

College of Public Health & Health Professions  
Course Syllabus

Public Health Concepts in Infectious Diseases  
PHC 6517, section 1816

M 10:40-11:30am  
HPNP room G-110

W 9:35-11:30am  
HPNP room G-110

Fall 2015

**Instructor Information**

Robert L. Cook, MD, MPH  
2004 Mowry Road, CTRB Bldg. Room # 4232  
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Office hours: By appointment (before/after class usually good if discussed in advance).  
Assistant: Michele Rollen-Hanson, (352) 294-5672; [rollen@ufl.edu](mailto:rollen@ufl.edu)

**Course Overview or Purpose**

After completing PHC 6517, students will be able to analyze the epidemiologic research methods used to obtain evidence regarding the emergence of infectious diseases, transmission pathways, prevention strategies, and the range of factors that influence the severity of individual health outcomes. Students will be able to systematically examine the research evidence related to a number of relevant emerging and existing infectious diseases of the 21<sup>st</sup> century, and then design an original research study that can answer a specific research question associated with infectious diseases.

**Course Objectives and/or Goals**

- 1) Identify and describe current public health issues related to several important infectious disease conditions worldwide.
  - a. Use a range of resources to obtain information regarding basic epidemiology of infectious diseases.
  - b. Interpret data from tables and graphs that describe infectious disease epidemiology.
  - c. Characterize and prioritize the types of resources that could be allocated to the prevention and control of a range of infectious diseases.
- 2) Identify a range of research tools and methods used to identify factors associated with the transmission, prevention, and clinical outcomes related to a range of infectious diseases.

- a. Locate and reference reliable sources of information regarding infectious disease topics.
  - b. Describe research methods used to understand the relationship of a range of factors (environment, community, behavior, human biology, pathogen characteristics) on relevant outcomes in infectious diseases.
- 3) Interpret strengths and weaknesses of specific epidemiologic study design strategies as they apply to infectious disease epidemiology.
- a. Identify one or more research articles from the literature and bring to class to discuss the specific epidemiologic study design used, and identify the pros and cons of that specific study design.
- 4) Characterize the attributes of a scientifically sound epidemiological research question so that predictors, outcomes, and populations are addressed.
- a. Construct research questions that include predictors, outcomes, and an identified population from existing literature, your own research study, and scenarios of various public health situations.
- 5) Design a research study to answer a research question related to infectious disease epidemiology.
- a. Present the research study in both a written document and oral presentation.

### **Course Materials**

Textbook (Recommended): Infectious Disease Epidemiology Theory and Practice, 3<sup>rd</sup> edition (2014). By Kenrad E. Nelson and Carolyn F. Masters Williams.

1-3 journal articles each week. These will be available online on the course web site. The course is in the CANVAS e-learning system, which can be accessed at URL: [lss.at.ufl.edu](http://lss.at.ufl.edu) and requires your Gatorlink ID.

Information available via the internet.

### **Course Requirements/Evaluation/Grading**

We will learn about methods used to address research questions in infectious diseases and public health. Topic areas will include key infectious disease conditions that are relevant in the early 21<sup>st</sup> century. These include malaria, HIV infection, vector-borne infections, influenza, sexually transmitted diseases, emerging infectious diseases, health-care associated infections, and other conditions chosen by the students.

Each week, there is a 1-hour class on Monday and a 2-hour class on Wednesday. In general, one hour per week will be devoted to review of a specific infectious disease concept or condition, using the primary textbook and additional resources as needed. The second hour will be a group discussion involving review of 2-3 journal articles, or answering research questions related to that topic. The third hour will include a multidisciplinary team of guest lecturers who will discuss their research related to infectious diseases and public health.

Homeworks. 15 % of grade. Each week, students will be expected to read a book chapter (or similar, current content) about one of the infectious disease conditions assigned that week. The

material will either be reviewed in class via a traditional lecture, or via class participatory activity to address learning objectives.

There will be a homework assignment each week, assigned one week prior to the due date. Most weeks, the homework will be related to specific journal articles that will be reviewed in class. As homework, there will be a few questions related to each article. The responses to all questions should never be more than one page in length, and should be copied and pasted into the appropriate answer box in Canvas prior to class. I will drop your lowest homework grade. Late homeworks may be accepted, with at least 1 point deduction per day (of 10), if arrangements are discussed prior to class (e.g. in case of illness).

Assignments (15%). These include leading a discussion of specific research papers, and discussing evidence regarding specific infectious disease topics in class.

