

UNIVERSITY OF THE INCARNATE WORD
School of Professional Studies
PSYC 3380 Applied Statistics for the Behavioral Sciences
COURSE OUTLINE

Term and Year: Approved for Academic Year 2017-2018

See Instructor Section of Blackboard Course for More Information

Overview of the Course

This is a course designed to prepare students to effectively participate in the research process.

Study Topics:

- Introductory concepts (e.g., populations, samples, independent and dependent variables)
- Frequency distributions
- Visual displays of data
- Measures of central tendency
- Sampling
- Probability
- Normal curve
- Standardization
- z-scores
- Effect size
- Confidence intervals
- Statistical power
- Hypothesis testing with z tests and t tests

Description of the course:

This course examines a variety of research methodologies relevant to the behavioral and social sciences. The course prepares students to critically analyze and apply research methods, explores frequency distributions, central tendency and variability, validity, reliability, sampling and probability, t tests, and other components of scientific research including the basic procedures and designs, laboratory apparatus, and treatment of data.

Prerequisites: PSYC (1301) Introduction to Psychology, Scientific Literacy in Psychology (2320), and Math (1304).

This course is part of: B. S. in General Psychology

Outcomes	Assessments will be a combination of the following
1. Express the basic logic of statistical reasoning. 2. Articulate the interconnections between theory, methods, and statistics. 3. Describe the uses, strengths and limitations of statistical software.	Written and/or oral discussion, examinations, class exercises, case studies, presentations (individual or group), or formal research based paper.

4. Interpret ethical issues related to statistics research. 5. Explain the societal implication of the application of statistics in research. 6. Interpret statistical information from published empirical research. 7. Apply statistical concepts and procedures. 8. Conduct statistical analysis on assigned data using computer software.	
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Note: The School of Applied Sciences has adopted the APA Guidelines for the Undergraduate Psychology Major, Version 2.0

Text:

Probability and Statistics EBook

<http://wiki.stat.ucla.edu/socr/index.php/EBook>.

Course Outline

Week	Chapter Readings and Discussions	In Class and Homework Assignments
Week #1	Chapter 1: Introduction to statistics	Homework/Class Activities (3) Course Materials Review and Discussion (2) Paper/Project Development (1)
Week #2	Chapter 2: Describing, exploring and comparing data	Homework/Class Activities (3) Course Materials Review and Discussion (2) Paper/Project Development (1) Submit topic for research paper/project
Week #3	Chapter 3: Probability Chapter 4: Probability distributions	Homework/Class Activities (3)

		<p>Course Materials Review and Discussion (2)</p> <p>Paper/Project Development (1)</p>
Week #4	Chapter 5: Normal probability distributions	<p>Homework/Class Activities (3)</p> <p>Course Materials Review and Discussion (2)</p> <p>Paper/Project Development (1)</p> <p>Submit outline of research paper/project</p> <p>Midterm Examination (questions from first half of the course)</p>
Week #5	Chapter 6: Relations between distributions	<p>Homework/Class Activities (3)</p> <p>Course Materials Review and Discussion (2)</p> <p>Paper/Project Development (1)</p>
Week #6	Chapter 7: Point and interval estimates	<p>Homework/Class Activities (3)</p> <p>Course Materials Review and Discussion (2)</p> <p>Paper/Project Development (1)</p>
Week #7	Chapter 8: Hypothesis testing	<p>Homework/Class Activities (3)</p> <p>Course Materials Review and Discussion (2)</p>

		Paper/Project Development (1)
Week #8	Chapter 9: Inferences from two samples	Homework/Class Activities (3) Course Materials Review and Discussion (2) Paper/Project Development (1) Submit completed research paper/project Final Examination (questions from second half of the course)

Total 48 hours

Note: Each week you will notice a number in parenthesis. This is the Alternative Learning Equivalencies for this course. It is an expectation for the minimum amount of time (hours) you will spend on each topic during the week. Its primary purpose is for accreditation.

Grading Activities Criteria and Guidelines

Grading Standards:

Discussion/Participation	20%
Homework/Assignment	15%
Research Paper/Project	15%
Midterm Examination	25%
Final Examination	25%
Total	100%

Grading Scale:

A	93 - 100	B-	80 - 82	D+	67 – 69
A-	90 - 92	C+	77 - 79	D	63 – 66
B+	87 - 89	C	70 - 76	D-	60 – 62
B	83 - 86	There is no C- grade at UIW		F	< 60

A and A- indicates a superior grasp of the subject matter of the course, initiative and originality in attacking problems, and ability to relate knowledge to new situations.

B+, B, and B- indicates better than average grasp of the subject matter of the course and ability to apply principles with intelligence.

C+ and C indicates an acceptable grasp of the essentials of the course.

D+, D, and D- indicates less than average performance in the course.

F indicates failure to master the minimum essentials of the course. The course must be repeated.

Discussion:

Students are encouraged to use outside materials and examples in class discussions, whether online (in online version of the class) or on-ground. Constructive class contribution includes being present, engaged, and professional. We will try to spend time each class discussing content in addition to lectures. Students will be expected to participate in discussion by asking questions, sharing examples, presenting arguments, and sharing real-world applications.

