

Course at a Glance

Spring 2017

Course Title: Foundations of Public Health Immunology

Course Number: HSC 4504

Dept: GLO

Credits: 3

Instructor Name: Asmita Mhaskar, BHMS MPH

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Course Description:

This course provides an introduction to the principles of Immunology with emphasis on the relation of these principles to the field of Public Health. Public Health is integral to the world at large; and, with this course, the students can come to understand the underlying immunological principles of disease causation and immune response.

Format of content presentation, activities and/or instructional methods: This course is entirely web-based, with weekly presentations, multimedia assignments, internet resources, and study guides for each block of material. This course is composed of five blocks covering the basics of Immunology, including Innate Immunity, Adaptive Immunity, and Immune Disorders. Each block (2-3 weeks in length) is organized into weekly segments. Each week will include a presentation (Flash Player format with audio) accompanied by an activity. Activities will be worth 40% of the grade, block quizzes worth 25%, and a cumulative final exam worth 35% of the course grade.

Course content organization:

The course is organized into 5 blocks, which describe different aspects of immunology. All presentations, assigned readings, and assignments/discussions for each Block will be available at the beginning of the block (you can view the materials for 2-3 weeks at once) so that you can work ahead. However, the activities will still be organized by week, and you will have to complete these required assignments and discussions during their scheduled weeks (not all at the beginning or end of block). The weekly schedule is shown below:

Block 1: Basics of Immunology

Week 1: Course introduction

Week 2: Principles of immunology

Week 3: Components of the lymphoid system

Block 2: Innate Immunity

Week 4: Innate barriers, inflammation, and nutrition

Week 5: Complement cascade

Block 3: Adaptive Immunity - humoral

Week 6: B-cells and antibodies

Week 7: Humoral immune response

Week 8: Vaccines and pathogen evasion strategies

Block 4: Adaptive Immunity – cell-mediated

Week 9: T-cells and antigens

Week 10: Antigen processing and recognition

Week 11: Effector mechanisms

Block 5: Immune system disorders

Week 12: Autoimmunity, tumors, and transplants

Week 13: Hypersensitivity

Week 14: Acquired and congenital immunodeficiencies

Week 15: Study break

Week 16: FINAL EXAM (due 11:55pm THURSDAY, May 4, 2017)

Textbook and Ordering materials:***Required Text:***

Required textbook: Abbas, A.K, Lichtman, A.H. and Pillai S. 2016. Basic Immunology: Functions and Disorders of the Immune System, 5th Ed. Elsevier. ISBN: 978-0-323-39082-8

HSC Bookstore <http://usfhsc.bkstore.com>.

How to Order:

Download USF Health Bookstore Order Form:

http://health.usf.edu/publichealth/eta/pdf/HSC_GradTextbook_OrderForm.pdf

Other Required Materials:

Supplemental materials will be made available directly through the course website via links, file downloads, etc.

Topics or course learning objectives:

1. Differentiate the components and functions of innate and adaptive immunity
2. Differentiate the functions of humoral and cell-mediated immunity
3. Discuss disorders related to immune system deficiencies/abnormalities
4. Discuss current global health issues, such as malnutrition and AIDS, and their relationship to immunity
5. Differentiate the infectious diseases that impair immune system function
6. Discuss the interactions between microorganisms and the immune system, including microbial/parasitic evasion strategies and immune system responses
7. Discuss the detrimental effects of immune responses including organ rejection, hypersensitivity reactions, and autoimmunity
8. Discuss the influence of cultural and societal beliefs that impact vaccines, organ transplantation, and allergies

Types of assessments and activities in the course:

Each week will include 1-2 assignments: an activity assignment. The types of activities vary with each block, and, may include video assignments and interactive activities.

Student Expectations:

Each student needs to read and understand the weekly presentations and the related textbook chapters. In addition, each student needs to complete the activities and quiz by the specified submission date. At the beginning of each block the materials for that block will open. Assignments must be completed prior to the end of the week (see Syllabus for due dates and times). Further, each student should have a functional email account (checked regularly) and should check the Canvas Announcements page regularly as well for updates.

For more information about the Course, Contact:

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Note: For problems accessing the course materials and other computer technical problems, click the **Tech Assistance** button in your course website and fill out a "Technical Problem Report Form". Tech Assistance button links to the Technical Assistance page of the Office of Educational Technology & Assessment website at: <http://health.usf.edu/publichealth/eta/techsupport.html>. Students can also receive assistance via telephone at 813-974-6666, Mon-Fri 8:30am-5pm, or via email at eta@health.usf.edu.

Technology Requirements (e.g. software or hardware):

Visit this website for software requirements and downloads:

http://health.usf.edu/publichealth/eta/students_tech_requirements.htm

Other technology requirements (hardware and software) specific for this course:

Note: These are in addition to the basic technology requirements for all online courses.

Please Note: The information on this document is subject to change. The course instructor has the right to change any information posted in this document. Students should check the official course syllabus released during the first week of classes for any updates to this document.