



## CJ/PSY315: Behavioral Sciences Statistics

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Office Hours:	By appt. (easy, just email to set up)	
Course Prereq:	None. Open to non-majors.	

### **COURSE/CATALOG DESCRIPTION:**

This course provides an 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.

### **COURSE DESCRIPTION:**

This course will be presented using a variety of methods, primarily through lectures and group discussions and exercises, often employing instructional aids like PowerPoint and other audio/visual material. The assigned textbook for the course is: *Gravetter & Wallnau. Essentials of Statistics for the Behavioral Sciences, 8<sup>th</sup> ed.* Cengage, 2014. (ISBN: 9781133956570) Additional reading materials will also be assigned to supplement the textbook.

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.

**COURSE WEBSITE ADDRESS:** <https://chaminade.instructure.com/>

**HARDWARE EQUIPMENT:** Canvas is accessible from both PC and Mac computers with a reliable internet connection. You will also need to be able to access video and/or materials from some external websites, and files posted within this course in the document sharing section. You should have access to audio equipment (speakers or headphones) so you can hear audio. You should not take this class if you do not have reliable internet access.

**SOFTWARE REQUIREMENTS:** You will need to have some ability to listen to audio in MP3 format, watch visual material in MP4 format, and be able to read .pdf files. If you encounter issues with your software for any of these during the term, let me know and I can let you know alternatives (e.g., VLC Player). In terms of web browsers, Google Chrome and FireFox are usually the most seamless (e.g., sometimes Safari may be incompatible with some video files).

#### **Technical Assistance For Canvas Users:**

- Search for help on specific topics or get tips in [Canvas Students](#)
- [Live chat with Canvas Support for students](#)
- Canvas Support Hotline for students: +1-833-209-6111
- Watch this [video to get you started](#)
- [Online tutorials](#): click on “Students” role to access tutorials
- Contact the Chaminade IT Helpdesk for technical issues: [helpdesk@chaminade.edu](mailto:helpdesk@chaminade.edu) or call (808) 735-4855

#### **ALIGNMENT OF LEARNING OUTCOMES:**

##### **COURSE LEARNING OUTCOMES**

Upon successful completion of this course, students will be able to:

1. Explain the difference between populations and samples, and what is associated with each in terms of research issues and statistical techniques.
2. Identify different variables types and levels of measurement.
3. Calculate/produce various types of descriptive statistics used in social science research in order to summarize and analyze data.
4. Understand and apply various statistics and techniques used to assess relationships between variables.
5. Identify the proper application and interpretation of inferential statistics in conjunction with hypothesis-testing.
6. Produce proper presentations and interpretations of data in graph and table form.
7. Understand and use SPSS in terms of proper data entry, coding of variables, performing statistical functions, and producing output for analysis.
8. Write research results in a logical manner and in a suitable format for the social sciences.

#	CCJ PROGRAM LEARNING OUTCOMES (PLOs)
1	Describe the interrelated institutions and processes of the criminal justice system, including the basic rights guaranteed to each individual by both state and federal constitutions and laws.
2	Apply theories of crime and criminal justice to explain actual and hypothetical scenarios, behaviors, and trends.
3	Evaluate social, cultural, and technological change and its impact on the criminal justice system.
4	Assess social inequities in crime and criminal justice processes by race, social class, gender, region and age.
5	Articulate a working knowledge of qualitative and quantitative research methods by explaining the various social science methods of inquiry and use these to test specific criminological research questions.
6	Engage the Marianist tradition of education for service, peace, and justice as it pertains to local and national social justice, injustices, and inequities in the criminal justice field.

## MARIANIST EDUCATIONAL VALUES

This class represents one component of your education at Chaminade University of Honolulu. An education in the Marianist Tradition is marked by five principles and you should take every opportunity possible to reflect upon the role of these characteristics in your education and development:

1. Education for formation in faith.
2. Provide an integral, quality education.
3. Educate in family spirit.
4. Educate for service, justice and peace.
5. Educate for adaptation and change.

For this course specifically, the course will tend to emphasize on #4 (educate for service, justice and peace) and #5 (educate for adaptation and change). These values are important considerations when working with data and, especially, how it is interpreted and presented/framed.

