

# **Principles of Epidemiology (HS261)**

**Spring 2008**

San Jose State University  
Health Science Department

**Description:** Introduction to epidemiologic concepts and methods with applications to public health practice for students intending to engage in, collaborate in, and interpret epidemiologic studies in the appraisal of public health.

**Pre-requisite:** HS 167 (Biostatistics) or equivalent

Website: [www.sjsu.edu/faculty/gerstman/hs261](http://www.sjsu.edu/faculty/gerstman/hs261)  
Meetings: Wednesdays from 3:00 – 5:30 in HB 407  
Professor: Bud Gerstman  
Email: [B.B.Gerstman@sjsu.edu](mailto:B.B.Gerstman@sjsu.edu)  
Phone: (408) 924-2978  
Office: MacQuarrie Hall 514  
Office hours: Tu 10:30 – 11:45 and Th 10:30 – 12:45  
Required text: Gerstman, B.B. (2003). *Epidemiology Kept Simple* (2nd ed.) New York: Wiley-Liss.  
Calculator: Texas Instrument 30XIIS or 80-series calculator  
Optional text: Last, J. M. (Ed.) (2001). *A Dictionary of Epidemiology* (3rd ed.). New York: Oxford. (ISBN: 0195141695)

The course calendar and assignments are posted online.

## **Objectives**

The following essential objectives meet CEPH accreditation expectations:

1. To explain the importance of epidemiology for *informing* scientific, ethical, economic and political discussion of health problems; to define basic *epidemiologic terms*; to *describe* patterns of disease and disease determinants by person, place, and time.
2. To apply epidemiologic concepts of *cause* in the prevention of morbidity and mortality.
3. To apply epidemiologic principles of *screening* for disease and risk factors in the routine and special collection of population-based morbidity and mortality data and community diagnosis.
4. To calculate and interpret basic *epidemiologic measures of disease frequency*.
5. To calculate and interpret basic *epidemiologic measures of association and potential impact*.
6. To draw *appropriate inferences* from ecological studies, cross-sectional studies, cohort studies, and case-control studies; to comprehend basic *ethical and legal principals* involved in the study of human subjects.
7. To identify and assess *systematic errors* in epidemiologic research.
8. To *communicate* epidemiologic information to lay and professional audiences.

**ASPH Education Committee  
MPH Core Competency Development Project**

**III. Discipline-specific Competencies**

**Epidemiology**

Epidemiology is the study of patterns of disease and injury in human populations and the application of this study to the control of health problems.

***Competencies:***

Upon graduation a student with an MPH should be able to...

1. Explain the importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues.
2. Describe a public health problem in terms of magnitude, person, time and place.
3. Apply the basic terminology and definitions of epidemiology.
4. Identify key sources of data for epidemiologic purposes.
5. Calculate basic epidemiology measures.
6. Evaluate the strengths and limitations of epidemiologic reports.
7. Draw appropriate inferences from epidemiologic data.
8. Communicate epidemiologic information to lay and professional audiences.
9. Comprehend basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data.
10. Identify the principles and limitations of public health screening programs.

**Grades:** Tentatively, your course grade is based on an average of quizzes, assignments (including lab assignments), and exams. Because of a recent shift in curriculum to an emphasis on lab reports, I have not yet decided whether a separate "studying-a-study" report is necessary. Grade cutoffs are as follows:

100-97%	A+	89-87%	B+	79-77%	C+	69-67%	D+	Below 60%	F
96-93%	A	86-83%	B	76-73%	C	66-63%	D		
92-90%	A-	82-80%	B-	72-70%	C-	62-60%	D-		

**Academic integrity.** Academic integrity is essential to the mission of San José State University. As such, students are expected to perform their own work except when collaboration is expressly permitted by the course instructor. Students are not permitted to use consult with students who have already taken an. When practiced, academic integrity ensures that all students are fairly graded. Violations to the academic integrity policy undermine the educational process and will not be tolerated. It also demonstrates a lack of respect for oneself, fellow students and the course instructor and can ruin the university's reputation and the value of the degrees it offers. We share the obligation to maintain an environment which practices academic integrity. Violators of the Academic Integrity Policy will be subject to failing this course and being reported to the Office of Judicial Affairs for disciplinary action which could result in suspension or expulsion from San José State University. Faculty are required to report all infractions to the Office of Student Conduct & Ethical Development (S04-12).

**Rules for collaborating** (based in part on rules for UNC course EPID600, Fall 2007, Prof. Vic Schoenbach).

HS 261 encourages collaboration and group work on *selected* items. In some of my courses in the past, students have gone beyond permissible collaboration and suffered serious consequences. I truly believe that when anyone breaks these rules, the entire class suffers. The belief that others are not obeying the rules erodes confidence in the ability to trust and introduces anxieties that those who do follow the rules will be disadvantaged. Having to investigate possible cheating incidents takes instructor time away from helping students learn the material. Therefore, I want to make clear these basic rules for collaboration in this course:

1. **Exams and quizzes:** You may *not* use published (print or web) materials when working on either in-class or take home examinations or quizzes. You may *not* communicate about the examination materials, even indirectly, with anyone other than an instructor.
2. **Lab reports and odd-numbered exercises:** You may use published (print or web) materials when working on lab reports and odd-numbered exercises. You may work with anyone so long as: (a) you work on every question rather than "divide and copy" and (b) none of the persons involved has access to the instructor answers.
3. **Even-numbered exercises:** You may use published (print or web) materials when working on even-numbered exercises. You may communicate about even-numbered exercises BUT ONLY via public discussion boards under instructor supervision.
4. **Research reports:** You may use published (print or web) materials when working on reports. You may consult with experts on specific issues but you must write your report entirely by yourself. Information received from any expert must be properly cited and must constitute no more than 25% of the paper's content.

**Do you have a question? Please ask!**

**Why do we devote so much attention to the rules and ethics for collaborating on course work?** Despite the fact that intellectual honesty is essential to human learning, cheating, plagiarism, and other forms of academic dishonesty are widespread in schools and universities. For example, a recent article ("Fuqua students may face expulsion", Durham *Herald-Sun*, 4/28/2007, A1,A4) reported on 37 Duke business students accused of cheating on a take-home exam. The article also mentioned a Center for Academic Integrity 2002-2004 survey of American MBA students in which 56% reported having cheated.

**Disability:** If you need course adaptations or accommodations because of disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible or see me during office hours. Presidential Directive 97-03 requires that students with disabilities register with DRC to establish a record of their disability.