

Statistical Methods in Practice  
MTH/STA 379 – Spring 2008  
TTh 9:30-11 am, LDB 204/415

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Office Hrs: TTh 1:30-3:30 pm  
*and by appointment*

Text: *Statistics: Principles and Methods, 5<sup>th</sup> Edition, Johnson and Bhattacharyya*

Course Objective: To develop an understanding of and a facility for the concepts and applications of descriptive and inferential statistics.

Course Description: This course covers the fundamentals of statistical concepts and will guide the student through basic statistical procedures to permit critical insight into the science of collecting, classifying, presenting, and interpreting information from data. The three primary topics are covered. The first topic is descriptive statistics (graphic presentation of data, histograms, plots, charts, measures of central tendency, dispersion, and position, bivariate data analysis, linear correlation and regression analysis). The second topic is probability concepts and rules for calculating probabilities of compound events. The probability coverage also includes the more commonly occurring probability distributions such as the binomial and normal distributions. Finally, the third area of coverage is that of inferential statistics, including inferences involving one and two populations. Students are also introduced to MINITAB software.

Prerequisite: 3 semester hours of mathematics and consent of instructor

Exams: There will be 3 mid-term exams and a mandatory comprehensive final exam. Exam dates are scheduled for Feb 14, March 20, and April 22. The final exam will be held on May 13 (8am-10am). *Makeup exams will **NOT** be given. The lowest exam grade may be replaced by the comprehensive final exam.*

Homework: Suggested homework assignments are given for each section. This list of problems will be the *minimum* necessary for a full understanding of that material. You are certainly invited to do more. Select problems will occasionally be collected for a grade.

Grades:	Exams	100 pts each	A 90% – 100%
	HWK	50 pts	B 80% – 89%
	Final Exam	<u>100 pts</u>	C 70% – 79%
		450 pts	D 60% – 69%
			F below 60%

Notes:

- **Drop Date**-The last day to drop/withdraw is March 1, 2008. It is your personal responsibility to initiate and complete the drop/withdrawal process.
- **Attendance**-You should attend all classes; success in the course depends on this.
- **Additional Resources**-The textbook publisher offers students useful resources such as data sets and a MINITAB manual at <http://bcs.wiley.com/he-bcs/Books?action=index&itemId=0471656828&bcsId=2940>.
- **Extra Credit**-Occasionally, throughout the semester, extra-credit opportunities will arise. At the *beginning* of each class period, students may place one problem from the previous day's assignment on the board for 1 point credit on the next exam. No problems may be repeated.
- **Classroom Etiquette** – Free discussion, inquiry, and expression are encouraged in this class. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class or (b) the ability of students to benefit from the instruction is not acceptable. Examples of such behavior may include routinely entering the class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as "crossing the line of civility." In the event of a situation in which a student legitimately needs to carry a beeper/cell phone to class, prior notice and approval of the instructor is required.
- **Academic Dishonesty** – All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials. For a complete listing of the university policy, see: <http://www.shsu.edu/administrative/faculty/sectionb.html#dishonesty>
- **Disability Issues**-It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance are expected to visit with the Office of Services for Students with Disabilities located in the Counseling Center. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Counseling Center and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Counseling Center. For a complete listing of the university policy, see: [http://www.shsu.edu/~vaf\\_www/aps/811006.pdf](http://www.shsu.edu/~vaf_www/aps/811006.pdf)

- **Student Absences On Religious Holy Days Policy** – Students are excused from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. For a complete listing of the university policy, see: [http://www.shsu.edu/~vaf\\_www/aps/documents/861001.pdf](http://www.shsu.edu/~vaf_www/aps/documents/861001.pdf)
- **Visitors In The Classroom** – Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance.

### Tentative Schedule

Week	Sections
1	Ch 1, 2-1, 2.2
2	2-3, 2-4
3	2-5, 3-1, 3-2
4	3-4, 3-5
5	3-6, Exam I
6	4-1, 4-2, 4-3, 4-4
7	4-5, 5-1, 5-2, 5-3,
8	5-4, 5-5, 5-6
9	6-1, 6-2, 6-3, 6-4, Exam II
10	7-1, 7-2, 7-3
11	8-1, 8-2, 8-3
12	8-4
13	9-1, 9-2, 9-3, 9-4
14	Exam III, 6-5, 8-5, 10-6
15	10-1, 10-2
16	10-2, 10-4, 10-5

### Tentative Homework List

Sections	Problems
Ch 1	1-3,6,7,18, supplement
2-2 & 2-3	1,2 (a,b),3,5,7,8,11,19*-21*,22,23
2-4	28-30,32,33,36,37,38,41,42*,54
2-5	63,64,66,67,72,73,78-80,82,83,85,88,89
Review	100,102,104,105,107,108,114,115,117,118
3-2	1,2,4-10
3-4 & 3-5	14,15,17,18,21,25,26
3-6	38,39,40
Review	46-48,52,53,56-58
4-2	1,8,10,11,12
4-3	15-19,21,22,25
4-4	43-45,47,51,52
4-5	55,59,62, supplement
Review	No questions from this review
5-2 & 5-3	12, supplement
5-4	29,30
5-5	45,47
5-6	59,61-68,72,73,77,78
Review	101*,102,104*,116-118,122,123(a,b),125,127,132,133
6-2 & 6-3	18,20,21
6-4	25,27,29-31,35-37
Review	62-64,69,70
7-2	2,7
7-3	11-13,18,19,22-24,27
Review	39,42-44
8-2	1(a,b),5,10,12
8-3	19,21,23,25,28,35,36
8-4	37-39,44*,46*,47*,48*,51,53*,55*,56*
Review	82,83b,87,90,91b*,94a
9-2 & 9-3	11,14,17,18,19,23,24,25,31
9-4	32-34
Review	82,83b,108*,110,113
6-5 & 8-5	57,59,61,62,64,71*,72*76*
10-6	45-48,53,55
10-1	4
10-2	17,21,27
10-4	35,38,39,40,41
Review	68,69,73,76,79,81,86,87

**\*These have special instructions.      \_ These require use of MINITAB.**