## NATIVE HAWAIIAN VALUES

Education is an integral value in both Marianist and Native Hawaiian culture. Both recognize the transformative effect of a well-rounded, value-centered education on society, particularly in seeking justice for the marginalized, the forgotten, and the oppressed, always with an eye toward God (Ke Akua). This is reflected in the 'Ōlelo No'eau (Hawaiian proverbs) and Marianist core beliefs:

1. Educate for Formation in Faith (Mana) E ola au i ke akua ('Ōlelo No'eau 364) May I live by God.
2. Provide an Integral, Quality Education (Na'auao) Lawe i ka ma'alea a kū'ono'ono ('Ōlelo No'eau 1957) Acquire skill and make it deep.
3. Educate in Family Spirit ('Ohana) 'Ike aku, 'ike mai, kōkua aku kōkua mai; pela iho la ka nohana 'ohana ('Ōlelo No'eau 1200) Recognize others, be recognized, help others, be helped; such is a family relationship.
4. Educate for Service, Justice and Peace (Aloha) Ka lama kū o ka no'eau ('Ōlelo No'eau 1430) Education is the standing torch of wisdom.
5. Educate for Adaptation and Change (Aina) 'A'ohe pau ka 'ike i ka hālau ho'okahi ('Ōlelo No'eau 203) All knowledge is not taught in the same school.

## ALIGNMENT OF LEARNING OUTCOMES

Area/CLO	CLO 1	CLO 2	CLO 3	CLO 4	CLO 5	CLO 6	CLO 7	CLO 8
Essential Questions	1	2	3	4	5	6	7	8
Marianist /NH Values	4			4	2	5	2,5	
Program Learning Outcomes	5	5	5	3,5	2,5	5	3,5	5

## ASSESSMENT:

- **Quizzes.** These quizzes are non-cumulative and will be administered every 2-3 weeks and will usually cover 2-3 chapters of material at a time.
- **Written/Data assignments.** These assignments will generally focus on interpretation of data/analysis using SPSS. Assignments are due periodically throughout the term and will correspond with materials covered in class the week before. The assignment will be handed out during the week in which the materials are covered. Assignments, unless noted otherwise, must include the

SPSS printout associated with the analysis and interpretation. Write-up of results must be typed and formatted.

- **Homework assignments.** Homework assignments will focus on problems presented in the textbook at the end of each chapter, supplementary handouts given in class, etc. For these assignments, the instructor will ask the student to complete select problems in chapters coinciding with lecture during that timeframe. Dates for homework assignments are not listed in the syllabus as the timing will often be based on classroom progress in sections beforehand. Basically though, the instructor will assign chapter problems during the week prior to their completion due date.
- **Midterm Examinations.** These exams are non-cumulative and will only include materials covered in the specified sections. The exam contents will correspond highly with materials covered and tested in the quizzes.
- **Final Examination.** This exam is cumulative and will include material covered throughout the entire semester.
- **Participation/Attendance.** Student can fulfill this aspect of the course by attending class regularly and participating. Absences up and beyond 5 for the entire term, especially without excuse, will negatively impact the student's grade in a sizable way (see below regular class attendance).

#### GRADING SYSTEM:

The class will be graded based on the following standardized grading system:

**A = 90-100%**

**B = <90-80%**

**C = <80-70%**

**D = <70-60%**

**F = <60%**

Activity/Assignment	% of Final Grade
Quizzes	25%
Writing/Data Assignments/Homework	20%
Midterm Examinations	25%
Final examination	20%
Classroom Participation/Attendance	10%
	<b>100%</b>

#### Grading Scale

A - Outstanding scholarship and an unusual degree of intellectual initiative

B - Superior work done in a consistent and intellectual manner

C - Average grade indicating a competent grasp of subject matter

D - Inferior work of the lowest passing grade, not satisfactory for fulfillment of prerequisite course work

F - Failed to grasp the minimum subject matter; no credit given

#### ATTENDANCE & PARTICIPATION

- **Regular Class Attendance.** As a policy, if a student misses more than **6** classes throughout the term, a deficiency notice will be sent to the registrar's office. Absences up and beyond 6 will result in the student losing 5% of their overall final grade points for each absence. For those with extenuating circumstances, documentation will be required for an incomplete (to be made up no later than 30 days after the final exam). "Extenuating circumstances" will be determined on a case-by-case basis, but the standard for this sort of exception is considered as circumstances beyond one's control (e.g., medical illness, family emergency). Unexcused absences equivalent to more than a week of classes may lead to a grade reduction for the course. Any absence of two weeks or more must be reported to the Associate Provost and the Records Office by the instructor. Federal regulations require continued attendance for continuing payment of financial aid. If attendance is not continuous, financial aid may be terminated. When illness or personal reasons necessitate continued absence, the student should officially withdraw from all affected

courses. Anyone who stops attending a course without official withdrawal may receive a failing grade.

