MATH 1342.001 Elementary Statistical Methods, 3 credits
COURSE SYLLABUS: Fall 2014

Instructor: Dr. Pamela S. Webster
Office Location: Binnion 315
Office Hours: Monday/Wednesday, 10am – 11:30am
Tuesday/Thursday, 10am – 11am
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COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings


Course Description:

Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Appropriate technology will be used. Prerequisites: TSI complete.

Student Learning Outcomes: Upon successful completion of this course, students will:
• Explain the use of data collection and statistics as tools to reach reasonable conclusions.
• Recognize, examine and interpret the basic principles of describing and presenting data.
• Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
• Explain the role of probability in statistics.
• Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
• Describe and compute confidence intervals.
• Solve linear regression and correlation problems.
• Perform hypothesis testing using statistical methods.

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Mission for the Department of Mathematics: Discovering the Keys to Success
**Core Curriculum Objectives:** Upon successful completion of this course, the student will:

- Analyze, evaluate, or solve problems when given a set of circumstances or data. (Critical Thinking Objective)
- Communicate in a manner appropriate (through written, oral, and/or visual communication) to audience and occasion, with an evident message and organizational structure. (Communication Objective)
- Students will be able understand and utilize mathematical functions and empirical principles and processes. (Empirical and Quantitative Skills Objective)

**COURSE REQUIREMENTS**

**Instructional / Methods / Activities Assessments**

This course will be taught as a lecture course with activities mixed throughout. In particular, students will be expected to work on projects and activities that deal with statistical software and real world applications of the material learned.

**GRADING**

Grading will be on a standard 100% scale:

- HW: 10%
- PROJECTS: 10%
- EXAMS: 3 @ 20% each (around weeks 5, 9, and 14)
- FINAL: 20%

The course will be graded on the standard scale of: A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: 0-59.

**TECHNOLOGY REQUIREMENTS**

Internet access is REQUIRED

Word processing and spreadsheet software is REQUIRED (Microsoft Word and Excel preferred/compatibility required)

Email access is REQUIRED. Please utilize your A&M-Commerce email address, or make me aware of your alternate email address. ECollege may be utilized.

Stat Crunch ® Statistical Software is REQUIRED. Program TBD.

A TI-83 calculator (or equivalent) is RECOMMENDED for this course.


**COMMUNICATION AND SUPPORT**

**Interaction with Instructor Statement**
Students will be expected to interact with the instructor(s) in class or via electronic means in an appropriate manner. All instructor contact information is listed on this syllabus and should be used. Please use email to facilitate a quick response.

**COURSE AND UNIVERSITY PROCEDURES/POLICIES**

**Course Specific Procedures:**

The Math Skills Center, located in Binnion 328, is open Monday and Wednesday, 8am – 8pm; Tuesday and Thursday, 8am – 6pm; Friday, 8am – noon.

Mach III/TRIO Program: The Mach III/TRIO Program is available for students who qualify for additional resources, such as private tutoring. Students may qualify by meeting a variety of conditions. For instance, one way to qualify is by being a first-generation college student. For more information, contact TRIO at 903-886-5833 or in the Halladay Student Services building, Room 301.

Supplemental Instruction: See bulletin boards or instructor for possible sessions

Please be sure that cell phones and other electronic devices are off or silent. If you expect to have to get up, please select an inconspicuous position to minimize disruptions. Courtesy to others is important. That means respecting the opinions of others, and in general, doing your part to make this a positive learning environment for all students. Food and beverages, while acceptable, should be consumed as quietly as possible, and you must clean up after yourself.

**University Specific Procedures:**

**ADA Statement**

Students with Disabilities
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

**Office of Student Disability Resources and Services**
Texas A&M University-Commerce
Gee Library- Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

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Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See Code of Student Conduct from Student Guide Handbook).

COURSE OUTLINE/CALENDAR

The following is a list of topics to be covered. In general, these topics will be covered in such a way that one topic is covered each week. Tests will tentatively be given during weeks four, eight, and twelve, with the final exam being given during finals week, according to the online final exam schedule.

Topics Covered:
- Topic #1 - Introduction and Getting Started/What is Statistics? What is Data?
- Topic #2 - Sampling and Surveys
- Topic #3 - Observational Studies and Experimental Design
- Topic #4 - Graphical Summaries of Data
- Topic #5 - Numeric Summaries of Data
- Topic #6 - Scatterplots and Correlation/Simple Linear Regression
- Topic #7 - Probability and Density Curves
- Topic #8 - Normal Distributions
- Topic #9 - Sampling Distributions/Sampling Distribution of the Sample Mean
- Topic #10 - Confidence Intervals for Means and Proportions
- Topic #11 - Hypothesis Tests for One Population Mean
- Topic #12 - Inference for One Population Proportion
- Topic #13 - Pearson's Chi-Squared Test
- Topic #14 - Inference for Two Population Means
- Topic #15 - One-Way ANOVA

Remaining enrolled in this course constitutes acceptance of all policies contained in this syllabus.

Any changes to this syllabus will be communicated directly to you in class by the instructor. You are responsible for being aware of any such changes.

Good luck and work hard!!