

Basic Course Information

Semester	Fall 2014	Instructor's Name	David Rosas
Course Title & #	Math 119	Instructor's Email	David.rosas@imperial.edu
CRN #	10430	Webpage (optional)	None
Room	2723	Office (PT Faculty:809)	809
Class Dates	08/20 to 12/10	Office Hours (n/a for PT Faculty)	NA
Class Days	Wednesday	Office Phone # (PT may use dept. number)	NA
Class Times	5:30-9:45	Who students should contact if emergency or other absence	E-mail me or call Ofelia Medina 760-355-6155 (Math Department Secretary)
Units			

Course Description

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.

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Determine and interpret a confidence interval for a population mean. (ILO2, ILO4)
2. Apply statistical inference to conduct formal significance tests concerning single populations. (ILO2)
3. Demonstrate the ability to use technology in computing and interpreting basic descriptive or inferential statistics. (ILO2, ILO4)
4. Apply techniques of linear modeling to explore the relationship between two numerical variables. (ILO2)

Course Objectives

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.

Textbooks & Other Resources or Links

1. Triola, Mario (2013). Elementary Statistics (Second California Edition). Pearson. ISBN10: 1-256-93644-8. ISBN 13: 1-256-93644-2
2. MathXL

Course Requirements and Instructional Methods

1. **Calculators and software:** A calculator will be required for many of the calculations in this class. I will require a TI-83 Graphing Calculator. You can rent it at the Math Lab for \$10 (Pay at the cashier and bring your receipt to the math lab). Go as soon as possible since there is a limited amount of calculators.
2. MathXL: You will be required to enter do your homework on MathXL before the deadline. Register on MathXL immediately.

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

It is based on this textbook: *Triola: Elementary Statistics, Second California Edition*

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

a. 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.

b. 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: XL1M-51D0-7020-4DI2

Need more help?

To view a complete set of instructions on registering and enrolling, go to www.mathxl.com and visit the Tours page. If you need extra help, visit the **Math Lab at IVC**. They are more than happy to help you with the registration process.

Course Grading Based on Course Objectives

Exams: There will be three exams during the semester and a final exam on the last day.

Test 1: Chapters 1-3 (20% of your grade)

Test 2: Chapters 6, 8 and 9 (20% of your grade)

Test 3: Chapters 7, 10, and 11 (20% of your grade)

Final Exam: Chapters 1-11 Mostly Chapters 7-11 and 4 (20% of your grade)

Homework: There will be an assignment on every chapter. (10% of your grade) **NO LATE HOMEWORKS WILL BE ACCEPTED.**

If you are absent, you will receive a zero on in-class assignments given towards the end of the hour (QUIZZES). **MAKE SURE YOUR NAME IS LEGIBLE ON THE QUIZ TO GET CREDIT.**

Projects: There will be one group project toward the end of the semester. Due on November 19 (10% of your grade).

Attendance

Required language

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add

a class. It is the student's responsibility to drop or officially withdraw from the class. See General Catalog for details.

- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.
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Classroom Etiquette

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class unless otherwise directed by the instructor.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the General Catalog.
- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

Academic Honesty

- Plagiarism is to take and present as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to correctly 'cite a source', you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment or using or attempting to use materials, or assisting others in using materials, or assisting others in using materials, which are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the General School Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to the following:

- (a) plagiarism
- (b) copying or attempting to copy from others during an examination or on an assignment
- (c) communicating test information with another person during an examination
- (d) allowing others to do an assignment or portion of an assignment
- (e) use of a commercial term paper service

Additional Help – Discretionary Section and Language

- Blackboard support center: <http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543>
- Learning Labs: There are several 'labs' on campus to assist you through the use of computers, tutors, or a combination. Please consult your college map for the **Math Lab**, Reading & Writing Lab, and Learning Services (library). Please speak to the instructor about labs unique to your specific program
- Library Services: There is more to our library than just books. **You have access to tutors in the learning center, study rooms for small groups, and online access to a wealth of resources.**
- Forming Study Groups: You are encouraged to form study groups. It is the best way to master the material.

