

## **Basic Course Information**

Semester	Summer 2023	Instructor Name	Dr. Alejandro Cozzani
Course Title & #	Math 119	Email	alex.cozzani@imperial.edu
CRN#	30176	Webpage (optional)	Refer to Canvas
Room		Office	2767
Class Dates	June 20-July 27, 2023 Holiday: Tuesday 7/4/23 Last Day to Add: 6/22/23 Last Day to Drop with W: 7/19/23	Office Hours	NONE
Class Days	Online Asynchronous	Office Phone #	760-355-5720
Class Times Units	N/A (no meetings)	Office contact if student will be out	Silvia Murray 760-355-6201
Ullits	4.0	or emergency	

#### **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)**

MATH 091 with a grade of "C" or better or appropriate placement.

## **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. Determine and interpret a confidence interval for a population mean. (ILO2, ILO4)
- 2. Apply statistical inference to conduct formal significance tests concerning single populations. (ILO2)
- 3. Demonstrate the ability to use technology in computing and interpreting basic descriptive or inferential statistics. (ILO2, ILO4)
- 4. Apply techniques of linear modeling to explore the relationship between two numerical variables. (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 student has several options as follows:

- 1. Mario F. Triola. *Elementary Statistics using Excel* (7<sup>th</sup> Edition). Pearson.
- 2. Michael Sullivan, III. Fundamentals of Statistics: Informed Decisions Using Data (5th Edition). Pearson.
- 3. Barbara Illowsky and Susan Dean. Introductory Statistics. Openstax.

## **Course Requirements and Instructional Methods**

- 1. <u>Exams or Tests</u>: There will be <u>3</u> tests and there will be <u>no</u> makeup exams given. Zeros will be given for all missed tests. Please refer to Canvas calendar for dates.
- 2. <u>Final Exam</u>: The common final will be given during the last week of summer school. **A score of 0 will be given if the final is missed.** Please refer to Canvas calendar for dates.
- 3. <u>Homework</u>: The purpose of homework is to provide students with sufficient practice to master all topics and to do well on tests and the final exam. Homework is submitted in Canvas (refer to Canvas for specific assignments and dates; all have links attached so follow them).
- 4. There will be no extra credit. Students must learn the material to pass this course.
- 5. <u>Technology:</u> It is highly recommended a graphing calculator such as TI83-plus or TI84-Plus (or similar) or Statdisk Online <a href="https://www.statdisk.com">https://www.statdisk.com</a>. Another option is XLSTAT (a separate announcement in Canvas will explain how to access it).
- 6. It is up most important that students review the material to do well on exams. Students are encouraged to form study groups and to attend tutoring sessions to keep up with assignments and to study for tests.
- 7. No student will be allowed to make up an exam or final exam unless he/she has a powerful reason to miss a test (e.g. hospitalization, illness, etc.). It is students 'responsibility to notify the instructor via e-mail ASAP to make arrangements and provide evidence.
- 8. <u>Notes/formulas</u>: During exams, students cannot use any notes unless otherwise directed by the instructor. Tables provided in Canvas are allowed.
- 9. <u>Out of Class Assignments</u>: 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.

#### **Course Grading Based on Course Objectives**

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

Semester Tests	60%	There will be <u>3</u> tests and there will be no makeup exams given.



Final Exam	20%	The final will be given during the last day of summer session.  A score of 0 will be given if the final is missed.
Homework/Quizzes & Discussions	20%	Both done in Canvas (pay close attention to deadlines).

All grades are calculated by using the standard scale of:

A = 100-90% B = 89-80% C = 79-70% D = 69-60% F = 59% and below.

Grades are displayed in Canvas and you must earn at least a "C" to pass the class.

#### **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 (DISCUSSION 0 COUNTS AS FIRST ASSIGNMENT). 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 absences 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 emotions (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 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.

## **Additional Student Services**

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.

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

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.

## **Student Counseling and Health Services**

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. In addition, Pioneers Memorial Healthcare District provide basic health services for students, such as first aid and care for minor illnesses. Contact the IVC Student Health Center at 760-355-6128 in 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 or in the building 1536 for appointments or more
  information.

#### Veteran's Center

The mission of the IVC Military and Veteran Success Center is to provide a holistic approach to serving military/veteran students on three key areas: 1) Academics, 2) Health and Wellness, and 3) Camaraderie; to serve as a central hub that connects military/veteran students, as well as their families, to campus and community resources. Their goal is to ensure a seamless transition from military to civilian life. The Center is located in Building 600 (Office 624), telephone 760-355-6141.