Article review: Each student will present one-two journal articles during the semester and participate in class discussions. For article review, each student will be assigned a topic at the beginning of the semester. The student will do a literature search for articles related to the topic and choose an article for review that will be approved by the instructor. The articles should be research articles that present original research data. It should not be a review paper. Students must submit their article selections to Dr. Cook at least 10 days prior to their scheduled presentation, and On the day of each paper discussion, the student will lead a 15-20 minute class discussion that will include:

1. What is the specific research question, and why is it significant?
2. What was known and unknown before the study started?
3. What is the study design, and why was that study design used?
4. Who was the population and how was a sample of the population identified?
5. What was the major outcome and how was it measured?

Group assignments. At least 2 times during the semester, students will select a question related to a current infectious disease topic such as influenza or ebola virus. Students will prepare an answer to the question for a 5-minute presentation in which they attempt to find specific evidence to support an answer to the question:

1. Identify at least 1 source of original data or declare that there are no data
2. Create a 1-page (max) handout to bring for class that outlines the answer to the question, presents some data (if available), and explain a rationale for their response.
3. List at least 2 references used to address the question.

Final research paper and presentation (15% each). Each student will identify an infectious disease research topic of their own choosing, and prepare a 20-minute oral presentation and a 10-15 page (double spaced) paper outlining the rationale and the study design for a research study, that the student designs, that is designed to answer a specific research question. The paper will have several deadlines for completion of benchmarks during the semester, and peer review of other students' papers. Accomplishing these benchmarks will be part of the grade.

The paper will be graded and returned to the student at least one week before the oral presentation, to allow students time to incorporate feedback into the presentation. Students will identify up to 3 specific learning objectives for the oral presentations.

Examinations. There will two examinations during the class that will include a combination of question types (e.g. multiple choice, matching, open-ended, interpretation of information). The

first exam will cover material from the first half of the semester, and the second exam will cover information from the second half, including content from the student presentations. (15% each exam).

Book club participation (bonus points on exam) We will have a book discussion late in the semester. Participating in the book discussion is optional, but it will provide 3 bonus points to one of the exams.

Grades:

- Homework 15%
- Assignments 15%
- Class participation 10%
- Exam 1 15%
- Exam 2 15%
- Written Paper 15%
- Oral Presentation 15%

Grades for class participation are generally provides as excellent (95), good (90) or could have been better (85). Missing more than 2 classes for any reason will result in an 5 points off the participation grade, unless specifically negotiated with the instructor. I will provide feedback on participation rates at the time of Exam 1.

The grading scale for this course consists of the standard scale, including minus grades, below. The conversion factors for grade point values that are assigned to each grade are also included (in parentheses):

93% - 100%	= A (4.00)
90% - 92%	= A- (3.67)
87% - 89%	= B+ (3.33)
83% - 86%	= B (3.00)
80% - 82%	= B- (2.67)
77% - 79%	= C+ (2.33)
73% - 76%	= C (2.00)
70% - 72%	= C- (1.67)
67% - 69%	= D+ (1.33)
63% - 66%	= D (1.00)
60% - 62%	= D- (0.67)
Below 60%	= E (0.00)

### **Statement of University's Honesty Policy (cheating and use of copyrighted materials)**

**Academic Integrity** – Students are expected to act in accordance with the University of Florida policy on academic integrity (see Graduate Student Handbook for details). Cheating or plagiarism in any form is unacceptable and inexcusable behavior. This will be discussed during the first day of class.

*We, the members of the University of Florida community,  
pledge to hold ourselves and our peers to the*

*highest standards of honesty and integrity.*

**Policy Related to Class Attendance:**

10% of grade is related to class participation. 1-2 excused absences are allowed; additional absences will count against this grade.

**Policy Related to Make-up Exams or Other Work**

***Example:***

***Attendance and Make-up Work*** –Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual basis.

**Statement Related to Accommodations for Students with Disabilities**

***Students with Disabilities*** - Students requesting classroom accommodation must first register with the Dean of Students Office, which will provide documentation to the student. The student should then provide this documentation to me.

**Phone Numbers and Contact Sites for University Counseling Services and Mental Health Services**

University Counseling Services  
<http://www.counsel.ufl.edu/services.asp>  
P301 Peabody Hall – 392-1575

Student Mental Health Services in the Student Health Care Center  
<http://www.health.ufl.edu/shcc>  
Room 245, Infirmary Bldg.- 392-1171

**Final Note**

Course syllabi will be posted on a student accessible website that will be submitted to the departmental office to document compliance with this policy.