

East Los Angeles College
Department of Mathematics
Math 227 Elementary Statistics MAP (4 Units)
Fall 2014 – Syllabus

Instructor Information:

Instructor: Gabriel Castro

Office: The Math Lab K5 – 104

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Instructor's Website: www.gcastromath.com

Office Hours: Monday – 2:00 – 3:30, Tuesday/Thursday – 12:30 – 2:00pm
Times subject to change due to meetings.

If you would like to make an appointment, please e-mail me.

Course Information:

Section: 1856

Classroom: K7 – 109

Class Time: Monday – Thursday, 9:35am – 11:45am

Class Dates: Monday, October 27, 2014 – Friday, December 19, 2014

Prerequisite:

Satisfactory completion of Mathematics 125 or acceptable level of skill as demonstrated in the mathematics placement process.

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.

Course Materials:

Required Online Component: Math XL

My Math Lab Course ID: [XL1L-E1DQ-1020-35F2](#)

NOTE: Students will be dropped if MathXL is not purchased/registered by 10/29/2014

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.

Calculator: A graphing calculator is required. Specifically a TI-83 or TI-84
TI refers to Texas Instrument.

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

Grading:

Computer Project (4):	4%	A = 90% — 100%
Take Home Exams (4):	4%	B = 80% — 90%
Homework:	10%	C = 70% — 80%
Quizzes:	10%	D = 60% — 70%
Unit Exams (4):	40%	F = 0% — 60%
MINITAB Final Exam:	10%	
<u>Written Comp. Final Exam:</u>	<u>22%</u>	

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 at least 2 days of class, they will be dropped from the class.

Projects/Lab:

Students are required to use MINITAB 14 or any later version. This will be worth a percentage of the student's grade. MINITAB Projects are similar to homework, but must be done using MINITAB. 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.
- vi. **All exercises must be attempted.**

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 class meeting 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.

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

Take-Home Exams:

Take-Home Exams are posted on Math XL. Students must print them out and perform all relevant work on them. Take-Home Exams are due the day of the unit exam. Take-Home Exams 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.
- v. **All exercises must be attempted.**
- vi. When turned in, all sheets of paper must be stapled.

If a Take-Home Exam is not submitted in this manner, the student will receive a grade of zero for the assignment.

Only selected problems will be graded.

Late Take-Home Exams will not be accepted and no extensions will be given. No exceptions.

Homework:

Homework assignments are posted on Math XL and are all on-line.

There is a "soft due date" for each homework assignment. This means a student can work on the assignment after the due date, but 10% will be deducted from the final score per day.

After the "soft due date", the student will have 2 days to complete and submit the assignment.

The only assignments that does not have a "soft due date" will be the homework assignments for Chapter 11 and 12.

Quizzes:

There will be 2 types of quizzes, 1. Online and 2. Take-Home.

1. The online quizzes will be completed on Math XL and are due by 11:59pm of the night that they are assigned. They are timed and students have 30 minutes to complete the quiz. Students will have 2 attempts to complete each quiz and the higher score will be recorded.
2. The Take-Home quizzes are intended to encourage students to attend class regularly, take good notes and use them as a study guide. Students are required to purchase a Math 227 study guide from the bookstore. These will be the take home quizzes.

They must be completed as follows:

- i. Legible
- ii. If a pencil is used, then all apparent mistakes must be erased not scribbled over.
- iii. If a pen is used, then all apparent mistakes must be covered with white-out not scribbled over.
- iv. **All exercises must be attempted.**
- v. When turned in, if there are multiple sheets of paper they must be stapled in their correct order.

If a Take-Home Quiz is not submitted in this manner, the student will receive a grade of zero for the assignment.

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

Unit Exams:

Unit Exams must be completed as follows:

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

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

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

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

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

Final Exam Date & Time:

MINITAB Final:

Tuesday, December 16, 2014

9:30am – 11:30am

Witten Comprehensive Final:

Thursday, December 18, 2014

Student Learning Outcome (SLO):

Given the mean and standard deviation of a normally distributed population, students will determine the continuous probability of a specific value. Students will also represent the probability using a density curve.

Extra Credit:

Extra Credit will be given. The instructor will discuss this in class.

