# Math 11: Elementary Statistics, Spring 2010
# THIS IS AN ONLINE COURSE!

**Instructor:** Walid Tayar
**Email:** walid.tayar@reedleycollege.edu
**Office Hours:** M, T, TH 9:00-9:50am in FEM 1K or by appointment
**Math Center Hours:** W 9:00-950am and 11:00-11:50am
**Phone:** 559-638-3641 ext. 3263

## Catalog Description:
This is an introduction to statistical methods and techniques 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 (parametric and nonparametric), and correlation and regression.

## Class Meetings and Midterms:
**Orientation Session: Thursday, Jan. 14th**
Reedley College – Room CCI 206 from 6-8pm

**Exam 1:** Thursday, Feb. 11th
Reedley College – Room CCI 206 from 6-8pm
**Exam 2:** Thursday, March 11th
Reedley College - Room CCI 206 from 6-8pm
**Exam 3:** Thursday, April 15th
Reedley College - Room CCI 206 from 6-8pm
**Final:** Tuesday, May 18th
Reedley College - Room POR 5 from 6-8 pm
(Dates and Times subject to change)

## Required text:

> **TITLE:** Essentials of Statistics**,** 3rd Edition
> **AUTHOR:** Mario Triola

Before you buy the book, **make sure both you and your computer are ready to take this course.** Do not buy the book if your computer does not meet the minimum requirements. This book comes bundled with a ***Student Access Kit***. It is <u>very</u> important that your book has the ***Student Access Kit*** with it. Once you open the kit you will <u>not</u> be able to return the book for a full refund. You may want to come to the orientation first. There may be time at the end to go purchase the text.

NOTE: Another option would be to buy the book used, and purchase the access code through Course Compass for around $70, or just purchase the access code online and you can view the book electronically through the website. All of this will be discussed at the orientation.

**BLACKBOARD:** This course may utilize blackboard for announcements, handouts, assignments, etc. You can access blackboard from the Reedley College homepage or at http://blackboard.reedleycollege.edu .
Your login and password to blackboard is as follows:
**Login ID:** "your student ID#"
**Password:** "your student ID#"

## Course Materials:
- Scientific Calculator (non-graphing)
- Scantrons (882-E)
- #2 Pencils
- Notebook paper

## Online Homework/Quizzes:
Online homework assignments/quizzes are completed online and the assignments can be found at the Course Compass website.  You may work ahead if you like.  The program is set up so that you must complete all the homework assignments/quizzes with at least a 70% to be able to take the online chapter tests.  Do not expect to take the online chapter tests and then complete the homework.  Each assignment has a due date and the assignment will be unavailable to the student after the due date.  Homework/quizzes will not be accepted late, but the two lowest homework scores will be dropped to allow for any missed assignments/emergencies.  It is important to stay current to be successful in the course!

Note:  When working on homework/quizzes, you do not have to complete an entire assignment during one session.  If you need to stop while in the middle of an assignment, you can submit your work and the program will save it for you.  You can then come back to the assignment and continue from where you left off at another time, as long as it is before the due date of course.

## Written Homework:
There will be written homework assignments for the semester.  These assignments will be collected in class at our scheduled meetings.  All work must be shown in order to receive full credit for these assignments.  No Late assignments are accepted.  Your homework will be graded on completeness, neatness, and effort.  Problems must be written out in pencil and all work must be shown in order to receive credit.  I will not accept HW on spiral bound notebook paper.  Please staple your HW in the top left corner and clearly highlight the section number at the top of each page or it will not be accepted.  If you come to class after the HW has been collected or are absent it will not be accepted. It is your responsibility to keep up with the pace of the class.

## Online Chapter Tests:
There will be several online tests for each chapter.  Your lowest online test score will be dropped. There are no make-ups for missed tests.  No exceptions.  Note:  Once you begin an Online Test you will have 90 minutes to complete it.  After the 90 minutes have expired the test will no longer be available to you.  It is not possible to stop the exam and return to it later!  You will have to complete it in one session.

