



Basic Course Information

Semester:	Fall 2024	Instructor Name:	Diana Roman
Course Title & #:	MATH 119- Elementary Statistics	Email:	diana.roman@imperial.edu
CRN #:	10810	Webpage (optional):	Canvas
Classroom:	2722	Office #:	2768
Class Dates:	August 12-December 7, 2024	Office Hours:	Mondays 2-3pm (Rm 2768) Tuesdays 9-10am (Rm 2768) Wednesdays 2-3pm (Zoom) Thursdays 9-10am (Zoom)
Class Days:	T/TH	Office Phone #:	(760)355-5755
Class Times:	10:15AM-12:45PM	Emergency Contact:	Division Secretary: Silvia Murray (silvia.murray@imperial.edu)
Units:	4	Class Format/Modality:	Face-to-face (in person)

Course Description

The use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-square and t-tests; and supervised use and practice in the application of technology for statistical analysis including the production of graphics, finding confidence intervals, test statistics, and regression lines, as well as the interpretation of the relevance of the statistical findings; Probability Theory, such as counting principles, conditional probability and the Poisson distribution. Applications using data from disciplines including business, social sciences, psychology, life science, health science, and education. (C-ID: MATH 110) (CSU, UC credit limited. See a counselor.)

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

Successful completion of Intermediate Algebra or appropriate placement as defined by AB705.

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.

Course Objectives

Upon satisfactory completion of the course, students will be able to:

1. Distinguish among different scales of measurement and their implications.
2. Interpret data displayed in tables and graphically.
3. Apply concepts of sample space and probability.
4. Calculate measures of central tendency and variation for a given data set.
5. Identify the standard methods of obtaining data and identify advantages and disadvantages of each.
6. Calculate the mean and variance of a discrete distribution.
7. Calculate probabilities using normal and t-distributions.
8. Distinguish the difference between sample and population distributions and analyze the role played by the Central Limit Theorem.
9. Construct and interpret confidence intervals.
10. Determine and interpret levels of statistical significance including p-values.
11. Interpret the output of a technology-based statistical analysis.
12. Identify the basic concept of hypothesis testing including Type I and II errors.
13. Formulate hypothesis tests involving samples from one and two populations.
14. Select the appropriate technique for testing a hypothesis and interpret the result.
15. Use linear regression and ANOVA analysis for estimation and inference, and interpret the associated statistics.
16. Make use of Chi-square distributions to analyze counts.
17. Use appropriate statistical techniques to analyze and interpret applications based on data from disciplines including business, social sciences, psychology, life science, health science, and education.
18. Apply concepts of probability theory, such as counting principles, conditional probability and the Poisson distribution.

Textbooks & Other Resources or Links

MyMathLab Access Code (REQUIRED)

You will need to purchase a MyMathLab 18-week access code to access and complete the homework assignments. Access codes sometimes come included with new, sealed physical copies of the textbook, or you can purchase an access code online through the IVC bookstore or through MyMathLab directly. Please use your IVC email when registering for MyMathLab. Refer to the pdf under “Files” on Canvas for step-by-step instructions on how to enroll in MyMathLab.

Textbook (REQUIRED, but included with MyMathLab Access Code)

With your MyMathLab access code, you will have full access to the e-book for the class:
Triola, Mario. *Elementary Statistics using Excel*. 7th edition, Pearson. ISBN: 9780136961888

Excel (REQUIRED)

Microsoft Excel will be required for all projects. If you do not have Excel installed on your computer/laptop already, you can gain access to Excel in the following ways:

- By accessing Excel through IVC's computer lab (inside the library, building 1500)
- By downloading Excel using your IVC student email. If you need assistance doing this, refer to this video:
<https://www.youtube.com/watch?v=gJ08yqWU5mQ>

*You will need to use Excel on a computer or laptop (not on a tablet, smartphone, etc.)

Scientific Calculator (OPTIONAL)

You may use a scientific calculator during class and on homework assignments if you wish.



Course Requirements and Instructional Methods

Lecture

Our class time will consist of a combination of lecture, individual practice, and group work. Participation and practice is key to understanding the material. You are encouraged to ask questions during class. A notes template for each chapter will be posted on Canvas under the “Files” tab. You may print the template and use it to follow along during class if you wish.

Homework

Homework will be assigned and completed exclusively through MyMathLab. In order to access and complete the homework, you must make a MyMathLab account and enroll using the course ID below. A pdf file outlining the step-by-step instructions for enrolling on MyMathLab can be found on Canvas under the “Files” section.

MyMathLab Course ID: roman53666

There will be MyMathLab homework assignments for each chapter. I suggest you work on each chapter regularly after each section is covered in lecture. You will have unlimited attempts for each homework problem. Homework for each chapter will be due the Sunday after we finish covering that chapter in class. You can refer to MyMathLab for exact due dates. All assignments are to be completed by the due date. It is the student’s responsibility to check MyMathLab regularly and stay on top of all due dates. You may continue working on homework assignments after the due date, but problems completed after the due date will be awarded 50% credit. Grades from MyMathLab homework will be updated on Canvas by the instructor at the end of the semester. Since homework can be completed for partial credit after the due date has passed, no homework due date extensions will be given.

Projects

There will be various projects throughout the semester. The instructions for each project will be provided during class and on Canvas. More information regarding projects will be provided once they are assigned. All projects must be submitted by the deadline. One lowest project grade will be dropped. For this reason, no late projects will be accepted and no due date extensions will be given.