Disabled Student Programs and Services (DSPS)

Required Language: Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. If you feel you need to be evaluated for educational accommodations, the DSP&S office is located in Building 2100, telephone 760-355-6313.

Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee. We now also have a fulltime mental health counselor. For information see <http://www.imperial.edu/students/student-health-center/>. The IVC Student Health Center is located in the Health Science building in Room 2109, telephone 760-355-6310.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762

Information Literacy

Imperial Valley College is dedicated to help students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at <http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/>

Anticipated Class Schedule / Calendar

Date or Week	Section	Topic
Week 1 August 20	First Day of School 1.2 Statistical and Critical Thinking 1.3 Types of Data 1.4 Collecting Sample Data and Experimental Design	Chapter 1 Quiz: Design an Experiment (30 Points)
Week 2 August 27	2.2 Frequency Distributions 2.3 Histograms 2.4 Statistical Graphics 2.5 Graphs that Enlighten Graphs that Deceive	Chapter 2
Week 3 September 3	3.2 Measures of Center 3.3 Measures of Variation 3.4 Measures of Relative Standing and Boxplots	Chapter 3 Quiz: Construct Box Plot (30 Points)
Week 4 September 10	Chapters 1-3 Test 6.2 The Standard Normal Distribution	Test
Week 5 September 17	6.3 Applications of the Standard Normal Distribution 6.4 Sampling Distributions of the Mean 6.5 The Central Limit Theorem 6.6 Assessing Normality	Quiz: Applications of the Standard Normal Distribution (30 Points) Quiz: The Central Limit Theorem (30 Points)
Week 6 September 24	8.2 Basics of Hypothesis Testing 8.3 Testing a Claim About a Proportion 8.4 Testing a Claim About a Mean: s Known	Quiz: 8.3 (30 Points) Quiz: 8.4 s known (30 Points)
Week 7 October 1	8.4 Testing a Claim About a Mean: s Not Known 8.5 Testing a Claim About Variation 9.2 Inferences About Two Proportions	Quiz: 8.4 s unknown (30 Points) Quiz: 9.2 (30 Points)
Week 8	9.3 Inferences About Two Means: Independent Samples	Quiz: 9.3 (30 Points)

October 8	9.4 Inferences from Dependent Samples	Quiz: 9.4 (30 Points)
Week 9 October 15	9.5 Two Variances or Standard Deviations Chapters 6, 8, and 9 Test Assign Project Assign Project	Test
Week 10 October 22	11.2 Goodness of Fit 11.3 Contingency Tables	Quiz: 11.2 (30 Points) Quiz: 11.3 (30 Points)
Week 11 October 29	12.2 Analysis of Variance 7.2 Estimating a Population Proportion 7.3 Estimating a Population Mean: s Known 7.3 Estimating a Population Mean: s Not Known 7.4 Estimating a Population Standard Deviation	Quiz: 7.2 (30 Points) Quiz: 7.3 s unknown (30 Points)
Week 12 November 5	10.2 Correlation 10.3 Regression	Quiz: 10.2 (30 Points) Quiz: 10.3 (30 Points)
Week 13 November 12	Chapters 7, 10 and 11 Test	Test
Week 14 November 19	4.2 Basic Concepts of Probability 4.3 The Addition Rule 4.4 The Multiplication Rule 4.5 The Multiplication Rule: Complements and Conditional Probability	Group Project Due Quiz: 4.2-4.3 (30 Points) Quiz: 4.4-4.5 (30 Points)
Thanksgiving Break	Grade Projects Thanksgiving Break	
Week 15 December 3	5.2 Probability Distributions 5.3 Binomial Probability Distributions	
Week 16 November 10	Final Exam	Final Exam