- **Regular classroom participation.** Besides simply coming to class, students will contribute to lecture, classroom discussions and exercises, informal presentations, and complete in-class and out-of-class assignments. Contributions to group and individual assignments will be assessed through participation (e.g., extent and depth of discussion), completeness of work turned in, etc. This also means that students will come to class prepared, being able to respond to questions posed by the instructor.

#### **TERMS OF COURSE REQUIREMENTS:**

1. *Late assignments/projects will be discounted an initial 30% and 10% per day after the due date. Assignments, quizzes, and exams that are not completed by the time items have been graded or discussed in class will receive no credit.*
2. Unless otherwise specified, *assignments are due at the beginning of class.*
3. *Quizzes & Exams are to be taken on the days that they are administered.* Exceptions are granted only in extenuating circumstances, otherwise loss of all credit will occur. Final exams may be taken earlier if needed and arrangements can be agreed upon; taking the final exam after the scheduled final exam day/time will not be considered unless extenuating circumstances exist.
4. *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.*
5. *Regular attendance is a must, given the amount of material covered in the course.* If you know you will be missing a class in the future due to legitimate reasons, be sure to tell me in advance and provide any necessary paperwork; this will allow me to keep you up-to-date on material you will be missing.
6. *Students are expected to read materials as assigned.* It is especially important that students read and do work outside of the classroom due to the breadth of material covered during the term.
7. *I have an open door when it comes to helping students understand the material and do well in the course. If you would like to meet with me, don't hesitate to approach me and/or email me to set up an appointment.*
8. 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.
9. The instructor reserves the right to change the schedule of the syllabus when deemed necessary.

#### **ADA POLICY**

If you need individual accommodations to meet course outcomes because of a documented disability, please speak with me to discuss your needs as soon as possible so that we can ensure your full participation in class and fair assessment of your work. Students with special needs who meet criteria for the Americans with Disabilities Act (ADA) provisions must provide written documentation of the need for accommodations from the Counseling Center by the end of week three of the class, in order for instructors to plan accordingly. If a student would like to determine if they meet the criteria for accommodations, they should contact the Kōkua 'Ike Coordinator at (808) 739-8305 for further information ([ada@chaminade.edu](mailto:ada@chaminade.edu)).

#### **TUTORING AND WRITING SERVICES**

Chaminade is proud to offer free, one-on-one tutoring and writing assistance to all students. Tutoring and writing help is available on campus at Kōkua 'Ike: Center for Student Learning in a variety of subjects (including, but are not limited to: biology, chemistry, math, nursing, English, etc.) from trained Peer and Professional Tutors.

Please check Kōkua `Ike's website (<https://chaminade.edu/advising/kokua-ike/>) for the latest times, list of drop-in hours, and information on scheduling an appointment. Free online tutoring is also available via Smarthinking. Smarthinking can be accessed 24/7 from your Canvas account. Simply click Account – Notifications – Smarthinking. For more information, please contact Kōkua `Ike at [tutoring@chaminade.edu](mailto:tutoring@chaminade.edu) or 808-739-8305.

### **UNIVERSITY STATEMENT ON ACADEMIC HONESTY**

Academic honesty is an essential aspect of all learning, scholarship, and research. It is one of the values regarded most highly by academic communities throughout the world. Violations of the principle of academic honesty are extremely serious and will not be tolerated.

Students are responsible for promoting academic honesty at Chaminade by not participating in any act of dishonesty and by reporting any incidence of academic dishonesty to an instructor or to a University official. Academic dishonesty may include theft of records or examinations, alteration of grades, and plagiarism.

Questions of academic dishonesty in a particular class are first reviewed by the instructor, who must make a report with recommendations to the Dean of the Academic Division. Punishment for academic dishonesty will be determined by the instructor and the Dean of the Academic Division and may range from an 'F' grade for the work in question to an 'F' for the course to suspension or dismissal from the University.

