Instructor: Jack Russ    
Office Hours: Tuesdays and Thursdays immediately after class or by appointment


Course Description: This course is an introduction to descriptive and inferential statistics. Upon completion, the student should be able to utilize statistical methods in reaching a quantitative decision in business or economics. This is accomplished through: massing data and describing them by their central tendency and dispersion characteristics; sampling theory; sampling distributions; statistical inference in relating industrial and marketing problems; regression analysis; correlation; time-series analysis; general theory of quality control and decision making under conditions of uncertainty. The evaluation of data and critical judgement is stressed throughout in forming quantitative decisions.

Prerequisites: Proficiency in Intermediate Algebra

Course Goals: The course will provide the knowledge to understand the meaning of frequently used statistical terms. Emphasis will be placed on making business decisions. Upon completion of this course, the student should be able to apply the following statistical methods in the business environment:

a. Calculate and compare descriptive measures of raw data including:
   (1) Measure of central tendency – mean, median and mode.
   (2) Measure of dispersion – range, variance and standard deviation.

b. Calculate various values for binomial, Poison and normal probability distributions. Also, be able to identify and use appropriate tables.

c. Identify different types of sampling, calculate sampling from non-normal populations and have an understanding of the Central Limit Theorem.

d. Understand both simple and multiple regression analysis and correlation.

e. Application of Statistical Methods in Decision Theory
   (1) Conditional Profit Tables
   (2) Decision Tree Analysis

Problems will be assigned at each class meeting. A multipurpose calculator; that is, one with more than the standard four functions (add, subtract, multiply and divide) will be needed.

Performance will be judged based upon your understanding of reading materials and lectures. FOUR exams and a research paper will be the basis for your grade. All exams are open notes. You must complete all exams and the research paper in order to obtain a grade in the course. Letter grades on the exams will be distributed on a class curve, utilizing proper statistical methodology.

Research papers may be done individually or in groups of two or three. No more than three students may participate in the research.

Research proposals, along with team members, are due during the first week in March.
Grades will be assigned for written material in accordance with the University catalog and the following general criteria.

NOTE: Letter grades may be assigned for any or all of the following reasons:

"A" range: Outstanding achievement, significantly exceeds standards.
- Unique topic or unique treatment of topic, takes risks with content; fresh approach.
- Sophisticated/exceptional use of examples.
- Original and "fluid" organization; all sentences and paragraphs contribute; sophisticated transitions between paragraphs.
- Integration of quotations and citations is sophisticated and highlights the author's argument.
- Confidence in use of Standard English, language reflects a practiced and/or refined understanding of syntax and usage.
- Sentences vary in structure, very few if any mechanical errors (no serious mechanical errors).

"B" range: Commendable achievement, meets or exceeds standards for course.
- Specific, original focus, content well handled.
- Significance of content is clearly conveyed; good use of examples; sufficient support exists in all key areas.
- Has effective shape (organization), effective pacing between sentences or paragraphs.
- Quotations and citations are integrated into argument to enhance the flow of ideas.
- Has competent transitions between all sentences and paragraphs.
- Conveys a strong understanding of Standard English; the writer is clear in his/her attempt to articulate main points, but may demonstrate moments of "flat" or unrefined language.
- May have a few minor mechanical errors (misplaced commas, pronoun disagreement, etc.), but no serious mechanical errors (fragments, run-ons, comma-splices, etc.).

"C" range: Marginal achievement, falls below standards for course.
- Retains over-all focus, generally solid command of subject matter.
- Subject matter well-explored but may show signs of under-development.
- Significance is understood, competent use of examples.
- Structure is solid, but an occasional sentence or paragraph may lack focus.
- Quotations and citations are integrated into argument.
- Transitions between paragraphs occur but may lack originality.
- Competent use of language; sentences are solid but may lack development, refinement, style.
- Occasional minor mechanical errors may occur, but do not impede clear understanding of material.
No serious mechanical errors (fragments, run-ons, comma-splices, etc.)

"D" range: Unacceptable achievement; does not meet minimum standards (Note: The "D" grade is a passing grade; work that is not of "passing quality" should receive grade "F.").

- Significance of content is unclear.
- Some ideas may lack support, elaboration.
- Lacks sufficient examples or relevance of examples may be unclear.
- Support material may not be clearly incorporated into argument.
- Expression is occasionally awkward (problematic sentence structure).
- Mechanical errors may at times impede clear understanding of material.
- May have serious mechanical errors (fragments, run-ons, comma-splices, etc.)

"F" range: Failure to attend to standards

- Ignores assignment.
- Lacks significance.
- Lacks coherence.
- Includes plagiarized material (intentional or unintentional).
- Lacks focus.
- Difficult to follow due to awkward sentence or paragraph development.
- Mechanical errors impede understanding.
- Problems with writing at the college level.

Other Grades

K In Progress: Designates in a project is in progress. No credit is awarded until the sequence is completed and a permanent grade is entered replacing the "K" grade.

S Satisfactory: Credit is granted and no grade points are assigned. This is a grade assigned for satisfactory work in practica, residencies and field experience courses.

U Unsatisfactory: A permanent grade given indicating that a credit attempt was not acceptable. An "Unsatisfactory" grade merits no grade points and is not computed in the grade point average. This grade is assigned for unsatisfactory work in practica, residencies and field experience courses.

