MA331 Probability and Statistics – Chaminade University

Instructor: Dr. Torrance L. Trevorrow
Class Times: T,TH 11:00-12:30, Henry Room 102
Dates: Instruction January 12th to May 1, 2009
Office Hours: Before or after class by arrangement.

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Text Book: Elementary Statistics using Excel, 3rd Edition by Mario Triola. Pearson/Addison Wesley ISBN: 0-321-36513-5

Course Description: (from the catalog) Sample space, random variables, classical distributions, the central limit theorem, estimation, testing of hypotheses for parameters, the first and the second kinds of errors, correlations, regressions, and analysis of variance. 3 Credits.

Prerequisites: MA 110 or equivalent or placement.

Course Goals: To give the student an increased knowledge and understanding of various topics in contemporary probability and statistics.

Course Objectives: (as modeled from previous syllabi) To Understand:

1. Relationships among real data
2. The design of various experiments
3. Differences between quantitative and categorical variables
4. Define a probability function and distribution
5. Distinguish between random and biased sampling
6. Differentiate between causality and posteriority
7. Recognize the normal distribution of data
8. When a hypothesis has been proven within specified limits
9. When a hypothesis is not supported by the data
10. The unsubstantiated statistical claims and conclusions from various media

Course Skills:

1. To be able to use a spreadsheet to display and analyze data
2. To calculate and interpret various statistical measures
3. To calculate least squares regression
4. To calculate correlation coefficient and variance
5. To calculate simple and compound probabilities
6. To calculate z scores
7. To calculate confidence intervals and test data for significance
8. To formulate, test the null hypothesis

Methodology: A significant amount of your learning will come from class participation, activities, a meticulous study of the text, and completing the assigned work. Multiple quizzes (usually at the beginning of each class), discussions, and articles will be used to reinforce learning. A significant amount of student presentations based on research and analysis is required.

Grading: The contributions of course components are indicated as percentages. Changes may be made to the course and grading at the instructor's discretion. The instructor reserves the right to adjust a student's if your quizzes and final do not reflect expected achievement. Quizzes, Presentations and Papers 50%, Final Exam 50%.

A	90% +	Outstanding Scholarship and excellent initiative with course
B	80% +	Superior Quality done in a consistent intellectual manner
C	70% +	Satisfactory showing competent understanding of course
D	60% +	Lowest passing grade, inadequate for prerequisites
F	0-59%	Unsatisfactory understanding and class work

Quizzes and the final exam will be open book and open notes. For any essay type questions original thinking and expression is required. Calculator is normally permitted.

Late Work: Absent or late work is not accepted or graded. <u>No exceptions</u>

Attendance: Active and early participation is <u>vital</u> to your success. Each student is accountable for <u>all</u> the information presented in class and should find an ally in case of absence or late arrival.

Guidelines from the undergraduate catalog indicate that if you miss more than a week of classes you are subject to a grade reduction; missing two weeks of classes will result in notification to the Associate Provost and Records office, and possible withdrawal. <u>Should an illness or personal reasons necessitate continued absence the *student* should officially withdraw</u>.

Academic Integrity: All material submitted in fulfillment of course requirements must be done by the registered student. Cut and paste research, copying, substitute work, "wandering eyes", or sharing exams will result in a grade of zero and possible failure for the course.

Supplies: Additional information to be provided in class. A PDA or Cell Phone or Text Device is <u>not to be used for class work or exams</u>.

Resources: The text and class materials are the primary resources for the course. Often assignments will require effective use of the library and internet research.

Requirements: You are required to **immediately** seek clarification on any material that you do not understand. You are expected to maintain high standards of academic performance and courtesy and to comply with all CUH policies. Any disruptive behavior, inappropriate language or violations will result in expulsion from class (subsequent occurrence possible withdrawal from course).

Quizzes: A quiz will usually be given at the beginning of each class. If you arrive late you will have less time. All work is to be arranged neatly and clearly presented (showing all major steps). "Clean" paper is required. Points for each quiz will be based on time allocated. Quizzes will be returned after grading and will be collected during finals.

Finals: Specific information will be provided towards the end of the semester and is normally the last week of class. Usually the final is written, open book and notes, calculator permitted.

Notes:

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