PSYC 3225 QUANTITATIVE RESEARCH IN PSYCHOLOGY (3 credit hours)

Elmira College

FALL 2023

Required Text:

Frederick J Gravetter; Larry B. Wallnau; Lori-Ann B. Forzano; James E. Witnauer. ***Essentials of Statistics for the Behavioral Sciences*** (10th ed). Cengage Learning.

Supplemental readings might be included to illustrate or expand on textbook readings.

Pre-requisites: PSYC 1040 Foundations of Psychology.

Course Description

In-depth study of quantitative research in psychology. Modules include frequency distributions, measures of central tendency and variability, normal curve and more. The course equips students with the essential knowledge and skills required to conduct empirical research using quantitative methodologies in the field of psychology. Students will master the intricacies of designing, implementing, and analyzing quantitative research projects.

Course Objectives and Goals

- Gain a comprehensive understanding of principles and theories of quantitative research in psychology;
- Know how to formulate research questions and hypotheses suitable for quantitative investigation;
- Utilize and analyze standard inferential statistical tests and correlation techniques;
- Develop critical thinking skills necessary to assess research hypotheses, identify confounding variables, and understand the implications of statistical results.;
- Explore the different data collection techniques commonly used in quantitative research, including surveys, questionnaires, observational methods, and archival data analysis;
- Understand and interpret data-driven information in psychological research studies.

Evaluation of Performance

Your grade will be based upon your performance on exams, assignments, and participation.

Class Participation	10%
Assignments	30%
Quizzes	20%
Exams	40%
Total	100%

Grades will be assigned as follows:

A	93% and above	B-	80 - 82%	D+	67 - 69%
A-	90 - 92%	C+	77 - 79%	D	63 - 66%
B+	87 - 89%	C	73 - 76%	D-	60 - 62%
B	83 - 86%	C-	70 - 72%	F	59% or below

Withdrawal Policy: Please see Elmira College Bulletin for information on this policy.

Academic Honesty: Please read the section on Academic Honesty in the **Code of Conduct**. Briefly, academic dishonesty includes: cheating, fabrication, facilitating academic dishonesty, and plagiarism. Ask if you have any questions on whether something constitutes as academic dishonesty. All work must be original and new. Past assignments from current or other courses will not be accepted. Academic dishonesty will not be tolerated. It will result in zero on the assignment, and a report will be filed with the school. Continued practice will result in failure of the class. Institutional penalties may also apply with repeated acts of academic honesty.

Student Responsibility:

- It is your responsibility to keep track of assignments and due dates.
- You should ask questions concerning assignments and lectures, if you need any clarifications.
- If you are struggling in class, have concerns, and/or unsure about expectations, please stop by duringoffice hours or make an appointment for another time.

Tentative Schedule of Topics

Topic	Materials	Tasks & Evaluations
Frequency Distributions and Frequency Distribution Tables	Chapter 1	
Grouped Frequency Distribution Tables	Chapter 2	
Frequency Distribution Graphs	Chapter 3	Assignments 1
Central Tendency and the Shape of the Distribution	Chapter 4	
Selecting a Measure of Central Tendency	Chapter 5	Quiz 1
Introduction to Variability	Chapter 6	
Defining Variance and Standard Deviation	Chapter 7	Assignments 2
The Pearson Correlation	Chapter 8	
Hypothesis Tests with the Pearson Correlation	Chapter 9	Exam 1
Introduction to Linear Equations and Regression	Chapter 10	
Looking Ahead to Inferential Statistics	Chapter 11	Quiz 2
Inferential Statistics and Hypothesis Testing	Chapter 12	
Hypothesis Testing and Sampling Distributions	Chapter 13	
The t Test for Two Independent Samples	Chapter 14	
The Chi-Square Goodness-of-Fit Test	Chapter 15	Assignments 3
Interpreting the Chi-Square Goodness-of-Fit Test	Chapter 16	
The Chi-Square Test for Independence	Chapter 17	
Research Methods and Statistics	Chapter 18	Exam 2