Basic Course Information

Semester:	**Winter 2024**	Instructor Name:	**Zhong Hu**
Course Title & #:	**Math 119**	Email:	**Zhong.hu@imperial.edu**
CRN #:	**15120**	Webpage (optional):	
Classroom:	**2728**	Office #:	**2760.1**
Class Dates:	**1/2/24 – 2/2/24**	Office Hours:	**By Appointment**
Class Days:	**MTWRF**	Office Phone #:	**760-355-6355**
Class Times:	12:30pm to 4:15 pm	Emergency Contact:	**Email me**
Units:	4	Class Format/Modality:	Face to Face

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 successful completion of Intermediate Algebra.

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. 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)

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

The textbook is Elementary Statistics Using Excel 6th Edition by Triola, Mario
Textbook ISBN-13: 9780134506623

Calculator: A TI-83 plus or TI-84 plus is recommended this course. You may rent a TI-83 plus from the Business office in building 10 for $10 for the semester.

You need to have access to Microsoft Excel and XLSTAT.
You have various options to access Excel: • IVC's computer lab have Excel installed • Your own computer may have Excel installed • Login to your IVC email to access Excel remotely via outlook here is how:
https://www.youtube.com/watch?v=gJ08yqWU5mQ
• XLSTAT is an extension of Excel that you need to access remotely or using one of IVC's computer labs.
Here is how to access it:
https://www.youtube.com/watch?app=desktop&v=FF4S5slDbjo&feature=youtu.be
Here is the XLSTAT code to enter: (copy and paste when need it)
XLSTAT activation code: TE4DHT-ZRRP2X-ZJ3XB0-1A9KFN-KVNMSV-6GBZ6S

Course Requirements and Instructional Methods

Homework

Homework will be posted on Canvas. It is your responsibility to check the homework assignment even if you are absent.

Homework will be due by the date of each test.

Quiz/Pop-quiz/Group Work

A quiz or group work may be given at any time during any class period. It may not be announced. The number of quizzes or group work in the semester will be instructor's discretion. The purpose is to provide a feedback on the learning outcome. The lowest scores will be dropped.

Tests

There will be three tests. The purpose of these tests is to check your understanding of the concepts covered in the course. Most of the questions on these tests will require showing a significant amount of work. A correct answer with insufficient work will receive partial credit or no credit.

 *Bring your own paper and pens/pencils on test days.

Final Exam

At the end of the semester, a COMPREHENSIVE/CUMULATIVE Final Exam will be given. If you miss the final, it will be recorded as a zero.

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.

Updated 6/2023

Course Grading Based on Course Objectives

Grading Policy

(Pop) Quiz /Group Work	10%
Homework	10%
Tests	60%
Final Exam	20%
Total	100%

Grading Scale for determining the final grade

A: 90%-100%
B: 80%-89%
C: 70%-79%
D: 60%-69%
F: 0%-59%

Academic Honesty (Artificial Intelligence -AI)

IVC values critical thinking and communication skills and considers academic integrity essential to learning. Using AI tools as a replacement for your own thinking, writing, or quantitative reasoning goes against both our mission and academic honesty policy and will be considered academic dishonesty, or plagiarism unless you have been instructed to do so by your instructor. In case of any uncertainty regarding the ethical use of AI tools, students are encouraged to reach out to their instructors for clarification.

Course Policies

Attendance and drop Policy You must attend the first day of class or you will be dropped from the course as a 'No Show.' Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. 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. It is the student's responsibility to drop or officially withdraw from the class

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.

WEEK	TOPIC
1	**Course Syllabus** **Chapter 1: Introduction to Statistics** **Chapter 2: Summarizing Data in Tables and Graphs**
2	**Chapter 3: Numerically Summarizing Data** **Chapter 10: Describing the Relation between Two Variable** **Review for Test 3 and Test 3** **Chapter 4: Probability**
3	**Chapter 5: Discrete Probability Distributions** **Chapter 6 and 7: The Normal Probability Distribution** **And Sampling Distribution** **Review for Test 2 and Test 2**
4	**Chapter 8: Estimating the Value of a Parameter** **Chapter 9: Hypothesis Tests Regarding a Parameter**
5	**Chapter 11: Inferences on Two Samples** **Review for Test 3 and Test 3** **Final Exam**

Subject to change without prior notice