. Academic dishonesty is a serious offense and will not be tolerated. This includes, but is not limited to: cheating on assignments or exams, plagiarizing (copying another's idea or words without proper credit), stealing of tests or other academic materials, and/or knowingly falsifying records. The first offense penalty for academic dishonesty on **any** assignment will result in an **F** (0 pts) for the assignment and the Academic Affairs and Office of Student conduct will be notified; there are no exceptions. The second offense will result in the student being dropped from the course with an **F** and Academic Affairs and the Dean of Student Affairs will be notified. They will then decide on further disciplinary action, depending on the severity of the offense, which may include

suspension or dismissal from the College. Refer to the *Student Handbook* for the CMU honor code. I am committed to this honor code.

An Honor Code is as follows: ***No student shall commit any act of academic dishonesty in order to advance her or his own academic performance, or to impede or advance the academic progress of others.***

Examples of Cheating are defined as, but not limited to:

- a) Receiving aid during an exam from anyone (or anything, such as a device) other than the instructor
- b) Using unauthorized materials during an exam (e.g., cell phone, smart watch, copied content, etc.)
- c) Giving unauthorized aid to another student taking an exam (e.g., talking when exam is handed out)
- d) Plagiarism. Defined as copying an individuals' words or ideas without giving the source proper credit.
- e) Copying another student's work on any homework assignment or during class.

Syllabus Modifications:

Make sure to read the course syllabus carefully. There may be modifications (course requirements, scheduled topics, exam dates, in-class assignments, overall points, etc.) to the course syllabus as the semester progresses to accommodate student learning or varying dates due to weather incidents or COVID-19 occurrences on. Students will be notified and given explanation of any changes made to the syllabus.

Success in this course:

Discipline and dedication in your study habits are important to be successful in this course. **Cramming for an exam does not work well in this course.** If you do not master the material from one week prior to starting the next week you will find yourself behind in this course and not do well on the exams. Regularly scheduled study sessions are highly recommended. ***The quality of your study time is as important as the quantity and neither one can be substituted for the other.***

- 1) Attend every class, pay attention and take notes. Research has shown that physical note taking reinforces learning through the process of both hearing the information and writing it down.
- 2) Reread your notes DAILY or at least three times per week (not just the night before the exam) to make sure you understand what you are learning and not just memorizing (although there will be plenty of memorization required). As a student, you need to be spending a minimum of 2 hours studying outside of class for every hour you are in class.
- 3) Understand how you learn best. Visit **vark-learn.com**. This site diagnoses your learning type and will provide you with type-specific learning strategies.
- 4) Read the textbook and self-evaluate your understanding by answering the "check your understanding" questions associated with each chapter and the review questions at the end of the chapter.
- 5) Productively interact with your classmates by discussing topics or join/make a study group to help with your understanding.
- 6) Complete all assignments on time and to the best of your ability.
- 7) If you have tried to understand a topic, have read the textbook, but still don't "get it", please ask the instructor. E-mail is best so you will have a written reply to your question and you don't have to wait, but you can also make an appointment to meet me on campus to discuss a topic. You are encouraged to seek assistance from me by scheduled appointment whenever you have questions concerning course topics.

Intellectual Pluralism:

CMU and I welcome the diversity of ideas and opinions that students hold. It is this diversity that drives the intellectual stimulation and learning. If you have concerns with the structure or content of the course please address those concerns first with the instructor. Your grade will in no way be affected by our conversation. If after speaking with me you are not satisfied, you should direct your concerns to the Division Chair, Dr. James "Tiger" Gordon (jjgordon@centralmethodist.edu).

Grievance Policy:

CMU has established a grievance policy and process designed to provide students and others with a process to resolve potential issues. This policy and process is established to provide persons with an avenue to file a written

concern and to establish a process to track and implement changes as a result of said concern. For more detailed information, consult the CLAS catalog

<https://clas-catalog.centralmethodist.edu/info/University%20Policies.html#info13-grievance>

If an issue cannot be solved through consultation with the faculty or division chair, students can report an incident/issue within 30 days of the event via the online web form:

<https://cm.maxient.com/reportingform.php?CentralMethodistUniv>

OTHER STUDENT RESOURCES:

Library Resources:

Online databases are available for you to write a paper or find online resources for your assignments.

<https://www.centralmethodist.edu/academics/library/library-services.php>

CMU is committed to creating a learning environment that meets the needs of its diverse student body. If you anticipate or experience any barriers to learning, communicate your concerns with the instructor. In addition to speaking with the instructor, the following resources are available to ensure an opportunity to learn in an inclusive environment that values mutual respect.

