

SAN DIEGO STATE UNIVERSITY
College of Health and Human Services
Graduate School of Public Health
Division of Epidemiology and Biostatistics

Course No. PH 621 -- Fall 2006
Epidemiology of Infectious Diseases

Day: Wednesday
Time: 1600-1840
Place: Hardy Tower, 183
Serial: 25885

Instructor: S. Brodine, M.D.
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GA: Jenny James
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RESOURCES:

Texts:

Nelson, K.E., Williams, C.M., and Graham, N.M., Infectious Disease Epidemiology: Theory and Practice, Aspen, 2006 (Required)
Heymann, Control of Communicable Diseases Manual. APHA, 18th ed., 2004 (Required)
Roueche, B., The Medical Detectives, Truman/Talley, 1991 (Required)
Evans, A.S., Viral Infections of Humans, Fourth ed., 1997 (Optional)
Evans, A.S., and Brachman, P.S., Bacterial Infections in Humans, Third ed., 1998 (Optional)
Gregg, Field Epidemiology, Second ed. (Optional, Recommended Reference)

GRADING POLICY:

Basis of Grade:

Class Presentations	15 %
Quizzes	15 %
Botulism in Argentina	10 %
Midterm Exam	30 %
Final Exam	30 %

IS IT FEASIBLE TO SHOW DATES OF QUIZZES AND PRESENTATIONS? OR ARE QUIZZES UNANNOUNCED? AND PERHAPS STUDENTS WORK OUT BEST PRESENTATION DATES AFTER THE COURSE BEGINS?

Standards (at the graduate level in attainment of educational objectives):

- A = Superior performance
- B = Adequate performance
- C = Less than adequate
- F = Fail

Note: +'s and -'s will be utilized according to school policy

Standards for evaluations for student presentations (20 minutes per group)

Content must include: 1) General information on the organism and the epidemiology with discussion of a selected article 2) Selection of class article and relevant issues for this pathogen

Article: Each group must select a recent article for class distribution to complement the text readings; article in PDF format must be e-mailed to GA by the Thursday before the group is to present the article. (previous Wed. bring article to class for Dr. Brodine to approve)

Presentation: PowerPoint (required); Each individual must present with a team approach/organization of Materials; PowerPoint must be e-mail to GA by Monday before presentation is to be given.

Judged on: Overall content, accuracy and conciseness; Quality of audiovisuals; Use of references

OVERALL OBJECTIVES:

To prepare the MPH graduate to:

- Acquire knowledge in Infectious Disease Epidemiology to include classification of infectious agents, modes of transmission, and clinical presentations.
- Gain proficiency in using guides to literature and resources regarding infectious diseases.
- Practice transmitting knowledge gained to others in the field of Public Health.

SPECIFIC OBJECTIVES

1) Gain Knowledge in Population Health Issues:

- Learn and explain determinants of health and infectious diseases in populations, and the factors that influence these distributions
- Understand and explain the factors that promote health and prevent diseases in populations.
- Be able to describe the major infectious diseases of national and international health concern, including risk factors and other contributing factors.

2) Gain Knowledge in Central Epidemiologic Principles, as they Related to Infectious Diseases:

- Learn and discuss the basic epidemiologic concepts of the causal chain model, the natural history of diseases, incidence, prevalence, case—fatality, and mortality rates
- Become familiar with and explain the various study designs used in epidemiologic research

3) Gain Knowledge in Assessing Public Health Data and the Collection of Data

- Learn how to design and conduct an outbreak/cluster investigation
- Learn the principles of surveillance: the systematic approach for planning, collecting, and processing of information in a research and practice setting

4) Gain knowledge in critically interpreting the published literature

- Able to retrieve, organize, and review a body of literature on infectious disease agents
- Able to critically evaluate the content and methodology, and interpret the published literature

5) Gain Communication Skills

- Practice in communicating a scientific presentation clearly and concisely

EPIDEMIOLOGY OF INFECTIOUS DISEASES

COURSE SCHEDULE

<u>Date</u>	<u>Subject</u>
Aug. 30	Course Introduction: Infectious Diseases: Overview and Impact (Brodine)
Sept. 6	Infectious Disease Epidemiology and Principles of Surveillance (Brodine) Due: Nelson, Chapter 2, p. 25-60 (General Principles), Chapter 4 p.119-143 (Surveillance)
Sept. 13	Tuberculosis (Crum); CHHS Science Librarian (Sue Hollander) Due: Nelson, Chapter 18, p.653-689 (TB) Heymann, p.560-573 (TB) <u><i>Changes in the Transmission of Tuberculosis in New York City from 1990 to 1999</i></u> <u><i>Enlightened Self-Interest and the Control of Tuberculosis</i></u> <u><i>Robert Koch, the Nobel Prize, and the Ongoing Threat of Tuberculosis</i></u>
Sept. 20	Outbreak Investigation (Brodine); (<i>Ebola, Schistosomiasis</i>) Due: Nelson, Chapter 5, p.147-177 (Outbreak) Heymann, p.180-182 (Ebola), p.476-480 (Schistosomiasis) <u><i>A Large Community Outbreak of Salmonellas</i></u> Medical Detectives, Chapter 2
Sept. 27	Avian/Influenza (Amundson) Due: Quiz, Key Terms Nelson, Chapter 15, p.577-595 (Influenza) Haymann, p.281-287 (Influenza) Medical Detectives, Chapter 3
Oct. 4	Diarrheal Diseases (Brodine); (<i>E. coli O157:H7, Botulism</i>) Due: Nelson, Chapter 20, p.759-779 (Diarrheal Diseases) Haymann, p.103-117 (Cholera) p.141-142 (Cyclospora) p.160-164 (E. coli O157:H7), p.69-75 (Botulism) Medical Detectives, Chapter 6, 12, 13
Oct. 11	Vaccine Preventable Diseases (<i>Leptospirosis, Rotavirus, Plague</i>) Due: Nelson, Chapter 11, p 345-379 (Vaccines) Heymann, p.347-354 (Measles), p.224-227 (Rotavirus), p.406-412 (Plague)
Oct. 18	MIDTERM

- Oct. 25 Refugee Health (Moser); Hepatitis C (Garfein) (*Tularemia*)
Due: Heymann, p.261-264 (Hepatitis C), p.573-576 (Tularemia)
Medical Detectives, Chapter 4
- Nov. 1 Bioterrorism (Amundson); Border Health Infectious Diseases (Rodriguez)
Due:Medical Detectives, Chapter 14, 21
- Nov. 8 STI Epidemiology (Gunn); GIS (Tsou);
Due: Nelson, Chapter 23, p.963-1002 (Sexually Transmitted Diseases) Chapter 7, p.213-239 (GIS)
Heymann, p.100-102 (Chlamydia), p.232-237 (Gonorrhea), p.518-525 (Syphilis)
p.268-272 (Herpes)
- Nov. 15 HIV Epidemiology (Brodine); (*Nutrition and ID,*)
Due: “*Botulism in Argentina*”
Nelson, Chapter 21, p.789-872 (HIV)
Medical Detectives, Chapter 25
- Nov. 22 Thanksgiving: no class
- Nov. 29 Malaria Control Programs (Vryheid) (*HPV, Lyme Disease*)
Due: Nelson, Chapter 26, p.1087-1129 (Malaria)
Heymann, p.324-340 (Malaria), p.590-592 (HPV), p.315-320 (Lyme Disease)
- Dec. 6 Course Review
- Dec. 13 **FINAL** 1600-1800