

Instructor: Dr. William H. Jackson
Office: SBDG 201A
Telephone: 641-3601
Lecture: TTh, 9:25AM – 10:40AM in SBDG 200

Office Hours: By appointment
Email: Billj@aiken.sc.edu
Text: **Immunology, 6th Ed.** by Goldsby, Kindt, Osborne, and Kuby
Supplement: **Writing Papers in the Biological Sciences., 4th Edition** by McMillan

Credit: Three semester hours
Information: <http://www.usca.edu/biogeo/faculty/Jackson/Jackson.asp>

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, written in 12 point Times New Roman font, and have 1 inch margins. A complete reference cited section must be included. The paper should have at least 12 references from the primary literature. No references can be a web site. In text citations and references must be in CSE style (see supplemental text). Figures, if included, must be in an attached appendix. 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. 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 on **February 15**; the first draft on **February 29**; and the final paper on **March 28**. 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 during class time on **April 24** in the Science Building.

Description	Points	Comments
Three one-hour exams	450	150 points each
Review and Poster	200	200 points (paper = 150 points; poster = 50 points)
Final Exam	150	Comprehensive
Weekly quizzes	100	Generally covering the previous 1 – 2 week's material
Readings	100	Assigned readings (five, 20points each)

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 15	1	Overview of the Immune System	1
Jan 17		Cells and Organs of the Immune System	2
Jan 22	2	Cells and Organs of the Immune System	2
Jan 24		Cells and Organs of the Immune System	2
Jan 29	3	Immunogens and Antigens	3
Jan 31		EXAM I	
Feb 5	4	Immunoglobulin Structure and Function	4
Feb 7		Immunoglobulin Structure and Function	4
Feb 12	5	Immunoglobulin Classes	4
Feb 14		Antigen - Antibody Interactions	6
Feb 19	6	Antigen - Antibody Interactions	6
Feb 21		Immunoglobulin Genes and Rearrangement	5
Feb 26	7	Immunoglobulin Genes and Rearrangement	5
Feb 28		Immunoglobulin Genes and Rearrangement	5
Mar 4	8	Major Histocompatibility Complex	7
Mar 6		EXAM II	
Mar 11	9	<u>Spring Break - No class</u>	
Mar 13			
Mar 18	10	Antigen Processing and Presentation	8
Mar 20		T-Cell Receptor	9
Mar 25	11	T-Cell Maturation, Activation, and Differentiation	10
Mar 27		T-Cell Maturation, Activation, and Differentiation	10
Apr 1	12	B-Cell Generation, Activation, and Differentiation	11
Apr 3		Immune Response to Infectious Disease	17
Apr 8	13	Immune Response to Infectious Disease	17
Apr 10		Vaccines	18
Apr 15	14	EXAM III	
Apr 17		AIDS and Other Immunodeficiencies	19
Apr 22	15	AIDS and Other Immunodeficiencies	19
Apr 24		Poster Presentation	
May 1		FINAL EXAM, 8:00 AM in SBDG 200	Comp