## **Extended Opportunity Program and Services (EOPS)**

The Extended Opportunity Program and Services (EOPS) offers services such as priority registration, personal/academic counseling, tutoring, book vouchers, and community referrals to qualifying low-income students. EOPS is composed of a group of professionals ready to assist you with the resolution of both academic and personal issues. Our staff is set up to understand the problems of our culturally diverse population and strives to meet student needs that are as diverse as our student population.

Also under the umbrella of EOPS our CARE (Cooperative Agency Resources for Education) Program for single parents is specifically designed to provide support services and assist with the resolution of issues that are particular to this population. Students that are single parents receiving TANF/Cash Aid assistance may qualify for our CARE program, for additional information on CARE please contact Lourdes Mercado, 760-355- 6448, lourdes.mercado@imperial.edu.

EOPS provides additional support and services that may identify with one of the following experiences:

- Current and former foster youth students that were in the foster care system at any point in their lives
- Students experiencing homelessness
- Formerly incarcerated students

To apply for EOPS and for additional information on EOPS services, please contact Alexis Ayala, 760-355-5713, alexis.ayala@imperial.edu.

### **Student Equity Program**

- The Student Equity Program strives to improve Imperial Valley College's success outcomes, particularly for students who have been historically underrepresented and underserved. The college identifies strategies to monitor and address equity issues, making efforts to mitigate any disproportionate impact on student success and achievement. Our institutional data provides insight surrounding student populations who historically, are not fully represented. Student Equity addresses disparities and/or disproportionate impact in student success across disaggregated student equity groups including gender, ethnicity, disability status, financial need, Veterans, foster youth, homelessness, and formerly incarcerated students. The Student Equity Program provides direct supportive services to empower students experiencing insecurities related to food, housing, transportation, textbooks, and shower access. We recognize that students who struggle meeting their basic needs are also at an academic and economic disadvantage, creating barriers to academic success and wellness. We strive to remove barriers that affect IVC students' access to education, degree and certificate completion, successful completion of developmental math and English courses, and the ability to transfer to a university. Contact: 760.355.5736 or 760.355.5733 Building 100.
- The Student Equity Program also houses IVC's Homeless Liaison, who provides direct services, campus, and community referrals to students experiencing homelessness as defined by the McKinney-Vento Act. Contact: 760.355.5736 Building 100

## **Student Rights and Responsibilities**

Students have the right to experience a positive learning environment and to due process of law. For more information regarding student rights and responsibilities, please refer to the IVC General Catalog.

## **Information Literacy**

Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. The IVC Library Department provides numerous Information Literacy Tutorials to assist students in this endeavor.

## **Anticipated Class Schedule / Calendar**

The calendar is tentative, and it may be modified according to students 'needs.

WEEK#	CORE CONTENT	ASSIGNMENTS – TESTS
1-June 20	<ul> <li>Course Syllabus</li> <li>Module 0: Getting Started</li> <li>Module 1: Introduction to Statistics</li> <li>Module 2: Descriptive statistics</li> </ul>	See Canvas for weekly to-do-list and deadlines
<i>2</i> - June 26	<ul> <li>Module 3: Probability</li> <li>Module 4: Discrete Probability Distributions</li> </ul>	See Canvas for weekly to-do-list and deadlines
3- July 03 <mark>Holiday:</mark> Tuesday 7/4/23	<ul> <li>Module 5: Normal Probability         Distributions     </li> <li>Module 6: Estimates and Sample         Sizes     </li> </ul>	See Canvas for weekly to-do-list and deadlines.  Exam # 1 (Modules 2-3-4)
4- July 10	<ul> <li>Module 7: Hypothesis Testing</li> <li>Module 8: Inferences from two samples</li> </ul>	See Canvas for weekly to-do-list and deadlines.  Exam # 2 (Modules 5-6)
5- July 17	<ul> <li>Module 9: Correlation and Regression</li> <li>Module 10: Multinomial Experiments and Contingency Tables</li> </ul>	See Canvas for weekly to-do-list and deadlines.  Exam # 3 (Modules 7-8-9)
6- July 24	<ul> <li>Review all chapters for final exam</li> <li>Final Exam (All modules)</li> </ul>	See Canvas for weekly to-do-list and deadlines. Final Exam (all modules 2-10)