Reedley College - Fall 2009 - Course Syllabus

Math 11, Elementary Statistics, Section # 56279

Instructor: Mrs. Lina Obeid **Class Room:** CCI200 **Class Time:** M, T, W, Th: 9:00 – 8:50 am
Office: FEM Library **Office Hours:** M, W, Th: 10-11am; or by apt
Phone: 638-3641, ext. 3184 **E-Mail:** lina.obeid@reedleycollege.edu

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Basic Skills Advisories: Eligibility for English 125 and English 126
Subject Prerequisites: Successful completion of Math 103

Required Texts: Bluman, Allan G. (2008). *A Brief Version Elementary Statistics: A Step by Step Approach*, 4th Edition. Boston: McGraw Hill.

Optional Text: Huff, Darrell. (1993). *How To Lie With Statistics*. New York: Norton & Co.
Other optional titles to read: Freakonomics; Outliers.

Materials Needed:
Graph paper, 5 to 6 886-E scantrons, binder, binder paper, ruler, pencils, erasers, stapler
TI 83Plus or TI83Plus Silver Edition calculator; Check with the instructor for the use of other calculators.

Course Description:
As stated in the Reedley College course outline, Math 11 is an introduction to statistical methods for business, behavioral, and social science majors. Topics include descriptive measures of central tendency and variability, probability, binomial and normal distributions, random variables, sampling, estimating, hypothesis testing, correlation and regression.

Attendance and Tardy Policy:
- Roll is taken daily. Students are expected to attend every class, arrive on time, and stay for the whole class period. Students who are absent or late, or who leave early will receive a zero on the missed, or late assignment. **Late work is not accepted.** Excuses are not accepted.
- If a student arrives late, it is his/her responsibility to inform the instructor after class, so the absence can be changed to a tardy. Two tardies count as an absence.
- A student may* be dropped by the instructor after 6 absences (not necessarily consecutive class periods).

*** NOTE:** If a student decides to no longer be enrolled in the class, it is the student's responsibility to ensure that he/she is officially dropped by turning in a program change form in to the Admissions office. Otherwise, the student may receive an "F".

Behavioral, Campus, and Academic Policy:
- Reedley College campus policies and academic regulations will be implemented in this class.
- Students engaging in any behavior the instructor deems disruptive may be asked to leave for the remainder of that class session. Pagers, cell-phones, CD/DVD/MP3 players, and any other electronic device must be turned off, silenced, and made invisible before entering class. [Approved calculators, and documented/required medical devices are exceptions.]
- Cell phones are NOT to be used as calculators. Students are not allowed to leave their cell phones in plain view even if set on silent. Cell phones are strictly prohibited during exams.

Plagiarism: Reedley College rules on plagiarism will be enforced. Students cheating and students allowing others to cheat off of their assignment will receive a 0% on that assignment (whether it is a test, quiz, classwork, or any other assigned work).

Grading Policy:
Students are graded in two major categories according to the following:

Homework grades constitute **20%** of the student's overall grade.
Exams grades constitute **80%** of the student's overall grade.

- **Homework:** Homework is assigned on regular basis. Homework will not be accepted late for any reason. Problems and exercises must be worked out thoroughly, completely and neatly, otherwise the work will not receive full credit. Graphs and charts are very important in statistics, so they need to be drawn labeled, titled, and scaled properly and accurately on graph paper. All work must be shown. The two lowest homework scores will be dropped.

- **Chapter Exams**: 5 chapter exams will be administered throughout the semester. No make-up exam will be given for any reason. Students who are not present will receive a score of ZERO* on that chapter exam. The final exam score, however, may be used to replace a chapter exam score.
  * **Note carefully**: In case a student has a known **unavoidable business on the exam date**, he/she will be given the chance to take the chapter exam **early (before the scheduled date/time)** *if and only if* the student makes the appropriate arrangements with the instructor in a timely manner. Students are **not** allowed to take the exam **after the scheduled date/time** for any reason.

