IMPERIAL VALLEY COLLEGE

Basic Course Information

Semester:	**Spring 2022**	Instructor Name:	**Brenda Estrada**
Course Title & #:	**PSY 214-Statistical Methods in Behavioral Science**	Email:	**Brenda.estrada@imperial.edu**
CRN #:	**20825**	Webpage (optional):	**http://www.imperial.edu**
Classroom:	**ONLINE**	Office #:	**Imperial Valley College**
Class Dates:	**February 14-June 10, 2022**	Office Hours:	**Upon request**
Class Days:	**ONLINE**	Office Phone #:	**760-997-6048**
Class Times:		Emergency Contact:	**760-997-6048**
Units:	**4.0**	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. Understand, analyze and apply data using correlations. 2. Understand, analyze and apply data using "t" tests. 3. Understand, analyze and apply data using analysis of variance. 4. Understand, analyze and apply data using chi-square.

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, 8th Ed - Wadsworth/Cengage Learning: Belmont, CA. ISBN-13: 978-1-133-95657-0; ISBN-10: 1-133-95657-2

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 be 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

Quizzes: 129 points

Final Exam: 40 points

Discussion-10 points

Assignments- 138 points

TOTAL POINTS: 455

Other Course Information

COMPLETE YOUR OWN COURSEWORK. - When you register for an online class and log-in to Canvas, you do so with the understanding that you will produce your own work, take your own exams, and will do so without the assistance of others (unless directed by the instructor).

Examples of Academic Dishonesty that can occur in an online environment:

- Copying from others on a quiz, test, examination, or assignment

- Allowing someone else to copy your answers on a quiz, test, exam, or assignment –

Having someone else take an exam or quiz for you

- Conferring with others during a test or quiz (if the instructor didn't explicitly say it was a group project, then he/she expects you to do the work without conferring with others)

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

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February 14- February 18 2022	**Week 1/Module 0:** Introduction to class
February 21- February 25 ,2022	**Week 2 /Module 1** Ch. 1 Introduction to statistics
February 28- March 4, 2022	**Week 3/ Module 2** Ch. 2 Frequency distributions
March 7-March 11, 2022	**Week 4/Module 3** Ch. 3 Measures of central tendency
March 14-March 18, 2022	**Week 5/ Module 4** Ch. 4 Measures of variability
March 21- March 25, 2022	**Week 6/ Module 5** Ch. 5 z-Scores/Probability
March 28- April 1st, 2022	**Week 7/Module 6** Ch. 6 & 7 Probability /Probability and Samples
April 4- April 8, 2022	**Week 8/ Module 7**

	Ch. 8 Introduction to hypothesis testing
April 11- April 15, 2022	**Week 9/ Module 8** Ch. 9 Introduction to t Statistics
April 18- April 22, 2022	**Week 10 SPRING BREAK NO CLASSES**
April 25- April 29, 2022	**Week 11/ Module 9** Ch. 10 The t test for two independent samples
May 2- May 6, 2022	**Week 12/ Module 10** Ch. 11 The t test for two related samples
May 9- May 13, 2022	**Week 13/ Module 11** Ch. Introduction to Analysis of Variance
May 16- May 20, 2022	**Week 14/ Module 12** Ch. 13 Repeated- Measures and Two-Factor Analysis of Variance
May 23- May 27, 2022	**Week 15/ Module 13** Ch. 14 Correlation
May 30- June 3, 2022	**Week 16 / Module 14** Ch. 15The Chi-Square Statistic: Tests for Goodness of Fit Dependence
June 6- June 10, 2022	**Week 17-** FINAL EXAM Extra credit due

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