General Policies:

Technology: Students are expected to be competent in using word-processing, spreadsheet, and presentation software in this course. Use of the Internet and E-Mail may also be required.

Civility: As a diverse community of learners, students must strive to work together in a setting of civility, tolerance, and respect for each other and for the instructor. Rules of classroom behavior include but are not limited to the following:
- Conflicting opinions among members of a class are to be respected and responded to in a professional manner.
- Side conversations or other distracting behaviors are not to be engaged in during lectures, class discussions or presentations
- There are to be no offensive comments, language, or gestures
**Diversity:** Learning to work with and value diversity is essential in every degree program. Students are required to act respectfully toward other students and instructors throughout the course. Students are also expected to exhibit an appreciation for multinational and gender diversity in the classroom and develop leadership skills and judgment appropriate to such diversity in the workplace.

**Disability:** CSUSM complies with the Americans with Disabilities Act of 1990 and Section 504 of the Federal Rehabilitation Act of 1973. If you need accommodations due to a documented disability, please contact the Office of Scholarships and Special Services at (858) 642-8185 or via e-mail at specialservices@nu.edu. Information received by this office is confidential and is only released on a 'need-to-know' basis or with your prior written consent. Accommodations can only be granted upon approval by the Committee for Students with Disabilities (CSD).

**Ethics:** In as much as honesty and transparency and personal trust is the currency of business, ethical behavior in the classroom is required of every student. Students are also expected to identify ethical policies and practices relevant to course topics.

**Attendance:** Students are expected to attend all class sessions. An absence is assessed each time a student is not in attendance during a regularly scheduled class period, whether or not it is an excused absence. An instructor may withdraw a student from class prior to the sixth session in graduate courses if there are more than two unexcused absences. Students who have more than three absences, excused or unexcused, cannot be given a satisfactory grade.
In your paper, you are to examine some economic or societal concepts, theories or issues of your choice utilizing data. This paper is for the purpose of demonstrating the value of quantitative statistics to Public Administration. National University has a good reserve list that helps to bare this out and can be found at the following link:  http://library.nu.edu/web/reserves/ReserveLists/PAD627_Angelini.pdf.

You are free to write about what you want. However, you must submit a proposal to be approved by me. Your proposal should state what interests you about the topic. What do you already have ideas about or want to know more about? What is your attitude toward the topic: serious, angry, puzzled, amused? Where do you propose to gather information and data? What kinds of evidence – such as facts, examples and the opinions of experts – will best suit your topic? Where are you going to get the information? Use at least three other sources that are NOT from the internet.

Your paper should include a thesis. This is the central idea. The entire work develops and supports that idea. Focus your thoughts and information on a single dominant question you seek to answer. Let the question guide your planning and research, but also allow it to change as information and ideas accumulate.

Notice that these thesis statements are concise and limited to a single idea. Offer a specific opinion that will be supported in the paper.

Most essays or papers are divided into three parts:

1. The introduction – usually a paragraph or two; presents the topic, sometimes provides background, narrows the topic and often includes the thesis statement.

2. The body – the longest part, contains the substance of the paper, developing parts of the thesis.
   a. A topic sentence (often the first or second sentence) states the point that the paragraph develops
   b. Other sentences offer examples, facts, expert opinion, and other evidence to support the topic sentence
   c. Occasionally, a concluding sentence ties the evidence together or prepares for the point of the next paragraph
   d. To bind paragraphs and sentences so that they flow smoothly, use transitional expressions such as first, however, and in addition.

3. The conclusion – usually a paragraph – ties together the parts of the body, sometimes restating the thesis, summarizing the major points, suggesting implications of the thesis or calling for action.

If you draw on outside sources in writing your paper, you must clearly acknowledge those sources. Your paper and citations should be in proper APA format.

Proper grammar, spelling, word usage and sentence construction are required. Projects submitted with errors will be downgraded.
Text should be written in the third person.

Do not use words/phrases such as “hopefully,” “obviously,” “as you know,” “now you can see why,” and so on.

Avoid using contractions.

Your paper should be no less than 2500 words or what seems appropriate for your topic. It should include graphs, tables or other data to support your position. These may be included in the body of the text or as an appendix.

**Above all – TEACH ME SOMETHING!**

Your papers are due on the date and time of the final examination for the course.

**Academic Integrity:** Students are required to cite the use of materials written by others in all written communications for courses. Plagiarism is the presentation of someone else's ideas or work as one's own. This includes using ideas, words, or phrases without proper attribution. Students found plagiarizing are subject to the penalties outlined in the Policies and Procedures section of the University Catalog, which may include a failing grade for the work in question or for the entire course. Inadequately or improperly cited work receives no credit. In cases of plagiarism, the burden of proof rests on the student, not the instructor. In other words, the student will be required to prove that plagiarism has not occurred.

For more information on proper citation and writing research papers see the web sites listed below: Plagiarism (http://owl.english.purdue.edu/handouts/research/r_plagiar.html) Quoting, Paraphrasing, and Summarizing (http://owl.english.purdue.edu/handouts/research/r_quotprsum.html) MLA Citation Format (http://owl.english.purdue.edu/handouts/research/r_mla.html)

If you want your papers returned, please provide a self-addressed stamped envelope.
## PROPOSED SCHEDULE

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