

Department of Global and Community Health
George Mason University
FALL 2009

Chronic Disease Epidemiology
GCH 732

Time: Wednesdays 7:20-10pm
Location: Innovation 316
Credits: 3 hours

Instructor: Kathryn H. Jacobsen
E-mail: kjacobse@gmu.edu

Course Description: Focuses on the epidemiology of chronic diseases, including cancers, cardiovascular and lung diseases, and mental health disorders. Emphasizes study design, critical reading, and public health approaches to disease control, such as surveillance and screening.

Prerequisite: GCH 712 (Introduction to Epidemiology).

Learning Objectives:

- Identify common chronic diseases, such as cancer, cardiovascular diseases, lung diseases, diabetes, and mental health disorders, in the United States and in other world regions.
- Explain the basic pathophysiology of common chronic diseases, such as cancer, cardiovascular disease, lung disease, kidney disease, and diabetes.
- Explore the principles and methods of chronic disease surveillance and screening.
- Describe methods for studying chronic diseases in populations using ecological, cross-sectional, case-control, cohort, and experimental study designs.
- Calculate and interpret common biostatistical and epidemiologic measures like rate ratios and odds ratios and their 95% confidence intervals.
- Identify risk factors, such as diet and physical inactivity, that contribute to the development of chronic diseases.
- Describe the process for implementation of disease control programs.
- Discuss the current burden of disease caused by chronic diseases in the United States and in other world regions.
- Critically analyze published chronic disease epidemiology reports and articles.

Course Materials:

- Assigned articles will be available online from the library website or will be distributed through the class e-mail list. Be sure to check your GMU e-mail account regularly. All class communication will be through this account.

Academic Honesty: George Mason University operates under an honor system, which is published in the University Catalog and deals specifically with cheating, attempted cheating, plagiarism, lying, and stealing. Please familiarize yourself with the honor code, especially the statement on plagiarism. If you have questions about how to correctly cite the contributions of published articles, internet resources, people, and other sources to your work, please talk with the professor.

Assessment:

Component	Due Date	% of Final Grade
Assignment 1	Sept. 25	10
Assignment 2	Oct. 21	10
Assignment 3	Nov. 18	10
Presentation	(will be randomly assigned to a presentation date)	15
Quizzes	journal panel days	10
Exam	Dec. 16	35
Participation	all class sessions	10

Anticipated Schedule:

Date	Part 1	Part 2
Sept. 2	Global Burden of Disease	Epidemiology Methods Review
Sept. 9	Diabetes Epidemiology	Cohort and Case-Control Studies
Sept. 16	Advanced Epidemiology Methods	
Sept. 23	Neuropsychiatric Epidemiology	Psychological Measurements
Sept. 30	Cardiovascular Epidemiology I	<i>Journal Panel #1</i>
Oct. 7	Cardiovascular Epidemiology II	Randomized Controlled Trials
Oct. 14	Reproductive Epidemiology	<i>Journal Panel #2</i>
Oct. 21	Genetic Epidemiology	Screening & Surveillance
Oct. 28	Environmental and Occupational Epidemiology	<i>Journal Panel #3</i>
Nov. 4	Cancer Epidemiology I	Confounding and Causal Theory
Nov. 11	Cancer Epidemiology II	<i>Journal Panel #4</i>
Nov. 18	Social Epidemiology	Longitudinal Cohort Studies
Nov. 25	NO CLASS – THANKSGIVING	
Dec. 2	Nutritional Epidemiology	<i>Journal Panel #5</i>
Dec. 9	Review	
Dec. 16	FINAL EXAM	