

CJ/PSY 315: Behavioral Sciences Statistics

INSTRUCTOR: Joe Allen

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Independent Study

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OFFICE: Behavioral Sciences 109

OFFICE HOURS: By appt.

COURSE PREREQUISITES: None.

COURSE/CATALOG DESCRIPTION:

Introduction to the methods and rules for organizing and interpreting observations; descriptive and inferential statistics, including frequency distributions, hypothesis testing, simple analysis of variance, estimation, and Chi-Square. This course develops and assesses the skills and competencies for the program student learning outcome of the Scientific Method and its Application in the Field of Psychology.

The purpose of this course is to provide students with the fundamental building blocks necessary to conduct and analyze statistical research. Social science research, or the study of people and things around us, consists of many different parts—statistics is just one of these parts, albeit a very important one.

Ever-increasingly, functioning in today's society requires individuals to be proficient in interpreting and conducting statistical research; this course will enable students to become more skilled in these areas which by today's standards are not considered to be so technical anymore. Specific material to be covered throughout the course include: the analysis, presentation and interpretation of descriptive statistics including, measures of central tendency and variability, probability, sampling; and the analysis, presentation and interpretation of inferential statistics including items such as, t-tests, analysis of variance, significance, correlation, and regression analysis.

This course is the first of a two-part sequence in behavioral sciences research required of all majors in Psychology. The sequence intends to introduce the student to behavioral & social sciences research methods (i.e., research design and statistical analysis of data). In PSY 315, students will be introduced to the basics of data measurement, descriptive and inferential statistical techniques used to analyze research data, and proper interpretation and write-up of results.

The analysis of statistics is dictated by being able to manage and process data through the use of computers. Much of our understanding of the current world through statistics is just a button-click away, whereas a few decades ago, these same types of functions would have taken days and even weeks to perform. Thus, in order to better understand statistical methods, these concepts will be introduced in conjunction with statistical software. The "Statistical Package for the Social Sciences" (SPSS) software will be used for analyzing & interpreting quantitative data.

Students will be exposed to survey data and analytical techniques of these type of data in order to provide a hands-on experience in survey methods; the collected data will also serve as a backdrop for statistical analysis assignments using the SPSS program.

STUDENT LEARNING OUTCOMES:

Upon successful completion of this course, the student will have a demonstrable understanding of:

1. The difference between populations and samples, and what is associated with each in terms of research issues and statistical techniques.
2. Variables types and levels of measurement.
3. The various types of descriptive statistics used in social science research, and how to produce these types of statistics in order to summarize and analyze data.
4. The various statistics and techniques used to assess relationships between variables.

5. The use and proper application and interpretation of inferential statistics in conjunction with hypothesis-testing.
6. The proper presentation and interpretation of data in graph and table form.
7. The application of SPSS in terms of proper data entry, coding of variables, performing statistical functions, and producing output for analysis.
8. The methods of writing-up research results in a logical manner and in a suitable format for the social sciences.

MARIANIST EDUCATIONAL VALUES

The five characteristics of a Marianist Education are:

1. Educate for Formation in Faith

Catholic Universities affirm an intricate relationship between reason and faith. As important as discursive and logical formulations and critical thinking are, they are not able to capture all that can be and ought to be learned. Intellectual rigor coupled with respectful humility provide a more profound preparation for both career and life. Intellectual rigor characterizes the pursuit of all that can be learned. Respectful humility reminds people of faith that they need to learn from those who are of other faiths and cultures, as well as from those who may have no religious faith at all.

2. Provide an Excellent Education

In the Marianist approach to education, “excellence” includes the whole person, not just the technician or rhetorician. Marianist universities educate whole persons, developing their physical, psychological, intellectual, moral, spiritual and social qualities. Faculty and students attend to fundamental moral attitudes, develop their personal talents and acquire skills that will help them learn all their lives. The Marianist approach to education links theory and practice, liberal and professional education. Our age has been deeply shaped by science and technology. Most recently, information and educational technologies have changed the way faculty and students research and teach. At Marianist Universities, two goals are pursued simultaneously: an appropriate use of information technology for learning, and the enhancement of interaction between students and teachers. As Catholic, Marianist Universities seek to embrace diverse peoples and understand diverse cultures, convinced that ultimately, when such people come together, one of the highest purposes of education is realized: a human community that respects every individual within it.

3. Educate in Family Spirit

Known for their strong sense of community, Marianists have traditionally spoken of this sense as “family spirit.” Marianist educational experience fosters the development of a community characterized by a sense of family spirit that accepts each person with loving respect, and draws everyone in the university into the challenge of community building. Family spirit also enables Marianist universities to challenge their students, faculty and staff to excellence and maturity, because the acceptance and love of a community gives its members the courage to risk failure and the joy of sharing success.

