

## Basic Course Information

|                   |                                                   |                     |                                                            |
|-------------------|---------------------------------------------------|---------------------|------------------------------------------------------------|
| Semester:         | <b>Fall 2025</b>                                  | Instructor Name:    | <b>Mr. Voldman</b>                                         |
| Course Title & #: | <b>Math STAT C1000-<br/>Elementary Statistics</b> | Email:              | <b>alex.voldman@imperial.edu</b>                           |
| CRN #:            | <b>11339</b>                                      | Webpage (optional): |                                                            |
| Classroom:        | <b>Online</b>                                     | Office #:           | <b>2764</b>                                                |
| Class Dates:      | <b>08/10/25-12/012/25</b>                         | Office Hours:       | <b>MW 10-11am on zoom, and<br/>TTH 1:30-2:30 on campus</b> |
| Class Days:       | <b>N/A</b>                                        | Office Phone #:     | <b>760-3556299(only via e-mail)</b>                        |
| Class Times:      | <b>N/A</b>                                        | Emergency Contact:  | <b>760-355-6155, 760-355-6201 Division<br/>Secretary</b>   |
| Units:            | <b>4.625</b>                                      | Class Format:       | <b>Online</b>                                              |

## 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)

## 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

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 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

Author(s): Triola, Mario. Elementary Statistics Using Excel 7th Edition Textbook ISBN: 9780136961888

Calculator: A basic calculator, like a TI-30 is recommended, or the TI-83 or TI-84, and there are also various apps that you can use instead. You need a calculator to do the work on the tests.

### Course Requirements and Instructional Methods

#### Homework

Homework is done using MyMathLab Statistics. MyMathLab Statistics code is **voldman10290**. Please refer to webpage: (<https://mlm.pearson.com/northamerica/>) for assignments and deadlines as well as registration.

#### Discussions

You will need to log into Canvas, each module has a discussion activity. Participation in the discussion in Canvas is mandatory and will be assessed. Students are expected to be ready for all class discussions.

#### Projects

There will be five (5) short projects that may involve the use of technology (such as Excel/XLSTAT). Projects will be provided through Canvas.

#### Exams

Purpose: To review the material introduced in class and to evaluate your understanding of the material covered in the course. There will be four exams and a final to be taken on **Canvas**. Please see the tentative schedule (Syllabus or Canvas) for the dates. There will be no make-up exams. If you miss one exam, the final exam score will be used in its place.

#### Final Exam

Final: The final exam is mandatory for all students.

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.

### What if I need to borrow technology or access to WIFI?

1. To request a loaner laptop, MYFI device, or other electronic device, please submit your request here: <https://imperial.edu/students/student-equity-and-achievement/>

## Course Grading Based on Course Objectives

### Grade Distribution

| Homework                                | Canvas Discussions                | Projects                    | Exams                     | Final            |
|-----------------------------------------|-----------------------------------|-----------------------------|---------------------------|------------------|
| 10 homework activities @ 20 points each | 10 canvas discussions @ 10 points | 5 projects @ 40 points each | 3 exams @ 100 points each | Final 200 points |

|                    |     |
|--------------------|-----|
| Canvas Discussions | 10% |
| Homework           | 10% |
| Projects           | 10% |
| Exams              | 40% |
| Final              | 30% |

### Grading Scale:

| A<br>(90-100%) | B<br>(80-89%) | C<br>(70-79%) | D<br>(60-69%) | F<br>(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.

## Accessibility Statement

Imperial Valley College is committed to providing an accessible learning experience for all students, regardless of course modality. Every effort has been made to ensure that this course complies with all state and federal accessibility regulations, including Section 508 of the Rehabilitation Act, the Americans with Disabilities Act (ADA), and Title 5 of the California Code of Regulations. However, if you encounter any content that is not accessible, please contact your instructor or the area dean for assistance. If you have specific accommodations through **DSPS**, contact them for additional assistance.

We are here to support you and ensure that you have equal access to all course materials.

## Course Policies

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the importance of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- Plagiarism is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to "cite a source" correctly, you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in



the course 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.

