

## Basic Course Information

|                   |                                                                                                                                                    |                        |                                   |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------|
| Semester:         | <b>Summer 2025</b>                                                                                                                                 | Instructor Name:       | <b>Dr. Alejandro Cozzani</b>      |
| Course Title & #: | <b>Math 119</b>                                                                                                                                    | Email:                 | <b>alex.cozzani@imperial.edu</b>  |
| CRN #:            | <b>30207</b>                                                                                                                                       | Webpage (optional):    | <b>Refer to Canvas</b>            |
| Classroom:        | <b>N/A</b>                                                                                                                                         | Office #:              | <b>2776</b>                       |
| Class Dates:      | <b>Class Start Date: June 16, 2025<br/>Class End Date: July 24, 2025<br/>Last Day to Add: 06/18/25<br/>Deadline to Drop with "W":<br/>07/18/25</b> | Office Hours:          | <b>None during summer school</b>  |
| Class Days:       | <b>-----</b>                                                                                                                                       | Office Phone #:        | <b>760-355-5760</b>               |
| Class Times:      | <b>-----</b>                                                                                                                                       | Emergency Contact:     | <b>Silvia Murray 760-355-6201</b> |
| Units:            | <b>4.0</b>                                                                                                                                         | Class Format/Modality: | <b>Online Asynchronous</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 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:

- 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.

## 1. 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

#### Required:

1. Mario F. Triola. *Elementary Statistics using Excel* (7<sup>th</sup> Edition). Pearson. ISBN: 9780136921721

#### Optional:

1. Illowsky, Barbara & Dean, Susan. 2013. *Introductory Statistics*. OpenStax. ISBN: 978-1-938168-20-8.
2. Sullivan. 2017. *Informed Decisions Using Data*. 5th Pearson. ISBN: 9780134133539.

#### Other:

3. Software as needed: Primarily Microsoft Excel; StatDisk Online, and/or Graphing Calculator.

### Course Requirements and Instructional Methods

1. **"Success is the only option, so apply yourself diligently, strive for excellence, study hard, and always give your best effort!"**
2. **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.
3. **Minimum requirements to access assignments in Canvas:**
  - a. Access to a computer,
  - b. Internet access (consider accessing the internet at alternative locations like IVC or the public library if you don't have it at home),
  - c. Browser: opt for Google Chrome or Firefox as your browser choice, as Safari may not display certain content correctly.
4. **Assignment Deadlines:** Each module is available for an entire week, giving you ample time to complete and submit the assignments.

- a. It is your responsibility to manage your time and ensure everything is submitted by the deadline. Avoid waiting until Sunday at 11:30 PM to start uploading your work, as technical issues such as internet problems can occur.
  - b. All assignments must be submitted in Canvas by the deadline so please do not send anything by email as it will not be graded.
  - c. Also, remember that during summer school, you will be working on more than one module per week, so plan accordingly.
5. **Lecture:** You are expected to read the modules (or the corresponding textbook chapters) and watch the pre-recorded videos, as the assignments are directly based on this material.
6. **Online Discussions:** Online discussion questions will prompt students to analyze and justify information while fostering meaningful interaction with peers as part of a collaborative learning community.
7. **Online Quizzes:** At the end of each module, you will take a quiz to check your knowledge. Please refer to specific instructions under the “Quizzes” tab in Canvas.
8. **Assignments:** To deepen your understanding, each module includes several assignments designed to reinforce key concepts from each section.
9. **Projects:** Certain modules include special projects designed to enhance your ability to analyze and interpret data effectively.
10. **Tests or Exams:** They may be T/F, multiple choice, open-ended, and free response questions.
11. **Final Exam:** It may include questions from the tests (recycled questions) and new questions (you have not seen them before but with similar level of difficulty).
12. **Students may only request exam or assignment makeup if they provide valid documentation, such as hospitalization records, and promptly inform the instructor via email to coordinate arrangements.**

### Course Grading Based on Course Objectives

The student’s grade will depend on the following areas (not on total points):

|                         |             |
|-------------------------|-------------|
| ➤ Quizzes & Discussions | 20%         |
| ➤ Assignments           | 20%         |
| ➤ Projects              | 20%         |
| ➤ Exams (3)             | 20%         |
| ➤ Final Exam            | 20%         |
| <b>TOTAL</b>            | <b>100%</b> |

All grades are calculated by using the standard scale of:

**A = 100-90%    B = 89.99-80%    C = 79.99-70%    D = 69.99-60%    F = 59.99 % and below.**

- ***Grades are displayed in Canvas, and you must earn at least a “C” to pass the class.***
- ***Final grades are not rounded under any circumstances, so please refrain from asking for adjustments if your grade is close to the next higher grade.***

### 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

#### ATTENDANCE

- 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 absence 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.

