Basic Course Information

Semester:	**Summer 2023**	Instructor Name:	**Joseph Pipkin, PhD**
Course Title & #:	**Statistical Methods in Behavioral Sciences - Psy - 214**	Email:	**joseph.pipkin@imperial.edu**
CRN #:	**30033**	Webpage (optional):	**http://www.imperial.edu**
Classroom:	**Online**	Office #:	**Summer is online (Campus – 203E)**
Class Dates:	**6/20 – 7/27/2023**	Office Hours:	**M – Th 9-10am and by appointment (online via zoom)**
Class Days:	**Online**	Office Phone #:	**(760)355-6149 ext. 6149**
Class Times:	**Online**	Emergency Contact:	**(760)355-6144**
Units:	4	Class Format:	**Online**

Course Description

Quantitative methods in behavioral sciences are considered including: scales of measurement, measures of central tendency and variability; probability and sampling distributions, visual displays of data (graphical methods), frequency tables and percentages; introduction to hypothesis testing, statistical inference and measures of association using correlation and linear regression; analysis of variance, chi-square and t-tests. Emphasis is placed on using software for data analysis such as SPSS and Excel and interpreting statistical findings from such analysis. Examples will be used from disciplines including business, social sciences, psychology, sociology, life sciences, health sciences, education and related areas. (CSU, UC)

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

Prerequisite: PSY 101 and MATH 091 or MATH 098 with a grade of "C" or better 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. Explain common methods for gathering data and identify the strengths and weaknesses of the various approaches; differentiate between descriptive and inferential statistics, populations and samples, and variables and data identify the properties of discrete and continuous variables.
2. Align statistical notation and symbols with appropriate quantities of equations (e.g. Sigma for summation notation, N for population size etc.), match data types nominal, ordinal, interval, ratio to the appropriate scales of measurement and explain the implications of data type on the choice of statistical methods.

3. Create, analyze and interpret graphical and numerical/tabular representations of data; calculate common measures of central tendency (e.g. mean) and variability/dispersion (e.g. standard deviation) for both samples and populations.
4. Construct and interpret confidence intervals and explain the importance of the Central Limit Theorem in relation to statistical inference; formulate and test hypotheses of sample data using parametric testing such as linear regression, t-tests, and analysis of variance; understand and apply non-parametric methods such as a chi-square as an alternative to parametric testing.
5. Use computer technology which may include one or more of the following Microsoft Excel, SPSS, R, Minitab to analyze data from a variety of sources such as business, social sciences, psychology, life sciences, health sciences, and education, understand how to create visual displays of data, interpret output and properly format output to conform to APA standards for publication.

Course Objectives

Upon satisfactory completion of the course, students will be able to:
1. Determine the appropriateness and values of different measures of central tendency and variance, including standard scores and percentiles; and graphical representations of each.
2. Compute the coefficients of Spearman's and of Pearson's correlations and levels of significance; regression equations; and graphical representations of each.
3. Use probability theory to discuss aspects of the normal distribution including its use in statistical reasoning.
4. Compute and interpret "t" scores and their significance using data from a minimum of two samples.
5. Compute and interpret "F" ratios and significance levels from one-way and two-way analysis of variance.
6. Compute and interpret results from non-parametric tests including chi-square and Mann-Whitney.
7. Successfully load, interpret and print output data sheets and graphs from statistical software such as SPSS and Excel.

Textbooks & Other Resources or Links

Gravetter, Frederick & Wallnau, Larry B. (2013). Essentials of Statistics for the Behavioral Sciences, 10th Ed - Wadsworth/Cengage Learning: Belmont, CA. ISBN-13: 978-1-133-95657-0; ISBN-10: 1-133-95657-2
8th 9th or 10th edition will work.

Course Requirements and Instructional Methods

This class is strictly online via CANVAS

The syllabus serves as a chronological guide to the class and may change without notice.

Modules Section: Each module represents a small chunk of related information. Within each module, there will be tasks for you to perform such as watch videos and recorded lectures, view PowerPoint slides, complete other assignments, work with statistical software, take quizzes and upload end of chapter "homework" problems, among others. The modules will become available sequentially as you move through the course. Some of the activities in the modules will have clear due dates. These activities must be completed by those due dates and in the time allotted.

Quiz: questions will come from the chapters covered in module and in the textbook. The majority of what you need to know for quizzes is explicitly covered in the modules although a small portion may not be. You are still responsible for knowing the material from each chapter in its entirety unless otherwise specified. It is your responsibility to pay attention to the due dates for quizzes and assignments as they are made available. You will not be able to make up missed quizzes and assignments

Lab work: Each week you are required complete the word problems (**only even numbered problems**) at the end of each chapter covered in the module about one chapter per week due each Sunday at 11:59PM. If you are having difficulty, you need to reach out to me so I can assist you.

Course Grading Based on Course Objectives

Grading Criteria:

An approximate grade/point breakdown for the various methods of evaluation in the course is shown below. Final course grade based on a curve.

Meet & Greet (Discussion): 10 points
Quizzes: 97 points
Assignments: 118 points
Final Exam: 40 points
TOTAL POINTS: 265

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:
- 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 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 while class is in session.   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
  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.

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. 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 and El Centro Regional Center 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 therapy are provided to currently enrolled students. Contact the IVC Mental Health Counseling Services at 760-355-6310 in Room 1536 for more information.

Veteran' Center
The mission of 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.

Students Rights and Responsibility
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.

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

Module 0 & 1 06/20-6/25 Chapters 1 & 2	• Self-Check & Attendance Quiz- 5 points • Discussion: Meet & Greet -10 points • Accessing Microsoft Excel Quiz- 3 points • Summation Notation Quiz-6 points • Simple Math with Microsoft Excel- 8 points (assignment) • Modules 1 & 2 Quiz- 23 points • End of Chapter Homework Chapter 1 & 2- 20 points
Module 2 6/26- 7/2 Chapters 3 & 4	• Chapter 3 mini quiz- 8 points • Chapter 4 quiz- 11 points • End of the chapter Homework Chapter 3 & 4- 20 points
Module 3 7/3-7/9 Chapters 5, 6, 7	• Z- score assignment upload- 10 points • Module 5: Mini quiz- 6 points • End of Chapter Homework Problems- Chapters 5 &7- 20 points
Module 4 7/10-7/16 Chapters 8 & 9	• Experimental Methods 8 mini quiz- 8 points • Chapter 9 quiz- 9 points • End of Chapter Homework Chapter 8 & 9 problems- 20 points
Module 5 7/17-7/23 Chapters 10, 11, 12, 13	• End of Chapter Homework Chapter 10 problems- 20 points • Chapter 13 quiz- 10 points
Module 6 7/24-7/27 Chapters 14 & 15	• Chapter 14 quiz- 8 points • Final exam- 40 points

This may change in case of emergency ***Subject to change without prior notice**