

Instructor: Dr. William H. Jackson
Office: SBDG 201A
Telephone: 641-3601
Lecture: TTh, 8:00AM – 9:15AM in SBDG 200
Credit: Three semester hours
Information: <http://www.usca.edu/biogeofaculty/Jackson/Jackson.asp>

Office Hours: By appointment
Email: Billj@aiken.sc.edu
Text: **Immunology, 5th Ed.** by Goldsby, Kindt, Osborne, and Kuby

Course Description: A study of immunological principles and concepts. Three lecture hours per week.

Course Objectives: This course will introduce the student to the underlying principles of immunology. Its primary emphasis will be on the cellular and non-cellular components of the human immune system and the ways in which these components interact to provide immunity. Upon completion of this course students will be expected to

1. Describe the major divisions of the immune system;
2. Describe humoral immunity;
3. Discuss cell mediated immunity;
4. Compare and contrast innate and acquired immunity;
5. Discuss the role of specific cells of the immune system;
6. Discuss cell signaling and hematopoiesis;
7. Discuss the immune response to specific pathogens;
8. Describe the nature of self and non-self;
9. Discuss the problem of autoimmunity.

Attendance Policy: Students should refer to the USCA Student Handbook regarding the number of absences permitted. In this regard, the instructor may impose a penalty for absences in excess of 25% of regularly scheduled class meetings by assigning an “F” for the course. Absences, *neither excused nor unexcused*, absolve the student from meeting class assignments. Exam make-ups will only be allowed for a *documented, excusable* reason. There will be no make-ups for quizzes.

Disability Statement: If you have a physical, psychological, and/or learning disability, which might affect your performance in class, please contact the Office of Disability Services, 126A B&E (803) 641-3609, as soon as possible. The Disability Services Office will determine appropriate accommodations based on medical documentation.

Methods of Presentation and Evaluation: Information will be presented through lectures and class discussion using appropriate visual aids. There will be three 1-hour exams and a comprehensive final exam. Quizzes will be used to gauge weekly student progress and generally cover the previous 1-2 week’s material. Total points gained on all quizzes (relative to total possible points) will be used in the final evaluation.

Students will be required to complete five critiques of the primary literature in immunology. The nature of the papers will be dependent on the review topic (see below). Each report should be one page long (double-spaced) and provide a summary of the work with appropriate referencing. Extreme care should be taken to avoid plagiarism.

Review and Poster. Twenty percent of your final grade will be from a research paper reviewing a specific assigned topic in immunology. Each topic will be based on a human health condition associated with abnormal immunological functioning. The student will conduct a literature search and prepare a written report on their topic. This report should provide information on all immunological aspects of the disease. The report should be double-spaced and include appropriate visual aids and a bibliography. The paper should have at least ten references from the primary literature. No references can be a web site, with the following exceptions: CDC, NIH, and WHO. Figures obtained from a web site are acceptable and should be credited in the figure legend (not in the bibliography). The majority of references should be from research journals (refer to the National Library of Medicine database Medline (<http://www.nlm.nih.gov>)). The paper should be written in the format of a scientific paper and provide a review of the current literature. A completed bibliography is due midterm, **January 27, 2006**; the first draft on **February 24, 2006**; the final paper is due **March 17, 2006**. The first draft will be peer-reviewed by a member of the class and

returned with appropriate comments to the writer. The revised final version will be presented to the instructor along with the critiqued first draft. Following completion of the review, students will prepare a poster to present their work. Poster designs will be made available through Blackboard. Completed posters will be printed and presented on **Friday, April 21, 2006** in the Science Building following the Department of Biology and Geology seminar.

Description	Percentage	Comments
Three one-hour exams	45%	15% each
Review and Poster	20%	Assigned topic
Final Exam	15%	Comprehensive
Weekly quizzes	10%	Generally covering the previous 1 – 2 week's material
Readings	10%	Assigned reading

Letter grades will be assigned as follows: A>90%; B>80%; C>65%; D>50%; F<50%.

You will be expected to endorse the USCA HONOR PLEDGE on every assignment: 'On my honor as a University of South Carolina Aiken student, I have neither given nor received any unauthorized aid on this assignment/examination. To the best of my knowledge, I am not in violation of academic honesty'.

TENTATIVE LECTURE SCHEDULE

DATE	WEEK	TOPIC	CHAPTER
Jan 10	1	Overview of the Immune System	1
Jan 12		Cells and Organs of the Immune System	2
Jan 17	2	Quiz 1; Cells and Organs of the Immune System	2
Jan 19		Cells and Organs of the Immune System	2
Jan 24	3	Immunogens and Antigens	3
Jan 26		EXAM I	
Jan 31	4	Immunoglobulin Structure and Function	4
Feb 2		Immunoglobulin Structure and Function	4
Feb 7	5	Quiz 2; Immunoglobulin Classes	4
Feb 9		Antigen - Antibody Interactions	6
Feb 14	6	Quiz 3; Antigen - Antibody Interactions	6
Feb 16		Immunoglobulin Genes and Rearrangement	5
Feb 21	7	Quiz 4; Immunoglobulin Genes and Rearrangement	5
Feb 23		Immunoglobulin Genes and Rearrangement	5
Feb 28	8	EXAM II	
Mar 2		Major Histocompatibility Complex	7
Mar 7	9	Spring Break - No class	
Mar 9			
Mar 14	10	Quiz 5; Antigen Processing and Presentation	8
Mar 16		T-Cell Receptor	9
Mar 21	11	Quiz 6; T-Cell Maturation, Activation, and Differentiation	10
Mar 23		T-Cell Maturation, Activation, and Differentiation	10
Mar 28	12	Quiz 7; B-Cell Generation, Activation, and Differentiation	11
Mar 30		Immune Response to Infectious Disease	17
Apr 4	13	Quiz 8; Immune Response to Infectious Disease	17
Apr 6		Vaccines	18
Apr 11	14	EXAM III	
Apr 13		AIDS and Other Immunodeficiencies	19
Apr 18	15	Quiz 9; AIDS and Other Immunodeficiencies	19
Apr 20		AIDS and Other Immunodeficiencies	19
Apr 27		FINAL EXAM, 8:00 AM (Thursday)	