### **TITLE IX COMPLIANCE**

Chaminade University of Honolulu recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct, physical and/or psychological abuse will NOT be tolerated at CUH. If you have been the victim of sexual misconduct, physical and/or psychological abuse, we encourage you to report this matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment, and should I learn of any sexual misconduct, physical and/or psychological abuse, I must report the matter to the Title IX Coordinator. If you or someone you know has been harassed or assaulted, you can find the appropriate resources by visiting Campus Ministry, the Dean of Students Office, the Counseling Center, or the Office for Compliance and Personnel Services.

### **Attendance Policy**

The following attendance policy is from the 2019-2020 Academic Catalog (p. 54-55). Faculty members should also check with their divisions for division-specific guidelines.

Students are expected to attend regularly all courses for which they are registered. Students should notify their instructors when illness or other extenuating circumstances prevents them from attending class and make arrangements to complete missed assignments. Notification may be done by emailing the instructor's Chaminade email address, calling the instructor's campus extension, or by leaving a message with the instructor's division office. It is the instructor's prerogative to modify deadlines of course requirements accordingly. Any student who stops attending a course without officially withdrawing may receive a failing grade.

Unexcused absences equivalent to more than a week of classes may lead to a grade reduction for the course. Any unexcused absence of two consecutive weeks or more may result in being withdrawn from the course by the instructor, although the instructor is not required to withdraw students in that scenario. Repeated absences put students at risk of failing grades.

Students with disabilities who have obtained accommodations from the Chaminade University of Honolulu ADA Coordinator may be considered for an exception when the accommodation does not materially alter the attainment of the learning outcomes.

Federal regulations require continued attendance for continuing payment of financial aid. When illness or personal reasons necessitate continued absence, the student should communicate first with the instructor to review the options. Anyone who stops attending a course without official withdrawal may receive a failing grade or be withdrawn by the instructor at the instructor's discretion.

### **Academic Conduct Policy**

From the 2019-2020 Undergraduate Academic Catalog (p. 39): Any community must have a set of rules and standards of conduct by which it operates. At Chaminade, these standards are outlined so as to reflect both the Catholic, Marianist values of the institution and to honor and respect students as responsible adults. All alleged violations of the community standards are handled through an established student conduct process, outlined in the Student Handbook, and operated within the guidelines set to honor both students' rights and campus values.

Students should conduct themselves in a manner that reflects the ideals of the University. This includes knowing and respecting the intent of rules, regulations, and/or policies presented in the Student Handbook, and realizing that students are subject to the University's jurisdiction from the time of their admission until their enrollment has been formally terminated. Please refer to the Student Handbook for more details. A copy of the Student Handbook is available on the Chaminade website.

For further information, please refer to the Student Handbook:

<https://chaminade.edu/wp-content/uploads/2019/08/NEW-STUDENT-HANDBOOK-19-20-Final-8.20.19.pdf>

### **Credit Hour Policy**

The unit of semester credit is defined as university-level credit that is awarded for the completion of coursework. One credit hour reflects the amount of work represented in the intended learning outcomes and verified by evidence of student achievement for those learning outcomes. Each credit hour earned at Chaminade University should result in 37.5 hours of engagement. For example, in a one credit hour traditional face to face course, students spend 50 minutes in class per week for 15 weeks, resulting in a minimum of 12.5 instructional hours for the semester. Students are expected to engage in reading and other assignments outside of class for at least 2 additional hours per week, which equals an additional 25 hours. These two sums result in a total student engagement time of 37.5 hours for the course, the total engagement time expected for each one credit course at Chaminade.

The minimum 37.5 hours of engagement per credit hour can be satisfied in fully online, internship, or other specialized courses through several means, including (a) regular online instruction or interaction with the faculty member and fellow students and (b) academic engagement through extensive reading, research, online discussion, online quizzes or exams; instruction, collaborative group work, internships, laboratory work, practica, studio work, and preparation of papers, presentations, or other forms of assessment. This policy is in accordance with federal regulations and regional accrediting agencies.