## Attendance:
Students are expected to attend all scheduled class meetings, and be on time. The doors will be locked at 6pm so be there early. I will not allow you to take the midterm if you are late ad you will get a 0. If you decide to drop the course, it is your responsibility to make the drop official in the Admissions and Records office or else possibly receive an F in the course. Also, there are to be no visitors in class for any reason. Pagers, cell-phones, CD/DVD/MP3 players, and any other electronic device must be turned off, silenced, and out of sight before entering class. You will be asked to leave if your phone rings in class. Leaving class at anytime will not be allowed. Please use the restroom/make phone calls before class or at the designated break times.

## Exams:
There will be several midterm exams each worth 100 points. There are no make-ups for missed exams. No exceptions. Calling the day of the exam and telling me that you can not make it to class is inexcusable. All tests will be taken using pencil.

## Final Exam:
A final exam worth 100 points will be given at the end of the semester during finals week.
- **Final will be on Tuesday, May 18th from 6:00pm-7:50pm**

## Grading:
- Exams and the Final will be worth 80% of your overall grade.
- Homework, Quizzes and Online Tests will be worth 20% of your overall grade.

| Percent | Grade |
|---------|-------|
| 90 - 100 | A |
| 80 – 89 | B |
| 70 – 79 | C |
| 60 – 69 | D |
| 0 – 59 | F |

## Course Outline:
Chapters 1-3: Intro to Statistics, Frequency Distributions and Graphs, Data Description (4 weeks)
Chapters 4 and 5: Probability and Counting Rules (4 weeks)
Chapters 6 and 7: The Normal Distribution and confidence intervals (4 weeks)
Chapter 8-11: Hypothesis Testing, Testing the Difference Between Two Means, Two Variances, and Two Proportions, Correlation and Regression, Chi-Square and Analysis of Variance (5.5 weeks)

## Course Outcomes:
Upon completion of this course, students will be able to:

A.    Summarize given data sets using a variety of graphs.
B.    Apply measures of central tendency (mean, median, and mode) and variability (standard deviation, quartiles, and range) in application problems.
C.    Apply basic rules of probabilities. Identify if an event is independent or dependent and calculate the probability of the event.
D.    Identify whether a discrete or continuous probability distribution is necessary and apply the appropriate formula to calculate probabilities in application problems.

E.      Apply sampling theory to collect a sample from a population by the method of simple random sampling.
F.      Estimate the parameters of a population by using large and small sample procedures for constructing confidence intervals.  Determine the minimum sample size to obtain a desired margin of error.
G.      Apply the $z$, $t$, Chi-squared, and Analysis of Variance test of significance.
H.      Apply correlation and simple linear regression to determine existence of relationships amongst quantitative variables.

## Course Objectives:
In the process of completing this course, students 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.

## Important Dates:
January 11 (M) Spring 2010 instruction begins
January 11 - March 12 (M-F) Spring 2010 short-term classes, first nine weeks
January 18 (M) Martin Luther King, Jr. Day observed (no classes held, campus closed)
January 22 (F) Last day to drop a full-term class for a refund for Spring 2010
January 29 (F) Last day to register for a full-term fall class for Spring 2010
January 29 (F) Last day to drop a fall full-term class to avoid a "W" for Spring 2010
February 12 (F) Lincoln Day (no classes held, campus closed)
February 15 (M) Washington Day observed (no classes held, campus closed)
February 16 (T) Last day to change a spring class to/from a Pass/No-Pass grading basis
March 12 (F) Last day to drop a full-term class (letter grades assigned after this date)
March 15 - May 21 (M-F) Spring 2010 short-term classes, second nine weeks
March 29 - April 2 (M-F) Spring Recess (classes reconvene April 5)
May 17-21 (M-F) Spring 2010 final exams week
May 21 (F) End of spring semester/Commencement

## 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 text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

## Please refer to the RC Catalog for the Plagiarism and Cheating Policy, pg. 51.

**Note:  This syllabus is subject to change at the discretion of the instructor.**