

East Los Angeles College
Department of Mathematics
Math 227: Elementary Statistics (4 Units)
Winter 2013 – Syllabus

Instructor: Gabriel Castro

Section: 8166

Class Time: Monday – Thursday, 9:25am – 1:30pm

Classroom: South Gate – 106

Office Hours: Monday – Thursday, 1:45 – 4:30pm or by appointment

Office: The MathLab at South Gate

Email: gcastromath@yahoo.com

Office Phone Number: (323) 267-3765

Website: www.gcastromath.com

Statistical Software: MINITAB 14 (All the computers in the MathLab are equipped with it)

Text: A text book is not required; however, a text book is a good reference to have. Use any of the following. Elementary Statistics, 10th edition or ELAC Custom Edition, by Mario F. Triola or any other edition.

Calculators: Any TI (Texas Instrument) 83 is REQUIRED

Course Goal: The purpose of this course is to learn the basic ideas of Statistics. These ideas consist of normal distribution, probability, hypothesis testing and regression. This course will help you better understand everyday statistics that you may encounter.

Grading:

Homework(4).....	8%	A = 90% – 100%
Computer Projects(4).....	8%	B = 80% – 89%
Unit Exams (4).....	40%	C = 70% – 79%
MINITAB Final.....	20%	D = 60% – 69%
Written Final.....	24%	F = 0% – 59%

Attendance:

Attendance is the student's responsibility. Students are expected to be present at every class meeting. Failure to attend class will result in missing valuable information. All students are solely responsible for all information missed as a result of an absence. It is the student's responsibility to find out what they missed from their classmates.

If a student is absent more than 1 day of class, the student will be dropped from the class.

One day is the equivalent of 4 hours.

Tardies:

Three tardies will be considered the equivalent of 1 hour of absence.

A tardy is defined as coming in to class after the class officially begins.

Withdrawals:

It is the student's responsibility to check the East Los Angeles College Winter 2013 Schedule of Classes for important drop dates and other valuable information. Since this a 5 week course, I have the following withdrawal policies.

- i. Exam #1 less than 65%, the student will be asked to drop the class.
- ii. Exam #1 less than 65% and Exam #2 less than 60%, the student will be dropped from the class.

MINITAB:

Minitab is statistical analysis software. It can be used for learning about statistics as well as statistical research. Statistical analysis computer applications have the advantage of being accurate, reliable, and generally faster than computing statistics and drawing graphs by hand. *Minitab* is relatively easy to use once you know a few fundamentals.

If you need assistance with MINITAB, your best resource will be the help option on MINITAB. Students are always welcome to ask me questions. If I am not available, use Google and find some resources online

Homework:

There are 4 homework assignments, one for each Unit Exam. Homework is posted on my website and can be downloaded/printed at any time.

The written portion of the homework is a previous semester Unit Exam and it gives the student preparation for their Unit Exam. Homework is due the day of each Unit Exam. The manner in which the homework must be completed and turned in is as follows:

- i. Ordered properly
- ii. Legible
- iii. If a pencil is used, then all apparent mistakes must be erased. Not scribbled over.
- iv. If a pen is used, then all apparent mistakes must be covered with white-out. Not scribbled over.
- v. Completed to the best of the student's ability.
- vi. All exercises must be attempted.
- vii. When turned in, the sheets of paper must be stapled.

If a Homework Assignment is not submitted in this manner, the student will receive a grade of zero for the assignment.

If a student does not submit a Homework Assignment or receives a zero, they will be deducted 10% from their Unit Exam.

Only selected problems will be graded.

Late Homework will not be accepted and no extensions will be given. No exceptions.

Projects/Lab:

Students are required to MINITAB 14. This will be worth a percentage of the student's grade.

MINITAB Projects are similar to homework, but must be done using MINITAB 14. MINITAB Projects must be completed as follows:

- i. Copy and paste all questions or type them.
- ii. Copy the output from MINITAB and paste onto a word document.
- iii. Type in all relevant information to answer all questions.
- iv. Format all responses in sequential order.
- v. When turned in, it must be stapled.

If these projects are not completed and turned in, in this manner, it will not be graded and the student will receive a grade of zero for the assignment.

These Projects are due the day before the Unit Exam. If not turned in, the student will not be able to take the Unit Exam. Late Projects will not be accepted and no extensions will be given.

No exceptions.

Quizzes:

Quizzes will be given on a daily basis, except the day of an exam. They will either be given at the beginning of every class meeting or at the end of every class meeting. The points will be given as extra credit. The quizzes must be completed as follows:

- i. Ordered properly
- ii. Legible
- iii. If a pencil is used, then all apparent mistakes must be erased. Not scribbled over.
- iv. If a pen is used, then all apparent mistakes must be covered with white-out. Not scribbled over.

If a quiz is not completed and turned in, in this manner, it will not be graded and the student will receive a grade of zero for the quiz. No make up Quizzes. No Exceptions.

Unit Exams:

There will be 4 Unit Exams.

Unit Exam #1: Ch. 1 – 3 Tuesday, January 8, 2013

Unit Exam #2: Ch. 4 – 6 Tuesday, January 15, 2013

Unit Exam #3: Ch. 7 – 9 Wednesday, January 23, 2013

Unit Exam #4: Ch. 10 – 12 Tuesday, January 29, 2013

MINITAB Computer Exam: Comprehensive Final using computer software. Wednesday, January 30, 2013

Written Final: Written Comprehensive Final. Thursday, January 31, 2013

There are no make-up exams, no exceptions.

