

## **CJ/PSY 315 Behavioral Sciences Statistics**

<b>Instructor: Abby Halston, Ed.D, NCC, LMFT</b> <b>Office Hours: Before class by appointment</b>	<b>Room: Schofield Barracks Rm 227</b>
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### **Required Materials:**

Course text: Essential Statistics for Behavioral Science, 8th edition by Garvetter

**Course link :** <https://login.cengagebrain.com/course/MTPP-M21P-0LG5>

**Course Key:** MTPP-M21P-0LG5

### **Catalog Course 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 the Chi-Square.

### **Program Linking Statement**

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 Behavioral Sciences.

### **Student Learning Outcomes**

Student will demonstrate an understanding of:

1. The nature of quantitative data.
2. Presenting data in graph and table form.
3. Using descriptive statistics to summarize and analyze raw data.
4. Research skills to investigate relationships among variables through the use of correlational analysis, percentage table analysis, and chi square.
5. Ability to test hypotheses through the use of z, t- & F tests and tests of significance.
6. Communicating research results in a clear and appropriate format.
7. The scientific method in relationship to statistics.
8. The relationship between statistics and research.
9. Descriptive and inferential statistics.
10. How the Five Marianist Educational Values are integrated into the course.

### **Scientific Method Definitions**

The **METHODS OF SCIENCE** are only tools that we use to obtain knowledge about phenomena.

The **SCIENTIFIC METHOD** is a set of assumptions and rules about collecting and evaluating data. The explicitly stated assumptions and rules enable a standard, systematic method of investigation that is designed to reduce bias as much as possible. Central to the scientific method is the collection of data, which allows investigators to put their ideas to an empirical test, outside of or apart from their personal biases. In essence, stripped of all its glamour, scientific inquiry is

nothing more **THAN A WAY OF LIMITING FALSE CONCLUSIONS ABOUT NATURAL EVENTS.**

Knowledge of which the credibility of a profession is based must be objective and verifiable (testable) rather than subjective and untestable.

**SCIENCE** is a mode of controlled inquiry to develop an objective, effective, and credible way of knowing.

The assumptions one makes regarding basic qualities of human nature (cognitive, affective, behavioral, and physiological processes) affect how one conceptualizes human behavior.

The two basic functions of scientific approach are 1) advance knowledge, to make discoveries, and to learn facts in order to improve some aspect of the world, and 2) to establish relations among events, develop theories, and this helps professionals to make predictions of future events.

Research Design And Counseling  
Heppner, Kivlighan, and Wampold

A **THEORY** is a large body of interconnected propositions about how some portion of the world operates; a **HYPOTHESIS** is a smaller body of propositions. **HYPOTHESES** are smaller versions of theories. Some are derived or born from theories. Others begin as researchers' hunches and develop into theories.

The **PHILOSOPHY OF SCIENCE** decrees we can only falsify, not verify (prove), theories because we can never be sure that any given theory provides the best explanation for a set of observations.

Research Method In Social Relations  
Kidder

**THEORIES** are not themselves directly proved or disproved by research. Even **HYPOTHESES** cannot be proved or disproved directly. Rather, research may either support or fail to support a particular hypothesis derived from a theory.

Scientific research has four general goals: (1) to describe behavior, (2) to predict behavior, (3) to determine the causes of behavior, and (4) to understand or explain behavior.

Methods In Behavioral Research; Cozby

In order to verify the reliability and validity of scientific research it is important to replicate the results. It is the preponderance of evidence that establishes/supports the theory.

<http://allpsych.com/researchmethods/replication.html>

### **Students with Disabilities**

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. June Yasuhara, 808-735-4845**, 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 her as soon as possible so that accommodations are implemented in a timely fashion.

### **Marianist Educational Values**

Chaminade University is a Catholic, Marianist University. 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.

### **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.

### **Attendance**

Students are expected to attend regularly all courses for which they are registered. Students should notify their instructors when illness prevents them from attending class and make arrangements to complete missed assignments. Any student who stops attending a course without officially withdrawing may receive a failing grade. Attendance counts in the final grade (check syllabus under ‘percent’).

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 determined. When illness or personal reasons necessitate continued absence, the student should officially withdraw from all affected courses.

## **Assessment**

### **1-Attendance and class participation in exercises: 10 classes @ 10 points each**

Each student is expected to have on-time attendance for all 10 class sessions. Class activities are designed to complement information from our text and to receive credit for participation each student will need to contribute to the class discussions and engage in group activities. It is important that you plan ahead and be prepared by completed the weekly assigned chapter readings.

### **2- Weekly Chapter Review Problem set- 15 chapters @ 900 points total**

Each week students will complete the chapter review problem sets.

### **3- Weekly Practice Chapter Quizzes- 15 chapters @ 30 points each**

Each week students will complete practice chapter quizzes.

### **4- Midterm- 1 @ 25 points**

This exam will only include materials covered in the specified sections. The exam contents will correspond highly with materials covered and tested in the quizzes.

### **5- Final- 1 @ 25 points**

This exam will only include materials covered in the specified sections. The exam contents will correspond highly with materials covered and tested in the quizzes.

## **Grading**

A = 90% or better

B = 80% to 89%

C = 70% to 79%

D = 60% to 69%

F = below 60%

## **Assessment Review Total:**

Attendance: 10 classes @ 10 points each= 100 points

Chapter Problem Sets: 15 chapters @ 900 total points

Weekly Practice Quizzes: 15 chapters @ 30 points each= 450

Mid-Term: 1 @ 25 points

Final Exam: 1 @ 25 points

Total: 1,500 points total

Late assignments/quizzes will be accepted up to 1 week from the original due date with a 50% penalty; after that time a score of zero will be given.

**Course Calendar- SYLLABUS TO CHANGE WITH NOTICE.**

<b>Dates</b>	<b>Assigned chapters/lectures</b>	<b>Assignments Due By 11:59pm</b>
Week 1- January 13, 2017	Chapter 1	January 19, 2017 Chapter 1 Problem set & practice quiz
Week 2- January 20, 2017	Chapters 2 & 3	January 23, 2017 Chapters 2 & 3 Problem sets & practice quizzes
Week 3- January 27, 2017	Chapters 4 & 5	January 30, 2017 Chapters 4 & 5 Problem sets & practice quizzes
Week 4- February 3, 2017	Chapters 6 & 7	February 6, 2017 Chapters 6 & 7 Problem sets & practice quizzes
Week 5- February 10, 2017	Midterm exam	
Week 6- February 17, 2017	Chapter 8 & 9	February 21, 2017 Chapters 8 & 9 Problem sets & practice quizzes
Week 7- February 24, 2017	Chapters 10 & 11	February 27, 2017 Chapters 10 & 11 Problem sets & practice quizzes
Week 8- March 3, 2017	Chapters 12 & 13	March 6, 2017 Chapters 12 & 13 Problem sets & practice quizzes
Week 9- March 10, 2017	Chapter 14 & 15	March 13, 2017 Chapters 14 & 15 Problem sets & practice quizzes
Week 10- March 17, 2017	Final exam	