IMPERIAL VALLEY COLLEGE

Basic Course Information

Semester:	**Fall 2025**	Instructor Name:	**Humberto Pena**
Course Title & #:	**Introduction to Statistics (STAT C1000)**	Email:	**humberto.pena@imperial.edu**
CRN #:	**11335**	Webpage (optional):	**N/A**
Classroom:	**2722**	Office #:	**N/A**
Class Dates:	**Aug 11 – Dec 06**	Office Hours:	**Fridays via zoom, 1:00 – 2:00 PM**
Class Days:	**T/Th**	Office Phone #:	**N/A**
Class Times:	**10:15 AM – 12:45 PM**	Emergency Contact:	**email**
Units:	**4**	Class Format/Modality:	**In person**

Course Description

This course is an introduction to statistical thinking and processes, including methods and concepts for discovery and decision-making using data. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-squared, and t-tests; and application of technology for statistical analysis including the interpretation of the relevance of the statistical findings. Students apply methods and processes to applications using data from a broad range of disciplines. (Formerly MATH 119)(C-ID: MATH 110) (CSU, UC credit limited. See a counselor.)

Additional Description Information:

The use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. 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.

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

PREREQUISITES: - Placement as determined by the college's multiple measures assessment process or completion of a course taught at or above the level 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.

Course Objectives

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

1. Assess how data were collected and recognize how data collection affects what conclusions can be drawn from the data.

2. Identify appropriate graphs and summary statistics for variables and relationships between them and correctly interpret information from graphs and summary statistics.
3. Describe and apply probability concepts and distributions.
4. Demonstrate an understanding of, and ability to use, basic ideas of statistical processes, including hypothesis tests and confidence interval estimation.
5. Identify appropriate statistical techniques and use technology-based statistical analysis to describe, interpret, and communicate results.
6. Evaluate ethical issues in statistical practice.
7. ADDITIONAL Objective Information:
8. Distinguish among different scales of measurement and their implications.
9. Calculate measures of central tendency and variation for a given data set.
10. Determine and interpret levels of statistical significance including p-values.
11. Identify the basic concept of hypothesis testing including Type I and II errors.
12. Formulate hypothesis tests involving samples from one and two populations.
13. Use linear regression and ANOVA analysis for estimation, inference, and interpret the associated statistics.
14. Make use of Chi-square distributions to analyze counts.
15. 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.
16. Apply concepts of probability theory, such as counting principles, conditional probability and the Poisson distribution.

Textbooks & Other Resources or Links

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

We'll be using MyLab & Mastering Pearson Lab for homework and quizzes, so you will have to purchase a subscription. *This is a necessary component of the class.* You will have access to your textbook via your Pearson account.

Excel: We will be using excel to perform statistical analysis on data sets, as well as learn to interpret statistical output.

Calculator: It is HIGHLY RECOMMENDED that you bring a calculator to class, in particular, a graphing calculator (TI-83, TI-84). While it is strictly not necessary, it will make your life a lot easier. You can rent out graphing calculators at the Cashier's Window on campus for a $10 fee.

Course Requirements and Instructional Methods

The classroom: Classroom time will consist of lecture and select practice exercises. I highly encourage you to participate in class and ask questions, no matter how trivial it seems. The course will follow a particular pace to make sure we cover everything in class, but I am more than willing to slow down and re-explain or re-do an example if asked to. All three exams and the final will be taken in person and will be graded no later than two weeks after the exam has been completed.

Outside the classroom: You will be expected to complete your homework and quizzes online outside of class time. It is your responsibility to check the due dates for homework and quizzes. You will also be expected to study accordingly for your exams. If you feel like you could use some extra help, I invite you to attend my office hours via zoom on Fridays OR go to the tutoring services offered by Imperial Valley College.

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Course Grading Based on Course Objectives

The overall course will consist of various homework assignments, 10 Quizzes, three exams, and one final exam, which will be weighted as follows:

Homework	**15%**
Quizzes	**10%**
Exams	**45% (3 exams, 15% each)**
Final Exam	**30%**

Once everything has been graded, the grade distribution will be as follows:

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

If for some reason you find yourself unable to complete a quiz or homework assignment by the due date, please contact me ASAP so that we may discuss the situation on an individual basis.

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: All students are expected to attend every class session. Incidentally, you must attend the first meeting of the course. For those who are enrolled but not present on the first day of class, as per the college's policy, will be dropped from the class. Constant absences are also grounds for dropping you from the course. If you have an emergency, please email me or let me know somehow to take it into consideration. ***Long story short, come to class!***

Academic honesty: You are expected to show your own work in both homework, quizzes, and exams. Cheating is not tolerated by Imperial Valley College under any circumstance. Anyone caught cheating will receive a zero on the assignment/exam and will be reported to the Campus Disciplinary Officer who may file an incident report. Multiple instances of cheating will result in a failing grade (F) and/or disciplinary action. Please refer to the General 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) using a commercial term paper service. ***Another long story short, don't cheat!***

Classroom behavior: You are expected to respect everyone around you, including your professor(s), fellow peers, and the classroom environment. Instances of disruptive behavior will result in me asking you to leave the classroom for the day. Multiple instances will result in filing a report with the Campus Disciplinary Officer.

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

Week	Topic	Important Dates
Week 1 August 11 - 15	Syllabus & Chapter 1	
Week 2 August 18 - 22	Chapter 2	
Week 3 Aug 25 – 29	Chapter 3	
Week 4 Sep 01 - 05	Chapter 4	No class on 09/01
Week 5 Sep 08 – 12	Review, Exam 1	Exam 1 on 09/11
Week 6 Sep 15 – 19	Chapter 5	
Week 7 Sep 22 – 26	Chapter 6	
Week 8 Sep 29 - Oct 03	Chapter 7	
Week 9 Oct 06 – 10	Review, Exam 2	Exam 2 on 10/09
Week 10 Oct 13 – 17	Chapter 8	
Week 11 Oct 20 – 24	Chapter 9	
Week 12 Oct 27 – 31	Chapter 10	
Week 13 Nov 03 – 07	Chapter 11	
Week 14 Nov 10 – 14	Exam 3	No class on 11/10 Exam 3 on 11/13
Week 15 Nov 17 - 21	Cumulative Review	
Week 16 Nov 24 - 28	THANKSGIVING BREAK (No class)	No class from Nov 24 – 28

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Week	Topic	Important Dates
Week 17 Dec 01 - 05	Final Exam	Final exam on 12/04

*****Subject to change without prior notice*****