All exams must be completed as follows:

- i. Clear
- ii. Legible
- iii. If a pencil is used, then all apparent mistakes must be erased not scribbled over.
- iv. If a pen is used, then all apparent mistakes must be covered with white-out not scribbled over.

If an Exam is not completed and turned in, in this manner, the student will receive a grade of zero on the unit exam.

Extra Credit:

I do give extra credit throughout the winter session; however, do not worry about extra credit. Each student should worry about all the points that are available for the entire winter session.

***Note: If any student mentions anything about extra credit, there will not be any extra credit given for the entire semester.**

Board Rule 9803.12 Dishonesty - East Los Angeles College - Policy On Academic Honesty

Refer to the East Los Angeles General Catalog 2011 – 2013 page 28.

Electronic Device Class Policy:

An electronic device such as a cell phone, PDA, MP3 player (earphones included), Bluetooth device, computer and recording device may not be out and may not be used while the class is in session. Students must put all such devices away while the class is in session. If a student is caught with an electronic device in class, the student will be asked to leave for the remaining of the class meeting. Furthermore, being caught with an electronic device will result in losing the right to take their upcoming exam.

Definition of caught with an electronic device in class:

If I see it the electronic device, if I hear the electronic device (that includes a phone ringing, beeping, vibrating, etc), if I see anyone texting or if I see any one checking their electronic device while the class is in session. This also means that the student will close all book bags, purses, etc and set them next to them on the floor or under their chair. The student will not be allowed to place their bag on top of their desk or on their lap while the class is in session. I suggest that each student turn off their phone put it away.

Course Outline:

Unit #1

Chapter 1. Introduction to Statistics

- ✓ Types of Data
- ✓ Critical Thinking
- ✓ Design of Experiments

Chapter 2. Summarizing and Graphing Data

- ✓ Frequency Distributions
- ✓ Histograms
- ✓ Statistical Graphics

Chapter 3. Statistics for Describing, Exploring, and Comparing Data

- ✓ Measures of Center
- ✓ Measures of Variation
- ✓ Measures of Relative Standing
- ✓ Exploratory Data Analysis (EDA)

Unit #2

Chapter 4. Probability

- ✓ Fundamentals
- ✓ Addition Rule
- ✓ Multiplication Rule: Basics
- ✓ Multiplication Rule: Complements and Conditional Probability
- ✓ Counting
- ✓ Bayes' Theorem

Chapter 5. Probability Distributions

- ✓ Random Variables
- ✓ Binomial Probability Distributions
- ✓ Mean, Variance, and Standard Deviation for the Binomial Distribution
- ✓ The Poisson Distribution

Chapter 6. Normal Probability Distributions

- ✓ The Standard Normal Distribution
- ✓ Applications of Normal Distributions
- ✓ Sampling Distributions and Estimators
- ✓ The Central Limit Theorem
- ✓ Normal as Approximation to Binomial
- ✓ Assessing Normality

Unit #3

Chapter 7. Estimates and Sample Sizes

- ✓ Estimating a Population Proportion
- ✓ Estimating a Population Mean: σ Known
- ✓ Estimating a Population Mean: σ Not Known
- ✓ Estimating a Population Variance

Chapter 8. Hypothesis Testing

- ✓ Basics of Hypothesis Testing
- ✓ Testing a Claim about a Proportion
- ✓ Testing a Claim about a Mean: σ Known
- ✓ Testing a Claim about a Mean: σ Not Known
- ✓ Testing a Claim about Variation

Chapter 9. Inferences from Two Samples

- ✓ Inferences about Two Proportions
- ✓ Inferences about Two Means: Independent Samples
- ✓ Inferences from Matched Pairs
- ✓ Comparing Variation in Two Samples

Unit #4

Chapter 10. Correlation and Regression

- ✓ Correlation
- ✓ Regression
- ✓ Variation and Prediction Intervals

Chapter 11. Multinomial Experiments and Contingency Tables

- ✓ Multinomial Experiments: Goodness-of-Fit
- ✓ Contingency Tables: Independence and Homogeneity

Chapter 12. Analysis of Variance

- ✓ One-Way ANOVA

***Note:** Syllabus subject to change at the discretion of the instructor.

Wednesday, Jan. 02	Day & Evening Classes Begin
Weds –Friday, Jan. 02 – Jan. 04	Late Registration –open enrollment for open classes (based on instructor add permit)
Friday, Jan. 04	*ADD DEADLINE-Last Day to Add or Audit Classes(Admissions will close at 4pm on this day)
Friday, Jan. 04	*DROP DEADLINE #1-Last Day to Drop Classes Without Having to Pay Fees. Last Day to Drop Without Class Appearing on Transcript
Friday, Jan. 04	Last Day to return parking permits
Friday, Jan. 04	Last Day to file for Pass/No Pass
Friday, Jan. 11	Last Day for Section Transfers
Monday, Jan. 21	Holiday – College Closed (Martin Luther King Day)
Friday, Jan. 25	*DROP DEADLINE #2-Last Day to Drop Classes with a "W" (75% of term)
Wednesday, Jan. 30	Last Day of Class Instruction
Thursday, Jan. 31	Final Examinations
Friday, Feb. 01	Winter 2013 Session Ends
Thursday, Feb. 07	Refund checks mailed