STP 226: Elements of Statistics
Fall 2010 Course Syllabus

Instructor: Dr. Jenifer Boshes	**Office Hours:** M 12:00 – 1:00, T 2:00 – 3:00, W 11:00 – 12:00, Th 2:00 – 3:00 and by appointment
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Class Number: (2:00) 75780; (3:00) 75781	**Office Phone:** (602) 496-0572

Welcome to STP 226! This course is aimed at introducing you to the foundations of statistics and relating statistical practices to real world applications. We will cover basic concepts and methods of statistics, including descriptive statistics, sampling, confidence intervals, and hypothesis testing for various types of data. This course is open to students who have completed a math course at or above the level of college algebra (MAT 113, MAT 117, MAT 142) with a grade of C or better. This course also carries General Studies "CS" credit.

Tentative Schedule

Week	Dates	Monday	Wednesday
1	August 16 – 20		
2	August 23 – 27	Introduction 1.1: Statistics Basics 1.2: Simple Random Sampling	2.1: Variables and Data 2.2: Grouping Data 2.3: Graphs and Charts 2.4: Distribution Shapes
3	August 30 – September 3	3.1: Measures of Center 3.2: Measures of Variation 3.3: The Five-Number Summary; Boxplots	5.1: Probability Basics 5.2: Events 5.3: Some Rules of Probability
4	September 6 – 10	**No Class –** *Labor Day Observed*	**Exam 1**
5	September 13 – 17	3.4: Descriptive Measures for Pop. 6.1: Normally Distributed Variables	6.2: Areas Under Normal Curve 6.3: Working with Normally Dist.
6	September 20 – 24	6.4 Normal Probability Plots	7.1: Sampling Distributions 7.2: Mean and St. Deviation of $\bar{x}$
7	September 27 – October 1	7.3: Sampling Distribution of the Sample Mean	8.1: Estimating a Population Mean 8.2: Confidence Intervals for One Pop. Mean When σ is Known
8	October 4 – 8	8.3: Margin of Error	8.4: Confidence Intervals for One Pop. Mean When σ is Unknown
9	October 11 – 15	**Exam 2**	9.1: Nature of Hypothesis Testing 9.2: Terms, Errors, and Hypotheses
10	October 18 – 22	9.3: Hypothesis Tests - σ Known	9.4: *P*-Values
11	October 25 – 29	9.5: Hypothesis Tests - σ Unknown	10.1: Sampling Distribution 10.3: Inferences for Two Pop Means
12	November 1 – 5	10.4: Using Paired Samples	Hypothesis Testing
13	November 8 – 12 *11/11 – Veteran's Day Observed*	Group Project Meetings	**Exam 3**
14	November 15 – 19	11.1: Confidence Intervals for One Population Proportion 11.2: Hypothesis Tests for One Pop.	11.3: Inferences for Two Pop.
15	November 22 – 26 *11/25-11/26 – Thanksgiving Observed*	12.1: The Chi-Square Distribution 12.2: Chi-Square Goodness-Of-Fit	12.3: Contingency Tables; Assoc. 12.4: Chi-Square Independence Test
16	November 29 – December 3	13.1: The *F*-Distribution 13.2: One-Way ANOVA: The Logic *Group Project due!*	13.3: ANOVA: The Procedure
17	December 6 – 10	Group Project Presentations Question Session	

Cellular Phone Policy:
I assume the responsibility of ensuring each of you is in a position to be successful in this class. Part of that responsibility is to ensure that all of us, collectively, are focused on the task at hand. Therefore, I request that your cell phone is turned off and put away while you are in this class, as its usage during class is disruptive and distracting to the learning environment, both individually and as a group.

Agreement of Terms:
By remaining registered in the course through drop/add period, you agree to all terms and policies set forth in the syllabus.

Required Text:
Elementary Statistics, *7th Edition* (Custom Package); by Neil A. Weiss; Pearson Custom Publishing; ISBN 0-558-32634-X
Students are expected to read relevant sections of the textbook prior to attending class.

Calculator:
A graphing calculator is required for this course. The recommended model is the TI-84, but any graphical calculator that performs statistical hypothesis tests (such as the TI-83) will be sufficient. You are expected to bring your calculator to class daily. Cellular phone calculators are not permitted in class or during an exam. Also, the sharing of calculators is not permitted during exams.

Student Success Center:
The Student Success Center, located on the first floor of University Center, will be open Monday-Thursday from 9am-4pm and on Friday from 9am-12pm. Be sure to go for help before it is too late and several days before an exam. Additional information on the Student Success Center can be found on their webpage at: http://studentsuccess.asu.edu/downtown.

Exams:
You will take 3 exams during the semester and one final exam according to the tentative dates listed below. Any changes will be announced at least one week in advance. Each exam will involve a mix of mechanical skills and conceptual reasoning. The best possible preparation for them is regular attendance and completion of assigned homework. No exam scores will be dropped.

