



## Basic Course Information

Semester:	<b>Summer 2023</b>	Instructor Name:	<b>Jill Nelipovich</b>
Course # and Title:	<b>Math 119 - Elementary Statistics</b>	Email:	<b>jill.nelipovich@imperial.edu</b>
CRN #:	<b>30057</b>	Webpage (optional):	<b>Canvas</b>
Classroom:	<b>2721</b>	Office #:	<b>2768</b>
Class Dates:	<b>6/20/23 – 7/27/23</b>	Office Hours:	<b>By Appointment</b>
Class Days:	<b>M-TH</b>	Office Phone #:	<b>760-355-6297</b>
Class Times:	<b>12:30 – 3:35 p.m.</b>	Emergency Contact:	<b>760-355-6201</b>
Units:	<b>4</b>	Class Format:	

## 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. Students will learn to use technology to find confidence intervals, test statistics, regression lines, and to produce graphics. This course also provides supervised practice in the appropriate use of technology designed to assist students in calculations required in beginning statistics. (CSU, UC)

## Course Prerequisite(s) and/or Corequisite(s)

MATH 091 MATH 098 with a grade of C or better or appropriate placement

## Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to: Demonstrate problem-solving strategies by identifying an appropriate method to solve a given problem, correctly set up the problem, perform the appropriate analysis and computation, and share their interpretation of the conclusion or the outcome, using correct grammar or in an oral presentation. This outcome will be assessed through selected exercises on exams throughout the semester. (ILO1, ILO2)

## Textbooks & Other Resources or Links

Author(s): Triola, Mario. Elementary Statistics Using Excel 7th Edition Textbook ISBN-13: 9780136937432



## 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

## Course Requirements and Instructional Methods

**Projects:** There will be projects assigned throughout the semester. The projects are designed to help you think more deeply about solving math problems. You are expected to work as a group. Turn in ONE PAPER PER GROUP

**Assignments:** The opportunity to share your knowledge of your homework will be provided on quizzes. You may use your homework. If you do not do your homework or your homework is not organized and neat, you may or may not have time to complete the problem.

**Homework:** Homework is not part of your direct grade calculations. Homework should be done with the intellect of you and your classmates. It should not include any other online learning platform (unless you are verifying your work). Photomath, Chegg, and all your other platforms are not available to you on exams. They will not be available to you while you are designing the airplanes or are operating on someone. Treat college as though you are in the work force. You are the solution. You must develop the resources to problem solve. Use this time wisely! There will be new problems and/or situations every day that you need to solve with your colleagues. Start the productive struggle now!

**Exams:** There are two exams in the semester where you are given the opportunity to share your knowledge and what you have learned. The exams must be done in person.

**Final Exam:** The final exam is cumulative, with emphasis on the later chapters.

## Course Grading Based on Course Objectives

Projects.....5%

Quizzes.....10%

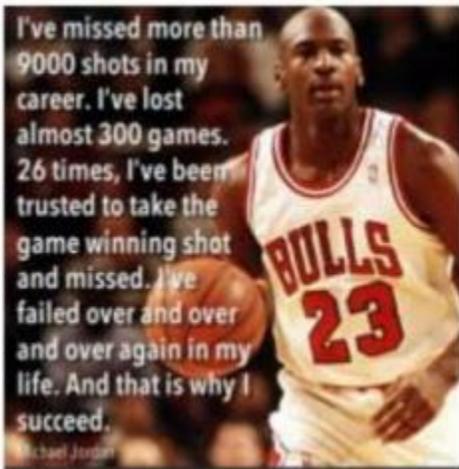
Exams.....60% (3 exams = 15 % each exam)

Final Exam.....25%

A:  $90 \leq x$ ; B:  $80 \leq x < 90$ ; C:  $70 \leq x < 80$ ; D:  $60 \leq x < 70$ ; F:  $x < 60$

## Course Policies

*Be good humans! Don't cheat! Love to Learn, Love to Laugh and Be Happy!*



*Do not live on your cell phone or with "things" in your ear!*

*Concentrate on trig!*

State policy – no kids in the classroom 😊

## IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

### Anticipated Class Schedule/Calendar

Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
June 20	Introduction, Chapter 2	
June 21	Chapter 2	
June 22	Chapter 2,3	
June 26	Chapter 3	
June 27	Chapter 3	
June 28	Chapter 4	
June 29	Chapter 4,5	
July 3	Chapter 5, 6	
July 4	Holiday	
July 5	Exam	
July 6	Chapter 6,7	
July 10	Chapter 7	
July 11	Chapter 7, 8	
July 12	Chapter 8	
July 13	Chapter 8	
July 17	Chapter 9	
July 18	Chapter 9, Review	
July 19	Exam 2	
July 20	Chapter 10	
July 24	Chapter 10, 11	
July 25	Chapter 11	
July 26	Review	
July 27	Final Exam	