Student Information

Refer to the East Los Angeles College General Catalog 2013 – 2015, Pages 25 – 40.

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

Refer to the East Los Angeles General Catalog 2013 – 2015 page 25.

Student Services

Refer to the East Los Angeles College General Catalog 2013 – 2015, Pages 41 – 49.

Disabled Student Program and Services (DSPS) - East Los Angeles College

Refer to the East Los Angeles General Catalog 2013 – 2015 pages 43 - 44.

Scholastic Policies

Refer to the East Los Angeles College General Catalog 2013 – 2015, Pages 50 – 67.

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 a deduction of 25% on the upcoming unit exam. In order to not be deducted 25% on the unit exam, the student must submit an extra assignment that will be determined by the instructor.

Definition of caught with an electronic device in class:

If I see it the electronic device, if I hear the electronic devise (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.

ELAC Fall 2014 Calendar

Monday, September 01	HOLIDAY - College Closed (Labor Day)
Tuesday, September 02	Day & Evening Classes Begin
September 02 - Sept. 12	Late Registration Period - Add Permit by Instructor Permission Only
Friday, September 12	*ADD DEADLINE-Last Day to Submit Add or Audit Permits in person for Full-Term Classes <i>(Date for short term classes is approximately 20% of term, please verify with Admissions Office or instructor)</i>
Sunday, September 14	*DROP DEADLINE #1- Last Day to Drop Classes Online Without Having to Pay Fees Last Day to Drop Classes Online Without "W" <i>(Date for short term classes vary, please verify with Admissions Office or instructor)</i>
Sept. 09 - Dec. 19	Graduation Petition Period
Friday, September 26	Last Day to Return Parking Permits
Friday, October 10	Last Day to File for Pass/No Pass <i>(Date for short term classes vary, please verify with Admissions Office or instructor)</i>
Monday, November 3	Check Refunds Mailed (for students who paid with check)
Friday, November 07	Last Day for Section Transfers
Tuesday, November 11	HOLIDAY - College Closed (Veterans Day)
Sunday, November 23	*DROP DEADLINE #2 - Last Day to Drop Classes Online with a "W" <i>(Date for short term classes vary, please verify with Admissions Office or instructor)</i>
Thursday - Sunday, November 27 - Nov. 30	HOLIDAY - College Closed (Thanksgiving)
Sunday, December 14	Last Day of Full Term Class Instruction
December 15 - Dec. 21	Final Examinations
Sunday, December 21	Fall 2014 Semester Ends

MAP important Dates:

- Census Date: 11/4/14
- No Penalty Drop Date: 11/3/14
- Last Day to Drop: 11/4/14

Math 227 Calendar

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	10/27/14	10/28/14	10/29/14	10/30/14	10/31/14
	Ch. 1 Ch.2	Ch. 2	Ch. 2 Ch. 3	Ch. 3	
2	11/3/14	11/4/14	11/5/14	11/6/14	11/7/14
	Ch. 3 Ch. 4	Ch. 4	Ch. 4	Unit Exam #1 Ch. 4	
3	11/10/14	11/11/14	11/12/14	11/13/14	11/14/14
	Ch. 5	HOLIDAY	Ch. 5 Ch. 6	Ch. 6	
4	11/17/14	11/18/14	11/19/14	11/20/14	11/21/14
	Ch. 6	Ch. 7	Ch. 7	Unit Exam #2 Ch. 7	
5	11/24/14	11/25/14	11/26/14	11/27/14	11/28/14
	Ch. 8	Ch. 8	Ch. 8 Ch. 9	HOLIDAY	HOLIDAY
6	12/1/14	12/2/14	12/3/14	12/4/14	12/5/14
	Ch. 9	Ch. 10	Ch. 10	Unit Exam #3 Ch. 10	
7	12/8/14	12/9/14	12/10/14	12/11/14	12/12/14
	Ch. 11	Ch. 11 Ch. 12	Ch. 12	Unit Exam #4	
8	12/15/14	12/16/14	12/17/14	12/18/14	12/19/14
		MINITab Final		Written Final	

➤ Note: Syllabus subject to change at the instructor's discretion.