#### Online Netiquette

**[Required Information for web-enhanced, hybrid and online courses:** Describe your policies regarding netiquette. The below is suggested language and may be modified for your course.]

- What is netiquette? Netiquette is internet manners, online etiquette, and digital etiquette all rolled into one word. Basically, netiquette is a set of rules for behaving properly online.

Students are to comply with the following rules of netiquette: (1) identify yourself, (2) include a subject line, (3) avoid sarcasm, (4) respect others' opinions and privacy, (5) acknowledge and return messages promptly, (6) copy with caution, (7) do not spam or junk mail, (8) be concise, (9) use appropriate language

#### Other Course Information

##### Disabled Student Programs and Services (DSPS)

**[Required language.]** Any student with a documented disability who may need educational accommodations should notify the instructor or the [Disabled Student Programs and Services \(DSP&S\)](#) office as soon as possible. **When campus is open**, the DSP&S office is in Building 2100, telephone 760-355-6313. Please contact them if you feel you need to be evaluated for educational accommodation.

##### Student Counseling and Health Services

**[Required language.]** Students have counseling and health services available, provided by the pre-paid Student Health Fee.

- **Student Health Center.** A Student Health Nurse is available on campus, **but you must make an appointment**. In addition, Pioneers Memorial Healthcare District provides basic health services for students, such as first aid and care for minor illnesses. Contact the IVC [Student Health Center](#) at 760-355-6128, **or when campus reopens**, visit Room 1536 for more information.
- **Mental Health Counseling Services.** Short-term individual, couples, family and group counseling services are available for currently enrolled students. Services are provided in a confidential, supportive, and culturally sensitive environment. Please contact the IVC Mental Health Counseling Services at 760-355-6310 for appointments, or **when campus reopens** visit Room 1536, for more information.

#### Financial Aid

Your Grades Matter! In order to continue to receive financial aid, you must meet the Satisfactory Academic Progress (SAP) requirement. Making SAP means that you are maintaining a 2.0 GPA, you have successfully completed 67% of your coursework, and you will graduate on time. If you do not maintain SAP, you may lose your financial aid. If you have questions, please contact financial aid at [finaid@imperial.edu](mailto:finaid@imperial.edu).

#### 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                                | Assignment Dates                         |
|--------------|--------------------------------------------------------------------|------------------------------------------|
| Week 1       | Introduction Getting Started-Module 0, Sampling and Data, Module 1 | Orientation Syllabus Quiz Due 9am, 02/15 |
| Week 1       | Sampling and Data, Module 1                                        | Discussion 1, Project 1, and Homework 1  |
| Week 2       | Descriptive Statistics, Module 2                                   | Discussion 2, Homework 2                 |
| Week 3       | Exam 1                                                             | Exam 1                                   |
| Week 4       | Probability, Part 1, Module 3                                      | Discussion 3, Homework 3                 |
| Week 5       | Probability, Part 2, Module 4                                      | Discussion 4, Project 2, Homework 4      |
| Week 6       | Exam 2                                                             | Exam 2                                   |
| Week 7       | Discrete Probability Distributions, Module 5                       | Discussion 5, Homework 5                 |
| Week 8-9     | Normal Probability Distributions, Module 6                         | Discussion 6, Project 3, Homework 6      |
| Week 10      | Confidence Intervals, Module 7                                     | Discussion 7, Homework 7                 |
| Week 11      | Hypothesis Testing for 1 Sample, Module 8                          | Discussion 8, Project 4, Homework 8      |
| Week 12      | Hypothesis Testing for 1 Sample, Module 9                          | Discussion 9, Homework 9                 |
| Week 13      | Exam 3                                                             | Exam 3                                   |
| Week 14-15   | Correlation and Regression, Analysis of Variance, Module 10        | Discussion 10, Homework 10, Project 5    |
| Week 16      | Final Exam                                                         | Final Exam                               |

**THE ORIENTATION QUIZ IS DUE BY 9AM ON Saturday 02/15/2025. IF THE SYLLABUS QUIZ IS NOT COMPLETED BY THEN, YOU WILL BE DROPPED FROM THE CLASS.**

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