Exam	Date	Topics on Exam
Exam #1	Wednesday, September 8, 2010	Chapters 1-5 Topics
Exam #2	Monday, October 11, 2010	Chapters 6-8 Topics
Exam #3	Wednesday, November 10, 2010	Chapters 9-10 Topics
Final Exam	See below.	Chapters 11-13 Topics

Final Exam:
The final exam will be given in our regular classroom as scheduled on the final exam scheduled located at: http://www.asu.edu/registrar/registration/finals.html. According to ASU policy, final exams can be rescheduled only under the following circumstances: (1) religious conflict, (2) the student has more than 3 exams scheduled on the same day, or (3) two finals are scheduled to occur at the same time. No final exams will be rescheduled for personal reasons or non-refundable airline tickets.

Class Number & Time	Date & Time of Final Exam
Class Number 75780 (2:00pm)	Monday, December 13, 2010; 12:10 – 2:00 PM
Class Number 75781 (3:30pm)	Wednesday, December 15, 2010; 12:10 – 2:00 PM

Homework/MyStatLab:
Homework will be graded on a regular basis. You are encouraged to work together, but each individual student is required to submit his or her own work. Most of your homework will be submitted online at http://www.coursecompass.com using MyStatLab, but some written homework assignments will be collected and graded to supplement MyStatLab. All written assignments must be turned in neat, organized, and stapled if there are multiple pages. If not, your written homework will not be graded. No late assignments will be collected if you miss class <u>for any reason</u>, however, the approximate equivalent of one homework assignment will be dropped at the end of the semester. Written homework assignments are considered late if they are turned in after the instructor has collected them at the beginning of class. For the MyStatLab problems, <u>it is highly recommended that you work the problems on paper, and save these exercises as part of your notes</u>. They come in handy when reviewing for an exam or for obtaining help if you have difficulty with the material. **MyMathLab Course ID: boshes07548**

Projects:
There will be two group projects for the semester. The purpose of these projects is to get you thinking about how statistical methods you have learned in class can be applied in a real world setting. Details for each project will be announced in class. The tentative due dates for these projects are September 13th and November 29th.

Make-Up Policy:
Make-up exams are only given in the case of <u>documented immediate family/medical emergencies</u>. There are no exceptions to this policy. Please note that work emergencies do not constitute family/medical emergencies. Arrangements for any make-ups must be done within one week of the exam. There are no make-ups for homework.

Attendance:
All students are expected to come to class each day prepared to discuss assignments and material being presented in class. During class, any student can expect to be called upon to answer questions posed by the instructor and other students. Moreover, part of being prepared for class involves bringing all course materials to class, including your calculator. Statistics show that students who regularly come to class tend to do better than students who skip class every now and again. **Only three (3) unexcused absences will be allowed during the semester. The fourth absence is grounds for the student earning a grade of EN (failure due to lack of attendance) for the semester.**

Final Grade Breakdown:
Your final grade is determined as follows:

Component	Percentage
4 Exams	70%
Homework / Participation / Misc.	20%
Projects	10%

Grade	x = Final Percentage
A+	$98\% \leq x \leq 100\%$
A	$90\% \leq x < 98\%$
A-	$89.5\% \leq x < 90\%$
B+	$87\% \leq x < 89.5\%$
B	$80\% \leq x < 87\%$
B-	$79.5\% \leq x < 80\%$
C+	$77\% \leq x < 79.5\%$
C	$70\% \leq x < 77\%$
D	$60\% \leq x < 70\%$
E	$x < 60\%$

Additional Information:
- Turn off any cellular phones prior to entering class. Blatant cellular phone usage (i.e., text messaging) during class is not tolerated and will negatively affect the student's participation grade for the semester.
- You are permitted to use your laptop during class to access Blackboard for class-related resources. Students found using a laptop during class for non class-related resources (i.e., checking e-mail or Facebook) will have his or her participation grade negatively affected.
- Classroom disturbances, including but not limited to: arriving late, leaving early, leaving during the middle of class, talking during lecture, and cellular phones, are not tolerated. Each student is expected to show respect for every student registered in the course. Recurring disturbances caused by an individual will result in an administrative withdrawal from the course.
- The highest standards of academic integrity are expected of all students at all times. Violations of academic integrity include, but are not limited to, cheating, fabrication, tampering, plagiarism, or facilitating such activities. We will act very harshly against any acts of academic dishonesty during quizzes or exams.
- Students with disabilities should arrange to meet with me as soon as possible to arrange for reasonable accommodations for their learning needs. Students registered with DRC must notify the instructor at least one week prior to any exam.
- Arrangements for any religious observances, ASU sanctioned activity, or ASU student athlete obligations must be arranged with the instructor at least one week prior to the event.
- No individual extra credit assignments will be offered.
- I reserve the right to make changes to this syllabus as necessary. Changes will be considered official if they are announced in class or posted on Blackboard.
- Welcome to the course! You should recognize that this is a 200-level course conducted at a steady pace with a workload appropriate for a 200-level university statistics course. I encourage you to stay after class, visit the Student Success Center, come to my office hours, or make an appointment with me to discuss any material that is unclear to you. I wish you well in the course and all of your other academic pursuits this semester.

Key Semester Dates

Drop/Add Deadline:	Wednesday, August 25, 2010
Course Withdrawal:	Wednesday, November 3, 2010
Complete Withdrawal:	Tuesday, December 7, 2010