

Math 11: Elementary Statistics, Spring 2010

Instructor: Walid Tayar

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Office Hours: M, T, TH 9:00-9:50am in FEM 1K or by appointment

Math Center Hours: W 9:00-9:50am and 11:00-11:50am

Phone: 559-638-3641 ext. 3263

Schedule #: 56803 in Room CCI 200 on TTH 1:00-2:50pm

Prerequisites:

Math 103. Basic skills advisories: Eligibility for ENGL 125 and ENGL 126

Required text:

Allan G. Bluman. Elementary Statistics, A Step by Step Approach (A Brief Version), 4th Edition. McGraw–Hill, 2008.

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.

Course Materials:

- 4 x 6 note cards
- Calculator (non-graphing)
- Notebook paper
- Graphing paper
- Ruler/pencils
- Stapler (try the dollar store)
- 3-ring binder (for class notes)
- Scantrons

Attendance:

If you are absent more than once in the first two weeks of the semester, more than two times in the first four weeks or more than 3 times in the first nine weeks, you may be dropped from the course. Attendance is a key factor in your success as a college student. Students are expected to attend all class meetings, be on time, and be in class the entire class session. 4 absences over the course of the entire semester may result in a drop from the course. However, 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. Also, cell phones are NOT to be used as calculators.

Tardies:

It is distracting, rude and unfair to classmates and to the instructor when a student is late. Leaving class at anytime during the lecture will not be allowed. Please use the restroom/make phone calls before class or at the designated break times. If you leave class at any time, it will count as a tardy. Two tardies will be counted as an absence. You are responsible for telling me, at the end of class, that you were tardy. If I mark you absent and you do not tell me of your tardy, you will remain absent. If you leave class early, you will be marked absent. Students with chronic tardiness may be dropped from the course.

Homework:

HW 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 for full credit. All late HW must be turned in by the following class meeting for half credit. If you are absent, you are still responsible for any HW assignments. It is your responsibility to keep up with the pace of the class. It is important to stay current to be successful in the course!

In-Class Assignments:

There may be quizzes, in-class assignments and possibly group work assigned throughout the semester. No in class assignments can be made up so attendance is very important. These assignments will be included as part of your HW grade.

Exams:

There will be an exam at the end of each unit, approximately every 2-3 weeks. Each exam will be worth 100 points each. There are no make-ups for missed tests. 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 if it is a written exam.

Final Exam:

A final exam worth 100 points will be given at the end of the semester during finals week.

- **Final will be on Thursday, May 20th from 1:00pm-2:50pm**

Grading:

- Exams and the Final will be worth 80% of your overall grade. At the end of the semester, your lowest exam score will be replaced by the Final
- Homework will be worth 20% of your overall grade.

<u>Percent</u>	<u>Grade</u>
90 - 100	A
80 - 89	B
70 - 79	C
60 - 69	D
0 - 59	F

Course Outline:

Chapters 1-3: The Nature of Probability and Statistics, Frequency Distributions and Graphs, Data Description (2.5 weeks)

Chapter 4: Probability and Counting Rules (2.5 weeks)

Chapter 5: Discrete Probability Distributions (2.5 weeks)

Chapter 6: The Normal Distribution (2.5 weeks)

Chapter 7: Confidence Intervals and Sample Size (2.5 weeks)

Chapter 8: Hypothesis Testing (2.5 weeks)

Chapters 9-11: Testing the Difference Between Two Means, Two Variances, and Two Proportions, Correlation and Regression, Chi-Square and Analysis of Variance (2.5 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:

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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.