MIC/BIO 420/598 - Immunology: Molecular and Cellular Foundations

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Course and Faculty Information

Course Description: This is an introductory immunology course with an emphasis on understanding how the immune system is able to recognize a diverse array of pathogens, discriminate between self and non-self, and make appropriate responses to infection. The material in this course will provide students with a fundamental understanding of all the major cellular and molecular components of the immune system and how each of these has evolved to recognize and respond to infection.

Credits: 3

Prerequisites: The material covered in this course assumes a fundamental understanding of basic cellular and physiologic processes as well as general microbiology. Accordingly, the prerequisites for this class are: BIO 353 (Cell Biology), BIO 360 (Animal Physiology) or MIC 220 (Biology of Microorganisms) with a grade of "C" or better. Students need not have taken all of these courses, but should possess a general understanding of the concepts in order to understand the physiologic, cellular and molecular basis for immunologic responses to microorganisms. Students with demonstrable experience in these subject areas may obtain instructor approval for enrollment without having taken the prerequisites.

Instructor: Dr. Michelle Di Palma

Contact Info: michelle.dipalma@asu.edu

Office Hours: TBD or *by appointment at the link below: https://asu.zoom.us/j/9248788700Links to an external site.*

TA: Lizbeth Nieves

Contact Info: lmnieves@asu.edu

Office Hours: TBD or *by appointment*

Course Learning Objectives

After completion of this course, students should be able to explain the generation of innate and adaptive immune responses to infection, immunologic memory and vaccination, and tolerance versus autoimmunity.

Course Access

Your ASU courses can be accessed by
both my.asu.edu and asu.instructure.com; bookmark both in the event that one site is down.

Computer Requirements

This is a fully online course; therefore, it requires a computer with internet access and the following technologies:

- Web browsers (ChromeLinks to an external site., Mozilla FirefoxLinks to an external site., or SafariLinks to an external site.)
- Adobe Acrobat ReaderLinks to an external site. (free)
- Webcam, microphone, headset/earbuds, and speaker
- Microsoft Office (Microsoft 365 is free for all currently-enrolled ASU students)
- Reliable broadband internet connection (DSL or cable) to stream videos.

Note: A smartphone, iPad, Chromebook, etc. will not be sufficient for completing your work in ASU Online courses. While you will be able to access course content with mobile devices, you must use a computer for all assignments, quizzes, and virtual labs.

Help

For technical support, use the Help icon in the black global navigation menu in your Canvas course or call the ASU Help Desk at 1+(855) 278-5080. Representatives are available to assist you 24 hours a day, 7 days a week.

Course Layout

This subject matter for this online class largely models the in-person course taught. The material to be learned is divided into several units, each comprised of "lecture" material (i.e., the modules on CogBooks) followed by an exam (accessible via Canvas). This is a self-paced course, meaning **you** are responsible for setting your own schedule to learn the material. Immunology is fascinating but an inherently difficult subject, and students struggle if they do not give themselves adequate time to learn the material. **Be aware that this is an extremely accelerated course**; students typically take this course over the duration of a full semester (~15 weeks), however this online course is ~7 weeks. Therefore it is critical that you keep yourself on a schedule so that you don't fall behind. If you are struggling, communicate with the instructor and TA so we can help you. Exam completion dates are indicated in the "Modules" tab. **All exams will become available at midnight on Canvas the night before they are due**, giving you 24 hours to complete them. You will have 75 minutes to complete each exam from the time the exams open. Answers to the exams will become available at noon the day after the exam due date.

Student Success

To be successful:

- Create a study and/or assignment schedule to stay on track
- Study study study (and then study some more)
- **Communicate regularly with your instructors if you are struggling**
- Complete exams by the due dates specified
- Attend review sessions
- STUDY
- access ASU Online Student Resources Links to an external site.

Exam Layout

Exams are to be completed on Canvas, not CogBooks. Each exam will be a mix of multiple choice, true/false, matching, and fill-in-the-blank. All of the CogBooks material covered prior to each unit exam is fair game, so make sure you actively work through the material and study thoroughly before taking each exam (as you would for an in-person test). Each exam will average ~60 questions, and tests will be open for 24 hours, and you will have 75 minutes to complete each exam, except for the final exam. The final exam will allow 1hr and 50 mins to complete, which covers the material found in Unit IV. **There are NO retakes allowed**. **MAKE SURE** you take the exams using a stable internet connection. If your WiFi mysteriously crashes while you're taking the exam, you will be able to log back into the exam. However, the timer will not be reset. Exam grades will be available within 48 hours of the due date in the Gradebook.

Review Sessions

The TA and Professor of the Class will hold review sessions the evening before the exam on the dates announced. These review sessions will **NOT** be additional lectures. They are to be student-led, meaning you will need to come to review with specific questions about the material.

Grading

Your overall course grade will be determined based on the following grading schema:

Unit I Exam (Modules 1 & 2):	30%
Unit II Exam (Modules 3 & 4):	30%
Unit III Exam (Modules 5 & 6):	30%
Final exam (Unit IV; Module 7):	30%
Cogbooks quizzes :	10%

**The lowest mid-term exam grade will be dropped - only the two highest mid-term grades, final exam, and Cogbooks quizzes will be used to calculate the course grade. The final exam is not optional.*

Grade	Percentage
A+	100% - 97%
A	<97-94%
A-	<94-90%
B+	<90-87%
B	<87-84%
B-	<84-80%
C+	<80-77%
C	<77-70%
D	<70-60%
E	<60%

Submitting Exams

All exams, unless otherwise announced, MUST be submitted to the designated area of Canvas. Do not submit an exam via email. Exam due dates follow Arizona Standard time. Click the following link to access the Time ConverterLinks to an external site. to ensure you account for the difference in Time Zones. Note: Arizona does not observe daylight savings time.

Communicating With the Instructor

Email/Zoom

ASU email is an official means of communication among students, faculty, and staff. Please address all emails with the heading "MIC/BIO 420/598: <*Subject*>" Emails will *only* be returned between the hours of 7AM-7PM. Allow a minimum 24-48 hour response time. **The instructor and TA are happy to meet via zoom** regarding questions over the material, however **emails will be required to set up an appointment**.

All instructor correspondence will be sent to your ASU email account.

ASU Online Course Policies

View the ASU Online Course Policies

Inclusion and Accessibility Statements

View the Accessibility section to review accessibility statements for common tools and resources used in ASU Online courses.

If any other tools are used in this course, links to the accessibility statements will be listed below this sentence.

View the Statement of Inclusion policy listed in the ASU Course Policies page.

Syllabus Disclaimer

The syllabus is a statement of intent and serves as an implicit agreement between the instructor and the student. Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. Remember to check your ASU email and the course site often.