Quizzes

Quizzes will be given during class (with or without prior notice). Students will be given 15 minutes to complete each quiz individually (unless otherwise announced). Students who arrive late will not be allowed additional time to complete the quiz. All quizzes will be open notes. However, I recommend that you study and familiarize yourself with the material prior to each quiz since 15 minutes is not enough time to extensively review notes while completing each quiz. One lowest quiz score will be dropped. If you are absent during a day where there was a quiz, that will be considered your lowest score, and that quiz will be dropped from your grade. No make-up quizzes will be offered. Phones (including phone calculators) are not allowed during quizzes. The best way to prepare for quizzes is to practice the assigned MyMathLab homework problems.

Exams

There will be 3 exams and a final. The final exam is cumulative, so it will cover all of the material from the semester. You will be allowed to use one hand-written (no photocopies; not typed) flashcard (3”x5”, front and back) for each exam.

Please be on time to exam days—you will not be given additional time to complete exams if you arrive late. Once you begin an exam, you are expected to stay in the classroom until your exam is completed. All exam dates are listed on the Course Calendar at the end of this document, so please plan accordingly. For exams 1-3, if you have a prior commitment that interferes with an exam date, you must make arrangements with the instructor to complete the exam 1-3 days ahead of time. No one will be allowed to take an exam after the rest of the class has already taken it. There is no make-up for the final exam.

Course Grading Based on Course Objectives

All grades will be shown on Canvas. Your grade will be weighted with the guidelines shown below.

Projects	20% of grade
Homework	15% of grade
Quizzes	15% of grade
Exams	30% of grade
Final	20% of grade

Final class grade is based on the following guidelines:

Percent \geq 90	A
$80 \leq$ Percent $<$ 90	B
$70 \leq$ Percent $<$ 80	C
$60 \leq$ Percent $<$ 70	D
Percent $<$ 60	F

Grades earned according to the point scale above will be the final grade you receive for the class. All students are graded by the same standards and grades are nonnegotiable.

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

Classroom Behavior

Behavior should not interfere with the learning of others. Civil and respectful conduct towards fellow students and towards the instructor is expected. Inappropriate behavior will be documented and may be subjected to disciplinary action.

Cell phone Policy

Cell phone use (including texting) is not allowed and cell phones should be turned off or on silent mode during class time. If you need to take an important call during class, please leave the classroom without disrupting others. Cell phone use during quizzes and exams is prohibited and violations to this policy will be considered academic dishonesty. Using a cell phone or any other electronic device during quizzes or exams will result in a grade of 0 for that quiz/exam.

Attendance and Email Communication

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. 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. If you happen to miss any class lectures, it is your responsibility to get caught up with the material you missed.

All email communications should be done through IVC email or Canvas. No personal emails should be used. You are expected to check your IVC email and Canvas regularly, several times a week. Announcements will be sent through Canvas. Please check Canvas several times a week!!

Open Door Policy

Please feel free to contact me or attend office hours if you have any questions, concerns, or would like additional help. I have high expectations for all of you and believe you can all succeed in this class if you put in the effort.

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.

The Learning Services Department's tutoring center offers free tutoring for MATH119 in-person in building 1500 (library) and online via Zoom. Contact the tutoring center or visit <https://www.imperial.edu/student-support/study-skills-center/index.html> for more information.

The MESA Center also offers free tutoring for MATH119. Contact MESA or visit <https://www.imperial.edu/courses-and-programs/divisions/economic-and-workforce-development/mesa/index.html> for more information.

Visit <https://www.imperial.edu/student-support/index.html> for more information regarding additional student resources, including:

- Disability Support Programs & Services (Refer to them if accommodations are needed)
- Counseling & Transferring Services
- Student Health Services
- Food & Housing Services
- Career Services
- Undocumented Student Resources
- Education Technology
- Technology Support Services
- Library & Tutoring Services
- Military & Veteran Success Center
- MESA Center
- EOPS/CARE/NextUp Services

Anticipated Class Schedule/Calendar

Date or Week	Activity, Assignment, and/or Topic
Week 1 August 13 & 15	Syllabus & Introduction Chapter 1
Week 2 August 20 & 22	Chapter 1 Chapter 2
Week 3 August 27 & 29	Chapter 2 Chapter 3
Week 4 September 3 & 5	Chapter 3 Exam 1 (September 5)
Week 5 September 10 & 12	Chapter 4
Week 6 September 17 & 19	Chapter 4 Chapter 5
Week 7 September 24 & 26	Chapter 5 Chapter 6
Week 8 October 1 & 3	Chapter 6 Exam 2 (October 3)
Week 9 October 8 & 10	Chapter 7
Week 10 October 15 & 17	Chapter 8
Week 11 October 22 & 24	Chapter 8
Week 12 October 29 & 31	Chapter 8 Chapter 9
Week 13 November 5 & 7	Chapter 9 Exam 3 (November 7)
Week 14 November 12 & 14	Chapter 10 Chapter 11
Week 15 November 19 & 21	Chapter 11 Chapter 12
November 25-30	Thanksgiving Break- No classes; Campus closed
Week 16 December 3 & 5	Review Final Exam (December 5) MyMathLab closes on December 5th at 10am

Subject to change without prior notice