

College of Public Health

Date approved by the home Department: 7/12/07

Date approved by the CPH Curriculum Committee: 10/3/07

I. COURSE NUMBER AND TITLES

Course Number: 173:159

Official Title: Applied Infectious Disease Epidemiology

Transcript Title: Appl Infect Dis Epi

II. BRIEF COURSE DESCRIPTION

Introduction to infectious disease surveillance, diagnostic tools, outbreak investigations, vaccine trials, public health interventions, biodefense, emerging infectious diseases, and analytical approaches pertaining to infectious disease prevention and control.

III. CREDIT HOURS

2 semester hours

IV. SCHEDULING

Summer, annually

V. CROSS-LISTED COURSE NUMBER AND DEPARTMENT

None

VI. COURSE DIRECTOR / INSTRUCTORS

Course director & primary instructor: Gregory C. Gray, MD, MPH

College of Public Health

Other instructors:

Guest lecturers

VII. DEGREE PROGRAMS REQUIRING THIS COURSE

None.

It is a required course for students seeking a Certificate in Emerging Infectious Diseases.

VIII. COURSE PRE-REQUISITES OR CO-REQUISITES

None

IX. STUDENTS FOR WHOM THE COURSE IS INTENDED

Masters

X. RELATIONSHIP OF THIS COURSE TO OTHER COURSES

This course, similar to the more comprehensive Epidemiology of Infectious Diseases (173:255) course given in the fall, will have more of an international focus.

XI. TEACHING METHODS

The course is comprised of readings, topical lectures, and group exercises.

XII. EVALUATION OF STUDENT PERFORMANCE

Students will be graded on a standard letter scale of A to F. Students will be evaluated by their class participation (50%) and a final open notes, open book, multiple-choice examination (50%). Students who fully participate and attend every session will earn at least a B for the class participation portion of the overall grade. To earn an A in class participation, students must attend each session and demonstrate that they prepared for lectures beforehand (through reading assigned text, interacting with the lecturers, and actively participating in group exercises).

XIII. COURSE OBJECTIVES

At the end of the course the student will be able to:

- Understand the etiologic, environmental, and host factors important to infectious disease epidemiology;
- Understand the value of epidemiological principles and methods in the identification and control of infectious diseases;
- Develop skills needed to apply epidemiological principles and methods in solving problems related to infectious diseases and including identifying surveillance and control measures given a specific infectious disease outbreak.

XIV. INSTRUCTIONAL MATERIALS

Required Text: Control of Communicable Diseases Manual (CCDM), 19th edition, David L. Heymann, MD, ed., 2008

XV. TOPIC OUTLINE

	Date	Title	Readings in CCDM
1	Mon	Course overview, history, and general principals of infectious disease epidemiology	
2	Mon	Surveillance & quantitative methods	A8-A19
3	Mon	Exercise 1	
4	Mon	Analytical epidemiological methods & forecasting	
5	Tues	Host and environmental factors	
6	Tues	Vaccines	
7	Tues	Exercise 2	
8	Tues	Pathogen detection and molecular epidemiology	
9	Wed	Emerging infectious diseases and their prevention	52-53, 157-160, 216-223, 269-273, 275-277
10	Wed	Exercise 3	
11	Wed	Bioterrorism	23-31, 79-80, 463-471, 560-563, 661-664
12	Wed	Acute respiratory infections I	515-520
13	Thur	Acute respiratory infections II	323-331
14	Thur	Acute respiratory infections III	455-461, 471-484, 577-585
15	Thur	Tuberculosis	639-660
16	Thur	Leishmaniasis	340-347
17	Fri	Diarrheal diseases	
18	Fri	Exercise 4	
19	Fri	Malaria	373-393
20	Fri	Final examination (2 hrs)	

Last revised May 5, 2009