Math 119 Elementary Statistics Imperial Valley College Spring 2014

Class Number: *20149*   (4 credit units)
Room: 2728
MW 3:15-5:20pm

<u>Instructor:</u>   Rick Castrapel
<u>Phone:</u>   (760) 355-6505
<u>Office:</u>   Room 2773
<u>Office Hours:</u>   MW 5:30-6:30pm, TR 2:00-3:00pm
                  or by appointment
<u>Email:</u>   rick.castrapel@imperial.edu
<u>Web Page:</u>   http://www.imperial.edu/rick.castrapel
<u>Textbook:</u>   Essentials of Statistics, 4th Edition, Triola
                  ISBN-13: 9780321641496, Math XL
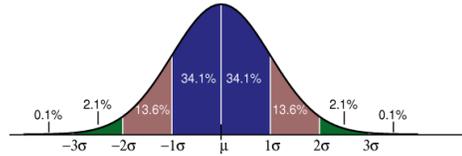
<u>Description:</u>   Graphical representation of statistical data, calculations, and uses of various averages, measures of variability, introduction to probability, probability distributions, confidence intervals, sample size determination and hypothesis testing, ANOVA, linear regression and Chi-square analysis.

<u>Prerequisites:</u>   MATH 91 or equivalent college course with "C" or better, or eligibility determined by placement.

<u>Calculator:</u>   A scientific calculator capable of statistical calculations, such as the TI30X-IIS is required. **A TI 83/84 is highly recommended** and will be used for classroom demonstrations. You may not share calculators during tests.

<u>Cell Phones:</u>   Keep cell phones turned off during class. You may not use a cell phone as a calculator during tests.

<u>Blackboard:</u>   http://www.imperial.blackboard.com Please use the first part of your IVC Email Address in the username field. For the password field, please use your WebSTAR/Student Portal PIN.

<u>Keys to Success:</u>   1. Attitude, Attitude, Attitude   2. Attend Class Regularly
                      3. Do Your Homework   4. Study

<u>Keeping Up:</u>   Don't let yourself fall behind. If you feel you are slipping, **SEE ME**. This is <u>urgent</u>. It is my goal and that of the Imperial Valley College Math Dept. that you succeed. Sign up for free tutorial service offered by the **Math Lab room 2500.**

<u>Homework:</u>   In mathematics, homework is crucial. Homework is assigned through **MathXL** and done online. See the attached flier. Please ask questions about the homework in class.

<u>Labs:</u>   There will be 4 lab sessions that you will do in the Math Lab room 2500 on your own time. These are <u>not</u> optional. They are part of the course. Skipping labs will directly affect your grade.

<u>Project:</u>   There will be a team video project to present a hypothesis test and conclusion. If nobody on your team has a cell phone capable of recording video, let me know and I will find you equipment.

<u>Dropping:</u>   You may be dropped from this class if you miss the first day or if you miss three or more class sessions total. The last day to drop this class is Apr 11. After that date, I must give you a letter grade. It is your responsibility to drop, not mine.

<u>DSP&S:</u>   Any student with a documented disability who may need educational accommodations should notify the Disabled Student Programs and Services (DSP&S) office as soon as possible. Room 2117 Health Sciences Building (760) 355-6312.

<u>Grading:</u>   There will be 5 midterm tests, worth 100 points each. The lowest score of the midterm tests will be dropped. There will be a comprehensive final exam worth 200 points. Your homework is worth 100 points. Labs are 200 points total. A team project worth 100 points will be assigned. **No early or make-up tests will be given.**

Grading Policy

Midterm Tests	400 points
MathXL Homework	100 points
Project	100 points
Labs	200 points
Final Exam	200 points
Total	**1000 points**

Grading Scale

90-100 %	A
80-89%	B
70-79 %	C
60-69 %	D
< 60 %	F

Academic Integrity is assumed and necessary. Disruptive students will be required to leave the class for the day. Continued disruptive behavior, cheating or plagiarism may result in severe academic penalty. See the college bulletin.

