

Biology 4100: Immunology

Room: Naraghi Hall of Science 322

Meeting Time: Saturdays at 8:00-10:30am

Textbook: Janeway's Immunobiology, 8th edition

Instructor: Dr. Kristin Patrick

Office location: xxx

Office hours: 11am-12pm on Saturdays; otherwise reachable by email

Email address: kpatrick3@csustan.edu

August 27th: Lecture by Dr. Robert Watson
Introduction to Immunology; cells of the immune system

September 3rd: Lecture by Dr. Robert Watson
*****Lecture shortened for Labor Day holiday. Only meet from 9:30 to 11am**
Innate Immunity; the complement cascade; induced innate response

September 10th: Antibody structure; antigen recognition; VDJ recombination

September 17th: Major Histocompatibility Complex; Antigen presentation

September 24th: Exam 1

October 1st: Antigen presentation and signalling

October 8th: Development and Survival of Lymphocytes

October 15th: T-cell mediated immunity

October 22nd: B-cell mediated immunity (the humoral response)

October 29th: Cytokines/chemokines; cell-based immunity

November 5th: Exam 2

November 12th: Adaptive immunity to infection; failures of host defense mechanisms

November 19th: Autoimmunity, transplantation and allergies; Group presentations

November 26th: Thanksgiving break

December 3rd: Group presentations and review

December 10th: Final Exam

COURSE OVERVIEW

Immunology is a technical and vocabulary-heavy subject matter and most of the material taught will be entirely new to you. It is notoriously one of the more difficult scientific

disciplines. It is imperative that you keep up with the reading and review the lecture material after each class. Learning will be cumulative, meaning that early concepts will re-emerge and be expanded upon throughout the semester. “Cramming” for an immunology exam is really not a very good idea. I will do my best to review difficult material before exams but if you don’t know the basics, you won’t be able to understand more complex topics (and trust me, there are many complexities to the immune system).

EXAMS and GRADING

There will be three exams throughout the semester; 2 “midterms” and 1 final exam. Each exam will follow a similar format, although the final exam will be longer. You will be required to answer multiple choice, short answer and short essay-type questions. The final exam will be cumulative (I will test you on concepts learned throughout the entire semester) and will also cover material addressed in the group presentations.

Your grades will be based on several criteria:

Exam 1 (20%)	100 points
Exam 2 (20%)	100 points
Group presentation (20%)	100 points
Final Exam (30%)	150 points
Class participation (10%)	50 points

Your final exam will be conducted during normal class time on December 10th. Missed exams due to illness or extenuating family circumstances will require some kind of written documentation. Make-up exams will be offered on a case-by-case basis.

Since there are so few lectures, missing class will be considered unacceptable, except for in absolutely dire circumstances, for which I will require notification by email prior to the start of class.

Students who miss more than 2 lectures without appropriate documented excuses will receive a 0% for class participation.

EXTRA CREDIT

In circumstances where students would like to bring their grades up, extra credit will be granted on a case-by-case basis. Students requesting an extra credit assignment should email me.

GROUP PRESENTATION

You will divide yourselves into 8 groups and will be assigned a disease or disorder that involves the immune system. The topics are:

AIDS
Tuberculosis
Lupus
Cancer
Arthritis
Parasitic infections
Type 1 Diabetes
Allergies

You will need to answer the following questions during your presentation:

1. What is the causative agent of your disease/disorder?
2. What immune cells are involved in the response to your disease/disorder?
3. What types of people are susceptible to your disease/disorder?
4. Is there a genetic component to your disease/disorder (i.e. are you born with it? Are you more likely to get it if someone in your family has it?)
5. What are the pathologies/symptoms of your disease/disorder?
6. What treatments, if any, are available to eliminate your disease/disorder and how do said treatments involve manipulation of the immune system?

Group presentations will be held on **November 19th and December 3rd**. Each group will be assigned to a particular date at a later time in the semester.