



Basic Course Information

Semester:	Spring 2021	Instructor Name:	Allyn Leon
Course Title & #:	Math 119, Elementary Statistics	Email:	allyn.leon@imperial.edu
CRN #:	20123, 20124, 20126	Webpage (optional):	imperial.instructure.com
Classroom:	N/A	Office #:	2760.2 (but home for now)
Class Dates:	02/16/2021 - 06/11/2021	Office Hours (Zoom):	Monday through Thursday: 10:00 am to 11:00 am
Class Days:	N/A	Office Phone #:	760-355-6523
Class Times:	N/A	Emergency Contact:	Email me or call my office phone
Units:	4	Class Format:	Online

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)

Appropriate placement as defined by AB705 or, MATH 098 or MATH 091 with a grade of "C" or better.

Student Learning Outcomes

By the end of this course, given a problem or a set of problems, the student will demonstrate problem solving strategies by identifying an appropriate method to solve a 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.

Textbooks & Other Resources or Links

Textbook: Introductory Statistics by Illowsky and Dean, OpenStax Publisher.

Online: You can view the book online at this url

http://cnx.org/contents/MBiUQmmY@18.11:2T34_25K@11/Introduction

Download PDF: The book will also be available as a PDF download (in Canvas).

Calculator: A basic calculator, like a TI-30 (costs around \$10) is recommended, or you can go with a graphing calculator, like the TI-83 or TI-84, and there are also various apps that you can use instead; it really depends on what other math or science classes you plan on taking later on. You NEED a calculator of some sort to do the work on the tests.



Course Objectives

Through various activities and assessments:

1. The student will distinguish the various ways of organizing, displaying, and measuring data.
2. The student will derive the numerical relationship that exists between bivariate data sets.
3. The student will demonstrate an understanding of the theory of probability and proficiency in solving problems of this nature.
4. The student will compute and interpret expected values and variance, and learn about the binomial distribution for discrete random variables.
5. The student will compute and interpret expected values and variance, and learn about the normal distribution for continuous random variables.
6. The student will 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. The student will use the various types of distributions that are derived from the normal distribution.
8. The student will calculate and interpret confidence intervals for a population mean to show how probability connects to this type of statistical inference.
9. The student will 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. The student will compare the means of the data from experiments involving more than two samples, including the single factor analysis of variance (ANOVA).
11. The student will fit a straight line to the given data in graphical form.
12. The student will make use of Chi-square distributions to analyze counts.

Course Requirements and Instructional Methods

Online Quizzes: There will be up to 13 or 14 quizzes to be completed online in Canvas. These quizzes will have between 5 and 20 questions and will usually cover one chapter. The quizzes will be worth 10 points each and have specific due dates (Check Canvas for these); make sure you finish the quizzes on time! The top 10 quizzes will count towards your overall grade. The quizzes will account for 100 points total, or 20% of your overall grade.

Project(s): There will be one or more short projects that may involve the use of technology (such as Google Sheets, Minitab, StatDisk, or Microsoft Excel). More information will be provided through Canvas. The projects will be worth 100 points combined, or 20% of your overall grade.

Tests: There will be a midterm and final to be taken online within Canvas. The midterm covers material from the first half of the course and is worth 100 points or 20% of your overall grade. The final covers material from throughout the whole course and is worth 200 points or 40% of your overall grade. The online exams also require you to submit written work (in the form of pictures or a pdf upload) for any problems that require steps right after submitting the test. This is to make sure that you are doing the work required for each problem and also to help with partial credit if you do not get the problem completely correct. Please see the tentative schedule for the dates. There will be no make-up exams. If you miss the midterm, the final exam score will be used in its place. You can check your grades anytime in Canvas.

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.



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Course Grading Based on Course Objectives

Your grade will be calculated based on the following items:

10 Quizzes @ 10 points each (count top 10)	100 points	~20%
Project(s) @ 100 points	100 points	~20%
Midterm @ 100 points	100 points	~20%
Final @ 200 points	200 points	~40%
Total	500 points	100%

Your final grade will be based on the following points and percentages:

90% to 100%	450-500 points	A
80% to 89%	400-449 points	B
70% to 79%	350-399 points	C
60% to 69%	300-349 points	D
Below 60%	Below 300 points	F

The **Canvas Gradebook** is where you want to go to check your grades and progress. You can do this at any time to get an idea of how you are doing in the class.

Course Policies

- 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.
- *Attendance in an online class is more than just logging in*
 - You will need to make sure that you log in and check announcements regularly
 - There are weekly readings and assignments that need to be done in a timely manner
 - There will be exams completed online in Canvas as well
 - **Quiz 0, based on the syllabus, counts as an attendance check for the first week**
 - **Quiz 0 is due by 11:59 pm on Thursday, 02/18/2021**
 - **If you do not complete Quiz 0 on time, you will be dropped from the class**

Other Course Information

Last day to add the class: Saturday 02/27/2021

Last day to withdraw from the class with a "W": Saturday 05/15/2021



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
Week 1 February 15 - 21	Introduction	Quiz 0 DUE 02/18 NO EXCEPTIONS
Week 2 February 22 - 28	Sections 1.1, 1.2, 1.3, 1.4, & 1.5	Quiz 1
Week 3 March 1 - 7	Sections 2.1, 2.2, 2.3, & 2.4	Quiz 2
Week 4 March 8 - 14	Sections 2.5, 2.6, 2.7, & 2.8	Quiz 3
Week 5 March 15 - 21	Sections 3.1, 3.2, & 3.3	Quiz 4
Week 6 March 22 - 28	Sections 3.4, 3.5, Counting Techniques, & 4.1	Quiz 5
Week 7 March 29 - April 4	Sections 4.2, 4.3, & 5.1	Quiz 6
Week 8 April 5 - 11	SPRING BREAK	SPRING BREAK
Week 9 April 12 - 18	Sections 5.2, 6.1, 6.2, 7.1	Quiz 7
Week 10 April 19 - 25	Sections 8.1 & 8.2 Midterm	Midterm available online from 04/18 - 04/22
Week 11 April 26 - May 2	Sections 8.3, 9.1, 9.3, & 9.4	Quiz 8
Week 12 May 3 - 9	Sections 9.5, 9.6, 10.1	Quiz 9
Week 13 May 10 - 16	Sections 10.3 & 10.4	Quiz 10
Week 14 May 17 - 23	Sections 12.1 & 12.2	Project(s) due by 05/20
Week 15 May 24 - 30	Sections 12.3, 12.4, & 12.5	Quiz 11
Week 16 May 31 - June 6	Section 13.1	Quiz 12
Week 17 June 7 - 12	Review for the Final Final Exam	Final available online from 06/06 - 06/10

QUIZ 0, BASED ON THE SYLLABUS, IS DUE BY THE END OF THE DAY, 11:59 PM, ON THURSDAY 02/18/2021. IF QUIZ 0 IS NOT COMPLETED BY THEN, YOU WILL BE DROPPED FROM THE CLASS.