

## **Biol 4350- Immunology**

Course Syllabus

Spring 2024

TR 5:30 - 6:50 PM

### **INSTRUCTOR**

Ali Azghani, Ph.D.

Professor of Biology

Office: BEP 105, (903) 566-7332

Research Lab: BEP 136, (903) 566-7259

[aazghani@uttyler.edu](mailto:aazghani@uttyler.edu)

**Office hours:** T. W. 11:00 – 12:30 or by appointment.

### **REQUIRED COURSE MATERIAL**

**Textbook:** IMMUNOLOGY, 7<sup>th</sup> edition, Coico & Sunshine, WILEY Blackwell

Paperback: ISBN: 978-1-118-39691-9, 2015; List Price: about \$40.00. A brand-new book will come with a code for a free E-Text and discounted access to “CourseSmart”, a nice online resource, but is not required in this course. For more information, please visit [www.wileyimmunology.com/coico](http://www.wileyimmunology.com/coico);

[www.vitalsource.com/software/bookshelf/downloads](http://www.vitalsource.com/software/bookshelf/downloads);

[www.coursesmart.com/students](http://www.coursesmart.com/students)

### **ATTENDANCE/PARTICIPATION**

Attendance and participation are essential to succeed in this class. If you miss class it is your responsibility to contact another student (not the instructor) to get notes and other announcements made during class. Your attendance and participation will be recorded during each class period.

### **COURSE DESCRIPTION**

This course will provide basic knowledge on the principles of the Immune System at cellular and molecular level. Current topics include the development and physiological & pathological functions of humeral & cell-mediated immunity and immunotherapy.

### **SPECIFIC OBJECTIVES**

1. Know the molecules, cells, and organs of the immune system
2. Learn the players of, differences between, and integration of innate and adaptive immunity
3. Comprehend the immunologic processes involved in targeting pathogens, transplants, and cancer cells.
4. Understand the molecular mechanisms behind pathologic functions of the immune system.
5. Develop critical thinking skills and problem-solving strategies

### **GRADING POLICY**

**Attendance and Participation (10%):** This will be an interactive class and students are expected to read the assigned material before lecture sessions, participate in class discussion, and take pop quizzes. Students are allowed to miss one lecture/each exam period without penalty.

**Class Quizzes (20%):** You will have a prescheduled class quiz at the conclusion of each chapter. The quiz will be given in the beginning of the following lecture session using the clicker. Just like attendance grades, these grades will comprise 20% of each major exam. No make-up quiz will be given. I will, however, drop one low quiz grade for each student. So, if you miss a quiz for any reason, including illness and excused travel absence, that quiz will be counted as a dropped quiz score.

**Four Exams (70%):** Each major exam will consist of multiple choice & True/False questions and will cover material from the lectures. **No make-up exams** will be given without prior notification or documented medical or family excuses. Chapter readings are to be used as reference material to assist with lecture and class discussions. Common courtesy is expected in class, so please Silence your Phones; Stop navigating Webs; Pay attention; and Get in the zone!

No additional work for extra credit will be given at the end of the semester.

Letter grades will be assigned according to the following scale: A = 90-100, B = 80-89, C = 70-79, D = 60-69.

**Grade rounding:** If your final course grade is within 0.5 point of the next letter grade, it will be rounded up automatically. The only other adjustment that will be made is if the final percentage is within one point of the next letter grade and, the student has missed three or less lectures throughout the semester.

**Academic Integrity:** Students should be aware that **absolute** academic integrity is expected of every student in all undertakings at The University of Texas at Tyler. Failure to comply can result in strong university-imposed penalties. **I will notify University Administration of any cheating!**

#### **Copy right- Recording of class sessions**

Class sessions may be recorded by students enrolled in this course. Recordings that contain personally identifiable information or other information subject to FERPA shall not be shared with individuals not enrolled in this course unless appropriate consent is obtained from all relevant students. Class recordings are reserved only for the use of students enrolled in the course and only for educational purposes. Course recordings should not be shared outside of the course in any form without express permission.

**I RESERVE THE RIGHT TO MODIFY THIS SYLLABUS AT ANY TIME. THEREFORE, YOUR ATTENDANCE AND ATTENTION TO THE ANNOUNCEMENTS IN CANVAS ARE CRUCIAL BECAUSE IT WILL ASSIST YOU TO REMAIN CURRENT ON THE MATERIAL AND KNOW WHEN THE SYLLABUS MAY BE MODIFIED.**

#### **GENERAL INFORMATION \_ Resources for UT Tyler Students Success**

Please refer to “Student Resources” and “University Policies and Information” on the course Modules/Canvas.

## SCHEDULE

DATE	LECTURE	CHAPTER
Jan 16 - 31	Class orientation, Overview of the Immune System	1
	Innate Immunity	2 & 14
	Adaptive Immunity	3
	Cytokines	12
29	Census Date – Deadline for Registrations & Schedule Changes	
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Feb 13	Exam 1	
Feb 8 – 29	Immunogens and Antigens	4
	Antibody Structure and Function	5
	<del>Antigen-Antibody Interactions, Immune Assays, and Experimental Systems</del>	<del>6</del>
	The Genetic Basis of Antibody Structure	7
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March 07	Exam 2	
11 – 15	Spring Break	
19	Biology of the B Lymphocyte	8
	How T Cells Recognize Antigen: The Role of the MHC Complex	9
	Biology of the T Lymphocyte	10
25 <sup>th</sup>	Last Day to Withdraw with an Automatic "W"	
April 2 - 5	Activation and Function of T Cells	11
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April 09	EXAM 3	
April 11 – 26	Tolerance and Autoimmunity	13
	Hypersensitivity (Lecture 13 on PPs module on Canvas)	15, 16, 17
	Resistance and Immunization to Infectious Diseases	21
	I doubt we will have time to cover the following chapters, however, they will be mentioned during “case study/pathophysiology” discussions.	
	Immunodeficiency Disorder & Neoplasia of Lymphoid System	18
	Transplantation	19
	Tumor Immunology	20
29 – May 3	Finals	
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	FINAL EXAM May 2 <sup>nd</sup> , 4:14-6:15.	Lectures 13, 14, & 15