Students with Disabilities:

Students with documented disabilities who may need academic services for this course are required to register with the Center for Learning and Teaching (phone: #660-248-6890). Until the student has been cleared through the disability services office, accommodations do not have to be granted by an instructor. If you are a student who has a documented disability, it is important for you to read the entire syllabus as soon as possible. The structure or the content of the course may make an accommodation not feasible. Website for the Disability Services and Accommodations page:

<https://www.centralmethodist.edu/academics/learning-teaching/disability-accommodations.php>

Student Success Services / Center for Learning and Teaching:

They provide you with personal advisors to help with many aspects of being a CMU student such as: student success planning (balancing academic rigor with other activities, identifying & overcoming barriers to success, mastering effective study skills, taking ownership of success and setbacks), adjustment to CMU, adjustment as a nontraditional student, coping with academic stress, etc. Website for the Center for Learning and Teaching:

<https://www.centralmethodist.edu/academics/learning-teaching/index.php>

Counseling services:

If you are having a hard time managing time and stress, and building healthy habits to improve academic success, or deal with any personal issues that may be getting in the way of focusing on your courses.

For students who are experiencing conflict which is impacting their educational environment, contact the Counseling Center at 660-248-6274 to schedule your initial appointment or visit the Counseling Center's website:

<https://www.centralmethodist.edu/student-life/services-and-resources/counseling-center.php>

Non-Discrimination Policy:

CMU does not discriminate on the basis of race, color, sexual preference, religion, sex, national origin, age, or federally defined disability in its recruitment and admission of students. The University's educational programs, activities, financial aid, loan, and scholarship programs are made available to all qualified students without regard to race, color, sexual preference, religion, sex, national origin, age, or federally defined disability. The University complies with all federal and state non-discrimination requirements.

Tentative Schedule of Immunology Lecture Topics Fall 2020*

Exam dates will NOT change

Topics are subject to change. Any changes will be announced in class and posted on the public discussion forum.
Readings pertain to the required textbook: Basic Immunology, 6th ed. unless specified

Dates	Lecture Topics	Assigned Readings	Homework (HW) / Quiz (Due Dates)
Week 1 08/18-08/21	Introduction History of Immunology Microbiology Review	myCMU Readings	Quiz 1
Week 2 08/24-08/28	Overview of Immune System How to Read a Paper	Ch 1 myCMU article	Quiz 2
Week 3 08/31-09/4	Innate Immunity	Ch 2	HW 1 - DUE (09/06)
Week 4 09/07-09/11	Adaptive Immunity: Antigen Capture	Ch 3	Quiz 3
Week 5 09/14-09/18	Adaptive Immunity: Antigen Presentation	Ch 3	Exam 1: Mon, Sep 14
Week 6 09/21-09/25	Adaptive Immunity: Antigen Recognition	Ch 4	Quiz 4
Week 7 09/28-10/02	T-cell Mediated Immunity: Activation of T Lymphocytes	Ch 5	Quiz 5 HW 2 - DUE (10/04)
Week 8 10/05-10/09	T-cell Mediated Immunity: Effector Mechanisms	Ch 6	Quiz 6
Week 9 10/12-10/16	Humoral Immunity: Antibody Production	Ch 7	Exam 2: Mon, Oct 12
Week 10 10/19-10/23	Humoral Immunity: Effector Mechanisms	Ch 8	Quiz 7
Week 11 10/26-10/30	Immune Tolerance and Autoimmunity	Ch 9	Quiz 8 HW 3 – DUE (11/01)
Week 12 11/02-11/06	Tumors and Transplantation	Ch 10	Exam 3: Mon, Nov 2
Week 13 11/09-11/13	Hypersensitivity / Congenital and Acquired Immunodeficiencies	Ch 11 Ch 12	Quiz 9
Week 14 11/16-11/20	Adipose Tissue Inflammation / Neuro-Endocrine Immune Interactions	Article on myCMU	Quiz 10
11/23-11/27 Thanksgiving Break – No Classes			
Week 15 11/30-12/4	Exercise Immunology	Article on myCMU	Online Quiz 11 HW 4 – DUE (12/6)
Exam 4: Wed 12/9, 10:30-12:30pm			

**This is a tentative schedule that may change during the course due to student progression. I reserve the right to change the schedule to meet student needs. There will be an announcement to any changes in lecture and/or on MyCMU, or via an announcement.*