Participation, Punctuality and Attendance: Requirements and Expectations for In-person Classes

- Attendance: Abide by the UIW Attendance Policy as stated in the Catalog: <http://uiw.smartcatalogiq.com/2015-2017/Catalog/VIII-Institutional-Academic-Policies/Attendance-and-Religious-Observance-Policies>
- Eating and Smoking: NOT ALLOWED in class
- Talking and Messaging using mobile devices: NOT ALLOWED in class
- Copies of home works, tests, exams, and e-mail communication: Save for your records
- Assignments and Home works with due dates: Expected to be turned-in on time

Homework Rubric:

Use APA style writing as the standard format. Homework will be graded using the rubric below:

Homework Rubric				
Criteria	90 - 100% Excellent	80 – 89% Good	70 – 79% Fair	Below 70% Poor
Completeness	Complete in all respects; reflects all requirements	Complete in most respects; reflects most requirements	Incomplete in many respects; reflects few requirements	Incomplete in most respects; does not reflect requirements
Analysis, evaluation, and recommendations	Presents detailed, realistic, and appropriate recommendations clearly supported by the information presented and concepts from the reading	Presents specific, realistic, and appropriate recommendations supported by the information presented and concepts from the reading	Presents realistic or appropriate recommendations supported by the information presented and concepts from the reading	Presents an incomplete analysis of the issues identified

Research	Supplements case study with relevant and extensive research into the present situation of the company; clearly and thoroughly documents all sources of information	Supplements case study with relevant research into the present situation of the company; documents all sources of information	Supplements case study with limited research into the present situation of the company; provides limited documentation of sources consulted	Supplements case study, if at all, with incomplete research and documentation
Writing mechanics	Writing demonstrates a sophisticated clarity, conciseness, and correctness; includes thorough details and relevant data and information; extremely well-organized	Writing is accomplished in terms of clarity and conciseness and contains only a few errors; includes sufficient details and relevant data and information; well-organized	Writing lacks clarity or conciseness and contains numerous errors; gives insufficient detail and relevant data and information; lacks organization	Writing is unfocused, rambling, or contains serious errors; lacks detail and relevant data and information; poorly organized

Discussion Rubric:

	<70%	70%-79%	80%-89%	90%-100%
Business Acumen	Does not demonstrate competence in course concepts, either by lack of connection to concepts in contributions, or by misrepresenting concepts when used.	Demonstrates limited competence in course concepts. There is significant room for improvement in terms of the scope and the depth of content coverage.	Demonstrates competence and accuracy in using course concepts OR makes frequent effort to use course concepts, but with room for improvement in terms of consistency, and level of detail.	Frequently uses a wide range of concepts from the class materials, demonstrating competence and accuracy in the use of concepts.
Critical Thinking	Does not demonstrate critical thinking. Does not work with peers to devise ways to cover	Rarely demonstrates critical thinking, appearing to be willing to accept all	Occasionally engages in activities designed to cause depth of thinking, including occasional	Frequently asks and makes an effort to explore relevant, thought-provoking questions to

	course content. Student does not critically examine arguments, alternatives, and analysis.	written and spoken statements as fact rather than exploring or challenging ideas. Rarely works with peers to outline approaches to covering course content. Room for improvement in terms of critically examining course content.	questions, or efforts to address the unknown or challenge assumptions. Occasionally works with peers to structure learning processes. Occasionally critically examines arguments, alternatives, and analyses.	advance the conversation and encourage deeper exploration of concepts. Facilitates content coverage. Critically examines arguments, alternatives, and analyses.
Personal Effectiveness	Student does not demonstrate personal effectiveness. Lack of engagement results in little or no impact on learning, OR contribution effort has a negative impact on self and others.	Infrequent contribution effort leading to limited influence on the group. Infrequently engages peers using a wide variety of participatory behaviors. Contribution effort occasionally has a negative impact.	Occasional contribution effort, however, positive impact and influence on class discussions when contributions are made. There is room for improvement in terms of engaging peers using a variety of contribution guidelines.	Consistently uses a wide range of contribution approaches, leading to clearly positive influence and impact on the class discussions and the learning of self and others.

Academic Honesty Statement

The highest standards of academic honesty are expected in the course. Forms of academic dishonesty include, but are not limited to cheating, plagiarism, counterfeit work, falsification of academic record, unauthorized reuse of work, theft, collusion. See the (UIW) student handbook for definitions and procedures for investigation of claims of academic dishonesty.

Class Absences for Religious Observances

The University of the Incarnate Word welcomes persons of diverse backgrounds and is therefore committed to providing reasonable accommodations for students wanting to attend religious observances and who will miss class. Students must inform instructors at least two weeks prior to

attending a religious observance. Students use the form found in the UIW Student Handbook & Student Code of Conduct to request accommodations from the instructor.

Disability Accommodations

The University of the Incarnate Word is committed to providing a supportive, challenging, diverse and integrated environment for all students. In accordance with Section 504 of the Rehabilitation Act – Subpart E, Title III of the Americans with Disabilities Act (ADA), and Title III of the ADA Amendments Act of 2008 (ADAAA), the University ensures accessibility to its programs, services and activities for qualified students with documented disabilities. To qualify for services, the student must provide Student Disability Services with the appropriate documentation of his or her disability at the time services and/or accommodations are requested.

Pregnancy Accommodations

Under the Department of Education's (DOE) regulations implementing Title IX of the Education Amendments of 1972, the University does not discriminate against any student on the basis of pregnancy or pregnancy related conditions.

To request reasonable accommodations for disability, temporary disability (e.g., injury, surgery) or pregnancy, please contact:

Student Disability Services
4301 Broadway CPO 295
Administration Building – Suite 51
San Antonio, TX 78209
(210) 829-3997
(210) 283-6329
www.uiw.edu/sds

Title IX Information

University of the Incarnate Word is committed to providing an environment that emphasizes the dignity and worth of every member of its community and that is free from sexual misconduct, including sex based discrimination, sexual harassment, sexual assault, sexual exploitation, stalking, relationship violence (including domestic and dating violence), and retaliation. The university encourages the prompt reporting of any incidents. For more information, or to report an incident, please visit www.uiw.edu/titleix.