Imperial Valley College Course Syllabus
Statistical Methods in Behavioral Sciences - PSY 214

Basic Course Information

Semester	Spring 2016	Instructor	Mark A. Duva, Ph.D.
Course Title/ Catalog #/units	Statistical Methods in Behavioral Sciences PSY 214/4 units	Instructor Email	mark.duva@imperial.edu mark.a.duva@live.com
CRN #	20628, 20629	Webpage	https://imperial.blackboard.com/
Room	2600-2610	Office	1700 - 1714
Class Dates	Feb 16 - Jun 10, 2016	Office Hours	MW 11:45am-12:45pm R 2:00pm-3:00pm F 10am-11am
Class Days/Times	MW: 0435-0600pm MW: 0630-0735pm TR: 0940-1105am TR: 1130-1235pm	Office Phone #	(760) 355-6335

Course Description

Quantitative methods in behavioral sciences are considered including: measures of central tendency and variability; graphic methods and percentages; linear correlation and regression; application of normal probability curves; and introducing statistical inferential measures including "t" tests, one and two-way analysis of variance, and chi-square. The data analysis will also involve statistical and graphical analysis and interpretation of behavioral science data using computer technology such as SPSS. (CSU, UC)

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 and Wallnau, Larry B (2013). Essentials of Statistics for the Behavioral Sciences, 8th Edition - Wadsworth Publishing. ISBN-10: 1133956572 | ISBN-13: 9781133956570

Course Requirements and Instructional Methods

The syllabus serves as a guide to the class. We may or may not cover all of the material shown and the Dates are approximations. There will be several quizzes, lab assignments, one (1) midterm exam, and one (1) final exam. Quizzes will be announced in advance and will be given at the beginning of class. They may include multiple choice, true-false, and/or short answer questions. Exam and quiz questions will come from material covered in class and in the textbook. If you are late to class, you will not be allowed to take the quizzes or exams. Some chapters may not be covered in class, but you will still be responsible for the material, unless otherwise specified. No makeups for exams, quizzes, or lab assignments will be given without prior notification and/or documentation of an emergency. No work will be accepted over email. If you find that you are having difficulty with the course, you can seek additional assistance at the various campus support centers. In addition, if you need special accommodations while taking exams or quizzes let me know in advance. An <u>approximate</u> grade/point breakdown is shown below, and final course grades will be based on a subjective curve.

  The lab portion of the course provides some flexibility. At times, it may be used to continue with lecture material. However, the primary focus of the lab is to provide a time for you to develop and work on the problems and equations associated with each of the chapters. You are to complete the even numbered problems for each chapter and turn them in sequentially every two weeks, (i.e. chapter 1, due by end of lab week 2 ; chapter 2 due week 4, chapter 3 due week 6, chapter 4 due week 8 and chapter 5 due week 10 and so on...). No late chapter problem assignments will be accepted, and **<u>if you turn in all homework assignments completed and on time you will earn 50 more points</u>**. These assignments are all or nothing (not extra credit), if you did the work properly you get the points, if the work is messy, incomplete, incorrect, late or non-existent you will not receive any credit. Further, another major purpose to the lab is to integrate computers into all aspects of the data analysis process. Specifically, students will apply knowledge from the lectures and readings in an effort to become comfortable with using two popular computer programs, SPSS and Microsoft Excel, to summarize, describe, graphically depict and interpret data.

Course Grading Based on Course Objectives

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

Graded Coursework		Grade Breakdown
Quizzes	60 Points	A = 90%
Lab work	60 Points	B = 80%
Chapter Problems	150 Points	C = 70%
Midterm	60 Points	D = 60%
Final Exam	80 Points	F = 59% or less
Total	410 Points	

(Example: 410 x 90% = 369 points for the "A")
(Example: 410 x 80% = 328 points for the "B" and so on)

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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 would 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

- <u>Electronic Devices:</u> Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor. Consider: specifics for your class/program
- <u>Food and Drink</u> are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed.
- <u>Disruptive Students:</u> 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.
- <u>Children in the classroom:</u> Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

Academic Honesty

- <u>Plagiarism</u> 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.
- <u>Cheating</u> 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 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 School 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 Help (if applicable)

- <u>Blackboard</u> support center: http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543
- <u>Learning Labs:</u> There are several 'labs' on campus to assist you through the use of computers, tutors, or a combination. Please consult your college map for the Math Lab, Reading & Writing Lab, and Study Skills Center (library). Please speak to the instructor about labs unique to your specific program.
- <u>Library Services:</u> 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.

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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, 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. We now also have a fulltime mental health counselor. For information see http://www.imperial.edu/students/student-health-center/. The IVC Student Health Center is located in the Health Science building in Room 2109, telephone 760-355-6310.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities, please refer to the IVC General Catalog available online at http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762

Information Literacy

Required Language: Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/

Anticipated Class Schedule / Calendar

	TOPICS	READINGS
2/16 Week 1	Introduction to statistics	Ch. 1
2/22 Week 2	Introduction to statistics	Ch. 1
2/29 Week 3	Frequency distributions	Ch. 2
3/07 Week 4	Frequency distributions	Ch. 2
3/14 Week 5	Measures of central tendency	Ch. 3
3/21 Week 6	Measures of variability	Ch. 4
3/28 Week 7	**Spring Break**	
4/04 Week 8	z-Scores: Location of scores, standard distribution: Probability	Ch. 5, 6
4/11 Week 9	z-Scores: Location of scores, standard distribution: Probability	Ch. 5, 6
4/18 Week 10	Introduction to hypothesis testing	Ch. 8
4/25 Week 11	Introduction to the t statistic	Ch. 9
5/02 Week 12	The t test for two related samples	Ch. 10
5/09 Week 13	The t test for two independent samples	Ch. 11
5/16 Week 14	The t test for two independent samples	Ch. 11
5/23 Week 15	Introduction to analysis of variance	Ch. 12
5/30 Week 16	Introduction to analysis of variance	Ch. 12
6/06 Week 17	Repeated Measures and Two factor analysis of variance	Ch. 13
	FINAL EXAM Last day of Class	Comprehensive