#### CLASSROOM ETIQUETTE

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed by the instructor.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the [General Catalog](#).
- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

#### ONLINE NETIQUETTE

- 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, (10) use appropriate emoticons (emotional icons) to help convey

meaning, and (11) use appropriate intensifiers to help convey meaning [do not use ALL CAPS or multiple exclamation marks (!!!!)].

### ACADEMIC HONESTY

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important 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

- 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.

### Other Course Information

Imperial Valley College offers various services in support of student success. The following are some of the services available for students. Please speak to your instructor about additional services which may be available.

- CANVAS LMS. Canvas is Imperial Valley College's main Learning Management System. To log onto Canvas, use this link: [Canvas Student Login](#). The [Canvas Student Guides Site](#) provides a variety of support available to students 24 hours per day. Additionally, a 24/7 Canvas Support Hotline is available for students to use: 877-893-9853.
- [Learning Services](#). There are several learning labs on campus to assist students through the use of computers and tutors. Please consult your [Campus Map](#) for the [Math Lab](#); [Reading, Writing & Language Labs](#); and the [Study Skills Center](#).
- [Library Services](#). There is more to our library than just books. You have access to tutors in the [Study Skills Center](#), study rooms for small groups, and online access to a wealth of resources.
- CANVAS LMS. Canvas is Imperial Valley College's Learning Management System. To log onto Canvas, use this link: [Canvas Student Login](#). The [Canvas Student Guides Site](#) provides a variety of support available to students 24 hours per day. Additionally, a 24/7 Canvas Support Hotline is available for students to use: 877-893-9853.
- 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. The DSP&S office is located in Building 2100, telephone 760-355-6313. Please contact them if you feel you need to be evaluated for educational accommodations.

### Financial Aid

Your Grades Matter! 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).

## Course Syllabus – Math 119 (CRN 30207) - Summer 2025

### 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

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

| WEEK OF                                                       | ACTIVITY, ASSIGNMENT, TOPIC                                                                                                                      | READING                                                                     | ASSIGNMENTS DUE                                                |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------|
| Week 1<br>June 16-22<br><b>Thursday 6/19 is a holiday</b>     | Module 0: Course Orientation<br>MODULE 1: Descriptive Statistics<br>MODULE 2: Describing, Exploring, and Comparing Data                          | Read Content Module 10<br>Read Content Module 1<br>Read Content Module 2    | <i>June 22, 2025, by 11:59 PM</i>                              |
| Week 2<br>June 23-29                                          | MODULE 3: Probability<br>MODULE 4: Discrete Probability Distributions                                                                            | Read Content Module 3<br>Read Content Module 4                              | <i>June 29, 2025, by 11:59 PM</i>                              |
| Week 3<br>June 30-July 06<br><b>Thursday 7/3 is a holiday</b> | MODULE 5: Normal Probability Distributions<br>MODULE 6: Estimates and Sample Sizes<br><b>Exam # 1 (Modules 1-2-3)</b>                            | Read Content Module 5<br>Read Content Module 6                              | <i>July 06, 2025, by 11:59 PM</i><br><br><b>Done in Canvas</b> |
| Week 4<br>July 07-13                                          | MODULE 7: Hypothesis Testing<br>MODULE 8: Inferences from Two Samples<br>MODULE 9: Correlation and Regression<br><b>Exam # 2 (Modules 4-5-6)</b> | Read Content Module 7<br>Read Content Module 8<br><br>Read Content Module 9 | <i>July 13, 2025, by 11:59 PM</i><br><br><b>Done in Canvas</b> |
| Week 5<br>July 14-20                                          | MODULE 10: Goodness of Fit and Contingency Tables<br>Module 11: Analysis of Variance<br><b>Exam # 3 (Modules 7-8-9)</b>                          | Read Content Module 10<br>Read Content Module 11                            | <i>July 20, 2025, by 11:59 PM</i><br><br><b>Done in Canvas</b> |
| Week 6<br>July 21-24                                          | <b>Final Exam (All Modules)</b>                                                                                                                  | <b>All Modules</b>                                                          | <b>Done in Canvas</b>                                          |