Math 119 Student Learning Outcomes and Course Objectives

STUDENT LEARNING OUTCOMES: Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:
- Identify, compare, and contrast two articles that include both descriptive and inferential statistics on the same research topic. (ILO2, ILO4)
- Apply their knowledge of statistical inference to conduct formal significance tests concerning single populations. (ILO2)
- Demonstrate their knowledge of basic descriptive statistics. (ILO2, ILO4)
- Apply techniques of linear modeling to explore the relationship between two numerical variables. (ILO2)

MEASURABLE COURSE OBJECTIVES AND MINIMUM STANDARDS FOR GRADE OF "C":
Upon satisfactory completion of the course, students will be able to:
 1. Distinguish the various ways of organizing, displaying, and measuring data.
 2. Derive the numerical relationship that exists between bivariate data sets.
 3. Demonstrate an understanding of the theory of probability and proficiency in solving problems of this nature.
 4. Compute and interpret expected values and variance, and learn about the binomial distribution for discrete random variables.
 5. Compute and interpret expected values and variance, and learn about the normal distribution or continuous random variables.
 6. Examine the joint probability structure of two or more random variables and understand the limiting behavior of the sum of independent random variables as the number of the sample becomes larger.
 7. Use the various types of distributions that are derived from the normal distribution.
 8. Calculate and interpret confidence intervals for a population mean to show how probability connects to this type of statistical inference.
 9. Use hypothesis testing as a formal means of distinguishing between probability distributions on the basis of random variables generated from one of the distributions.
 10. Compare the means of the data from experiments involving more than two samples, including the single factor analysis of variance (ANOVA).
 11. Fit a straight line to the given data in graphical form.
 12. Make use of Chi-square distributions to analyze counts.

Math 119 Spring 2014 Tentative Schedule

Date	Text	Event	Notes
01/22/14	1-2,1-3,1-4,1-5		Introduction to Statistics
01/27/14	2-2, 2-3,2-4,2-5		Summarizing and Graphing Data
01/29/14	3-2, 3-3, 3-4		Statistics for Describing Data
02/03/14		**Lab Preview**	Measures
02/05/14		**Test 1**	**Chapters 1, 2 and 3**
02/10/14	4-1, 4-2	**Craps**	Probability
02/12/14	4-3, 4-4		Addition Rule, Basic Multiplication Rule, Examples: Craps
02/17/14		**Holiday**	**Presidents Day**
02/19/14	4-5,4-6,5-2		Mult. Rule, Counting, Random Variables
02/24/14		**Lab Preview**	Discrete Probability Distributions
02/26/14	5-3, 5-4	**Keno**	Binomial Distribution, Poisson Distribution
03/03/14		**Test 2**	**Chapters 4 and 5**
03/05/14	6-2, 6-3		Introduction to Normal Distribution
03/10/14	6-5, 6-6		Normal Distribution
03/12/14		**Lab Preview**	Normal Distribution
03/17/14	7-1, 7-2, 7-3		Estimates of proportions, means with σ known
03/19/14	7-3, 7-4		Estimates of means with σ unknown, variances
03/24/14		**Test 3**	**Chapters 6 and 7**
03/26/14	8-1, 8-2		Basics of Hypothesis Testing
03/31/14	8-3, 8-4		Hypothesis Testing of proportions, means with σ known
04/02/14		**Lab Preview**	Hypothesis Testing
04/07/14	8-5, 8-6	**Projects Assigned**	Hypothesis Testing of means with σ unknown, variances
04/09/14		**Test 4**	**Chapter 8**
04/14/14	9-1, 9-2		Inferences about two proportions
04/16/14	9-3,9-4		Inferences about two means, indep. and dep.
04/21/14			**Spring Break**
04/23/14			
04/28/14	10-1, 10-2, 10-3		Linear Correlation and Regression
04/30/14	10-3		Regression
05/05/14	11-3,11-4(12-2)		Contingency Tables, ANOVA
05/07/14		**Test 5**	**Chapters 9, 10-2, 10-3, 11-3, 11-4 (12-2)**
05/12/14			**Project Reports** **Review**
05/14/14	**Final Exam**		**Comprehensive Final**
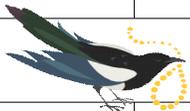
MathXL®

How to Register and Enroll in Your Course

Welcome to MathXL! Your instructor has set up a MathXL course for you.

> The course name is: Math 119 Statistics 20149 MW 3:15-5:20pm

> It is based on this textbook: *Triola: Essentials of Statistics, 4e*

To join this course, you need to register for MathXL and then enroll in the course.

1. Registering for MathXL

Before you begin, make sure you have the access code that comes with your MathXL Access Kit.

To register or buy access, go to www.mathxl.com, click the **Student** button in the Register section, and then follow the instructions on the screen.

2. Enrolling in your instructor's course

After registering, log in to MathXL with your username and password. To enroll in this course, enter the following Course ID:

The Course ID for your course is: XL1F-H1KX-901Y-1WT2

Need more help?

To view a complete set of instructions on registering and enrolling, go to www.mathxl.com and visit the Tours page.