Biostatistics (HS 167)

Fall 2008

Department of Health Science
San Jose State University

Website: www.sjsu.edu/faculty/gerstman/hs167. This website is part of this syllabus by reference.

The course web site lists the assignment schedule and test dates.

Professor: B. Gerstman, B.B.Gerstman@sjsu.edu (email is preferred method of contact); MH 514; office hours posted on www.sjsu.edu/faculty/gerstman.

Pre-requisite: Undergraduate students must complete the CSU Entry Level Math requirements *and* a GE *statistics* course (e.g., SJSU HS 67) with a C or better before enrolling in HS 167.

Course Organization: The class consists of a weekly lecture and lab. Students must attend the lecture and their lab each week (see SJSU attendance policy). In addition, to successfully complete the course, students should allocate 3 to 5 hours *per week* for reading and homework assignments.

Lecture	(HS167-1: LEC 45993)	Tu 3:00-4:15	BBC 004
Lab A	(HS167-2: ACT 40829)	Tu 4:30-5:45	MH321
Lab B	(HS167-3: ACT 40830)	We 12:00-1:15	MH321
Lab C	(HS167-4: ACT 42212)	Th 3:00-4:15	MH321
Lab D	(HS167-5: ACT 42718)	We 1:30-2:45	MH321
Lab E	(HS167-6: ACT 47671)	Th 4:30-5:45	MH321

Required Materials

1. **Text.** Gerstman, B.B. (2008). *Basic Biostatistics: Statistics for Public Health Practice.* Boston: Jones & Bartlett. 557 pp.
2. **Lab Workbook.** HS 167 Lab Workbook – Fall 2008. San Jose: Spartan.
3. **Statistical Calculator.** Only the TI-30XIIS will be supported.

Software. All software for the course is loaded on the computers in the College Computer Labs (MH 321 and MH332). Some students prefer to have software loaded on their home compute, as well. If you wish to do this, you will need a copy of SPSS. You can purchase a student version of SPSS from the campus store or from www.journeyed.com. You can lease SPSS from www.e-academy.com. In addition, you can download StaTable and WinPepi from the links on the text's website.

Academic Integrity (Office of Student Conduct & Ethical Development): Your own commitment to learning, as evidenced by your enrollment at San Jose State University, and the University's Academic Integrity Policy, requires you to be honest in all your academic course work. Faculty are required to report all infractions to the Office of Student Conduct & Ethical Development (S04-12).

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.

University Drop Policy: Please see the SJSU Schedule of Classes for details about the drop procedure.

Homework Policies: Homework is due @ 3pm on the due dates posted on the separate assignment sheet. Late assignments will *not* be accepted. You may *not* collaborate on even-numbered homework problems. Plagiarism will be reported to Office of Student Conduct and Ethical Development. Work neatly and accurately, and apply reasoned judgment.

Learning objectives by lab unit:

1. Measurement and sampling—To define "measurement"; identify measurement scales; understand the importance of measurement integrity and select a simple random sample from an enumerated population.
2. Frequency Distributions—To construct and interpret stemplots; to construct and interpret frequency tables, histograms, and bar charts.
3. Summary Statistics—To calculate and interpret means, median, standard deviations, quartiles, and boxplots.
4. Probability Concepts and the Binomial Distribution—To understand various conceptions of probability; to calculate binomial probabilities; to use binomial probabilities to make help make judgments about data
5. Normal Probability Distributions—To calculate binomial probabilities; to use binomial probabilities to make help make judgments about data.
6. Introduction to Inference—To simulate a sampling distribution of a mean; to calculate and interpret a confidence interval for μ; to determine sample size requirements to limit the margins of error when estimating μ; To understand the logic of hypothesis testing; to perform and interpret a hypothesis test for a mean when σ is known.
7. Inference about Mean—To discern between paired and independent samples; to explore and describe a quantitative response based and calculate confidence intervals and hypothesis tests for means based on single and paired samples.
8. Comparing means—To explore and describe a quantitative response from two groups; to calculate and interpret confidence intervals and significance tests for means from two groups; [to determine the sample size requirements for a t test].
9. Inference about a proportion—To calculate and interpret confidence intervals for a proportion; to determine the sample size requirements to estimate a proportion with given margin of error.
10. Comparing proportions—To compare independent proportions; to test independent proportions for a difference.

Grades

Your course grade will be based on a weighted average of your average HW score (30% of grade), midterm grade (25% of grade), final exam grade (35% of grade), and lab work (10% of grade). A weighted average calculator is linked to the course website. Grade cut-offs are:

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−		

Please check the course web site for additional information.