- **The Final exam** is a comprehensive final meaning it might contain any of the material covered from the entire semester. The Final exam score will be weighed like any chapter exam score**.** ***The final exam score may be used to replace the lowest chapter exam score or a missed chapter exam score.***

The Final will be administered on Monday, December 14, in CCI200, 9am to 10:50am.

The average score within each category may be calculated by adding the earned scores, then dividing them by the sum of the possible scores. The following formula is used to determine the overall grade:
Student's overall grade = (Homework average)(0.20) + (Exam average)(0.80)

If students need further clarification regarding grades, they are welcome to consult the instructor.

Grading Scale:

Grade		**Percent**
A	=	90% - 100%
B	=	80% - 89%
C	=	70% - 79%
D	=	60% - 69%
F	=	Below 60%

Tips for Success:

- **FORM A STUDY GROUP!**
- Come to class prepared and on time; Attend regularly;
- **Do not procrastinate;**
- Turn in well thought-out assignments on time with all the work shown step-by-step;
- Put in the maximum effort daily in every aspect of your work;
- Ask the instructor and students for help;
- Attend tutorial center for additional help;
- Do not wait until you are failing or you are completely lost to ask questions.
- READ THE SECTIONS PRIOR TO ATTENDING THE LECTURE.

▶ Accommodations for students with disabilities:

- If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic test, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

▶ Important Dates: FALL 2009

August 17 (M)	Start of Fall semester
August 28 (F)	Last day to drop a full-term class for a refund
September 4 (F)	Last day to register for a full-term fall class
September 4 (F)	Last day to drop a fall full-term class to avoid a "W"
September 7 (M)	Labor Day (no classes held, campus closed)
September 18 (F)	Last day to change a fall class to/from a Pass/No-Pass grading basis
October 16 (F)	Last day to drop a full-term class (letter grades assigned after this date)
November 11 (W)	Veterans Day (no classes held, campus is open)
November 26-27 (Th-F)	Thanksgiving holidays
December 14 (M)	**The Final will be administered on Monday, December 14, inCCI200, 9am to 10:50am.**
December 14-18 (M-F)	Final exams week
December 18 (F)	End of Fall semester
December 21 - January 8	Winter Break

- *Instructor reserves the right to make minor changes to the syllabus.*

- **COURSE OBJECTIVES:**

In the process of completing the course, the student will:

A. Summarize and describe given data sets
B. Apply the methods of descriptive statistics to determine the measures of central tendency and variability to a variety of problems.
C. Apply basic principles of probability to determine probabilities of a variety of events.
D. Analyze discrete and continuous probability distributions.
E. Explore the basics of sampling theory.
F. Estimate population parameters through studying confidence intervals.
G. Examine hypothesis testing for small and large samples and multiple populations.
H. Determine if a relationship exists between quantitative variables.

COURSE CONTENT OUTLINE:

A. Introduction to Statistics
   1. Statistical data
   2. Frequency distributions
   3. Graphs

B. Population Parameters and Sample Statistics
   1. Measures of central tendency.
      a. Mean
      b. Median
      c. Mode
   2. Measures of Variability
      a. Standard deviation
      b. Quartiles
      c. Range

C. Probability
   1. Rules of probability, random variables, and expected value.
   2. Discrete and continuous probability distributions.
      a. Binomial Distribution
      b. Hypergeometric Distribution
      c. Poisson Distribution

D. Sampling Theory
   1. Simple random sample
   2. Central Limit Theorem

E. Estimating Population Parameters
   1. Estimating from a small or large sample.
   2. Sample size.

F. Hypothesis Testing (Parametric/Nonparametric)
   1. One population, one and two sided tests.
      z-test for means and proportions.
      t-test for means (independent and dependent samples)
   2. Two populations, sampling distributions
   3. Chi-squared (Goodness of Fit and Contingency Tables)
   4. Analysis of Variance (ANOVA) *(as time permits)*

G. Correlation and Simple Linear Regression *(as time permits)*
   1. Correlation coefficient
   2. Regression coefficient
   3. Test of hypothesis about the value of correlation/regression coefficient.