4. Educate for Service, Justice, and Peace

The Marianist approach to higher education is deeply committed to the common good. The intellectual life itself is undertaken as a form of service in the interest of justice and peace, and the university curriculum is designed to connect the classroom with the wider world. In addition, Marianist universities extend a special concern for the poor and marginalized and promote the dignity, rights and responsibilities of all people.

5. Educate for Adaptation to Change

In the midst of rapid social and technological change, Marianist universities readily adapt and change their methods and structures so that the wisdom of their educational philosophy and spirituality may be transmitted even more fully. “New times call for new methods,” Father Chaminade often repeated. The Marianist university faces the future confidently, on the one hand knowing that it draws on a rich educational philosophy, and on the other fully aware for that philosophy to remain vibrant in changing times, adaptations need to be made.

Selected from *Characteristics of Marianist Universities: A Resource Paper*, Published in 1999 by Chaminade University of Honolulu, St. Mary's University and University of Dayton

Each of these characteristics is integrated, to varying degrees, in this course.

READING MATERIALS:

Gravetter & Wallnau. Essentials of Statistics for the Behavioral Sciences, 5th ed. Wadsworth. 2005.

The textbook also has an accompanying website with useful tutorials and quizzes. I suggest you give it a look: http://www.wadsworth.com/cgi-wadsworth/course_products_wp.pl?fid=M20b&discipline_number=24&product_isbn_issn=053463396X

Kirkpatrick & Feeney. A Simple Guide to SPSS for Windows: For Versions 12.0 & 13.0. With the Student Version of SPSS 12.0 CD. Wadsworth. 2005.

Additional required reading material may be assigned throughout the term.

COURSE APPROACH:

An on-line course does not allow for the easy flow of information as in a traditional classroom setting. Notably, there is often a lag time between questions and responses. To this end, your success in this course depends more on your self-study habits than on the secondary guidance provided by the instructor and through other students. The student must read materials and do assignments in a responsible manner so that s/he can contribute to on-line activities adequately (i.e., be up to speed on things when the instructor talks about it). On-line courses require more planning and pacing on the student's behalf. Besides reading the textbook, other materials will accompany the course, including things like PowerPoint presentation notes and videos and tutorials to be viewed on-line.

COURSE REQUIREMENTS:

- **Six (6) written assignments.** These assignments will range between 1-3 pages. The assignments will generally focus on interpretation and analysis of data performed using SPSS. Assignments, unless noted otherwise, must include the SPSS printout associated with the analysis and interpretation. Write-up of results must be typed and formatted.
- **Five (5) text quiz assignments (TQA).** These quizzes are non-cumulative and cover the material assigned per specified section (usually 2 chapters per quiz assignment). Students are given approximately 10-12 days to complete each assignment. Depending on the chapters covered, expect to spend a few hours minimum for the easier sections and longer for more difficult sections.
- **Four (4) exams.** These exams are non-cumulative and will only include materials covered in the sections determined in the syllabus. The contents of each exam will correspond highly with materials covered in the TQA preceding it. The exams are essentially boiled-down versions of the text quiz assignments, with some modifications to questions/answers. So, if you take the time out to do your TQAs well and understand the material, you should do well on the exams. The exams are given on a select date and are limited by time (usually 1-2 hours). You need to understand the material of the TQAs and not simply memorize it, since many/most of the questions while remaining the same tone, will have different numbers in them than the TQA.
- **One (1) final exam.** This exam is non-cumulative and is the last installment of the sections exams. However, it differs in that you **MUST** take this exam in-person. For those off-island, arrangements will need to be made with the AUP office or your site representative – usually about two weeks before the end of class. For those on Oahu, reservations can be made for various base sites. Details should be forwarded to you from the AUP office as the course approaches its end. For this exam you will be allowed to use some notes (usually an index card w/ concepts or formulas that you find helpful); I will inform you of the note policy before you take the exam and will also inform the AUP of the guidelines for their usage.
- **Five (5) participation activities.** These activities will revolve around a conceptual question or assignment-related question that I either post on the postboard or request something of you to complete and return (up-and-beyond the written assignments). Once a specific discussion or participation activity has been posted, you will have a prescribed amount of time to respond. You are expected to give thoughtful and thorough responses

TERMS OF COURSE REQUIREMENTS:

1. *Lateness is not accepted.* You will have plenty of time to complete each assignment, exam, etc. Once the particular item closes, you will no longer be able to complete it and turn it in. This is not because I'm not a nice, understanding guy; it is primarily because everything is spelled out clearly and you must take responsibility and the fact that I have a duty to the other students in class to be fair.
2. *Exams are to be taken on the days that they are assigned to be taken on-line.* Exceptions are to be granted only in extenuating circumstance, otherwise loss of all credit will occur. If you are given the opportunity to take an exam after given in class, you will be given a different exam which will likely be more comprehensive than the initial one given.
3. *Regular participation and logging in is a must for this course given the nature of the material and the amount covered in such a short period of time.* You will be logging on and submitting materials or participating in discussions several times a week – there is no getting around this. The dates of TQAs, assignments, exams, and discussions fall in a way that you will have to log on regularly. If a student does not log on for a one week period, they will be subject to being immediately dropped from the course for non-attendance. If you know you will be away from a computer for longer than 5 consecutive days, be sure to tell me in advance and provide any necessary paperwork; this will allow me to know your situation and keep you up-to-date.
4. *Students will be expected to read materials and attempt to figure out materials on their own.* This is the weakness of an on-line class format – you will not have the luxury of having the usual back-n-forth that can occur in a classroom environment. Additionally, I am unable to bend over backwards to answer any and all questions you may have, especially if a due date or deadline is looming. I am not at the computer 24/7, so remember to pace yourself and to plan accordingly. That is, start in on your assignments early so I can be given time to respond and you can have time to act on my instruction – **DO NOT DO THINGS LAST MINUTE AND EXPECT ME TO BAIL YOU OUT** – if you do, you will find out that my bucket is not bottomless.
5. *I have an open-door approach when it comes to helping students understand the material and do well in the course. If you would like to meet with me on-line, in-person, or by phone, call/e-mail me and we can figure something out. DON'T HESITATE to talk to, call, or e-mail me!* Usually, the only questions I don't have answers for are those that aren't asked!
6. Any instances of academic dishonesty will result in an "FD" (failure for dishonesty) grade for the course and will be subject to the policies and procedures for the college. If you are at all unclear about what constitutes academic dishonesty, refer to catalogued materials.
7. *As a policy, opportunities for extra credit WILL NOT be available. All students begin the course with perfect scores, and will have every opportunity to maintain this score.*
8. Chaminade will provide assistance for any student with documented disabilities. Any student who believes he/she may need accommodations in this class must contact **Dr. Don Kopf, 735-4845 or Dr. June Yasuhara, 739-4603**, at the Counseling Center (office next to Security) in order to determine if the student meets the requirements for documented disability in accordance with the Americans with Disabilities Act. It is important to contact them as soon as possible so that accommodations are implemented in a timely fashion.
9. The instructor reserves the right to change the schedule of the syllabus when deemed necessary.

GRADING SYSTEM:

The class will be graded on a curve, based on the highest score received on each exam, paper, presentation, participation, and attendance. For this curve, a standardized grading system will be used:

A = 93-100% (of highest point total received)

B = 84-92%

C = 75-83%

D = 66-74%

F = < 65%

Activity	# of Items	Points per Item	Points Possible	% of Final Grade
Writing Assignments	6	25	150	25.0%
Text Quiz Assignments	5	40	200	33.3%
On-line Exams	4	30	120	20.0%
Final Exam (in-person)	1	30	30	5.0%
Bi-Weekly Participation Activity	5	20	100	16.7%
Total			600	100%

As a policy, the curve for this class will not exceed a straight 90-80-70-60 curve. For example, if a student scores 100% on an exam, the curve will revert downward to a standard 90-80 . . . etc. curve. It will not be 93%/84%, etc. Based on overall class performance, the instructor will adjust the curve accordingly if anomalies occur. This grading system always works in favor of students, especially in this course. Based on past performance of other classes, this scoring system essentially brings down a rigid, standard curve down somewhere between -3% and -7%. (in other words, if this applied to this class, an 'A' would be in the 83-87% range, a 'B' in the 73-77% range, and so forth.

About the Instructor:

Joe Allen is a full-time faculty member in the C&CJ Department, advisor to CJ students, and the program's internship coordinator. His usual repertoire of courses includes criminology, juvenile delinquency, behavioral sciences statistics, and criminal justice system. He began teaching at Chaminade in 1994 as adjunct faculty, and has also taught courses at the University of Hawaii and Hawaii Pacific University. Before joining the Department in a full-time capacity, he worked with the Corrections Population Management Commission, Department of the Attorney General, and the Social Science Research Institute (University of Hawaii). Throughout the years, he has been involved in various research and evaluation projects, including the topics of: probation and parole recidivism, sentencing simulation modeling and policy analysis, juvenile delinquency and youth gangs, community crime prevention, restorative justice, domestic violence and anger management, substance abuse treatment, ecstasy, prostitution, runaway and missing children, uniform crime reporting, victimization surveys, and crime trends and law enforcement/correctional policy analysis. Mr. Allen is currently a Ph.D. candidate in the Sociology Department at the University of Hawaii with an emphasis in Criminology, and is expected to complete his doctoral degree in Summer-Fall 2006. Before transferring to the University of Hawaii, he attended the University of Minnesota.