**ABOUT THE INSTRUCTOR:**

*Dr. Allen is a full-time faculty member, Associate Professor, in the C&CJ Department. He is an advisor to CJ majors and oversees the CJ Club. His usual repertoire of courses includes criminology, juvenile delinquency, behavioral sciences statistics, survey research methods & statistics, seminar in criminal justice agencies, and sex crimes. He has been a full-time faculty member in the Department since 2004 and began teaching at Chaminade in a part-time capacity in 1994. He has also taught courses in Sociology at the University of Hawaii and Hawaii Pacific University. Prior to Chaminade, he worked with the Corrections Population Management Commission (thru the Department of Public Safety), the 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: victim compensation/restitution, 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. Dr. Allen received his Ph.D. from the Sociology Department at the University of Hawaii with an emphasis in Criminology. Before transferring to the University of Hawaii, he attended the University of Minnesota (he was born in Minnesota and spent his earlier formative years there).*



**COURSE SCHEDULE****CJ/PSY315**

<b>Week</b>	<b>General Topic</b>	<b>Read for Week</b>
<b>1</b> 8/24-8/28	Course Introduction Introduction to Statistics	Ch. 1
<b>2</b> 8/31-9/4	Frequency Distributions	Ch. 2
<b>3</b> 9/7-9/11	<i>Monday (9/7) – NO CLASS (Holiday – Labor Day)</i> <b>Tentative: Quiz – Chapters 1-2</b> Measures of Central Tendency	Ch. 3
<b>4</b> 9/14-9/18	Variability <b>Tentative: Quiz – Chapters 3-4</b>	Ch. 4
<b>5</b> 9/21-9/25	Z-Scores & Standardized Distributions <b>Tentative: Midterm Exam #1 – Chapters 1-4</b>	Ch. 5
<b>6</b> 9/28-10/2	Probability & Samples	Ch. 6
<b>7</b> 10/5-10/9	Probability & Samples (cont'd.) <b>Tentative: Quiz – Chapters 5-6</b>	Ch. 7
<b>8</b> 10/12-10/16	<i>Monday (10/12) – NO CLASS (Holiday – Discoverers' Day)</i> Constructing & Testing Hypotheses	Ch. 8
<b>9</b> 10/19-10/23	<b>Tentative: Quiz – Chapters 7-8</b> t Statistic	Ch. 9
<b>10</b> 10/26-10/30	<b>Tentative: Midterm Exam #2 – Chapters 5-8</b> t Test for Two Independent Samples	Ch. 10
<b>11</b> 11/2-11/6	t Test for Two Related Samples <b>Tentative: Quiz – Chapters 9-10</b>	Ch. 11
<b>12</b> 11/9-11/13	<i>Wednesday (11/11) – NO CLASS (Holiday – Veterans' Day)</i> <b>Tentative: Quiz – Chapters 11-12</b> ANOVA	Ch. 12
<b>13</b> 11/16-11/20	ANOVA cont'd <b>Tentative: Quiz – Chapters 12-13</b>	Ch. 13
<b>14</b> 11/23-11/25	Correlation & Regression Chi-Square <b>Tentative: Quiz – Chapters 14-15</b>	Ch. 14-15

**\*\*\*\*FINAL EXAMINATION: MUST BE COMPLETED BY WEDNESDAY 11/25\*\*\*\***

## **Chapters & Topics**

### ***PART I: INTRODUCTION AND DESCRIPTIVE STATISTICS.***

1. Introduction to Statistics.
2. Frequency Distributions.
3. Measures of Central Tendency.
4. Measures of Variability.

### ***PART II: FOUNDATIONS OF INFERENTIAL STATISTICS.***

5. z-Scores: Location of Scores and Standardized Distributions.
6. Probability.
7. Probability and Samples: The Distribution of Sample Means.
8. Introduction to Hypothesis Testing.

### ***PART III: USING $t$ STATISTICS FOR INFERENCES ABOUT POPULATION MEANS AND MEAN DIFFERENCES.***

9. Introduction to the  $t$  Statistic.
10. The  $t$  Test for Two Independent Samples.
11. The  $t$  Test for Two Related Samples.

### ***PART IV: ANALYSIS OF VARIANCE: TESTS FOR DIFFERENCES AMONG TWO OR MORE POPULATION MEANS.***

12. Introduction to Analysis of Variance.
13. Repeated-Measures and Two-Factor Analysis of Variance.

### ***PART V: CORRELATIONS AND NONPARAMETRIC TESTS.***

14. Correlation and Regression.
15. The Chi-Square Statistic: Tests for Goodness of Fit and Independence.