

COURSE: BU640 Quantitative Analysis  
CREDIT: Semester Hours: 3 hours  
SEMESTER: Fall 2025, Session 1 (August 18 – October 10, 2025)  
TIME/LOCATION: This is an online only class  
INSTRUCTOR: Dr. Teddy Bitner  
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## DESCRIPTION

This course provides students with the background of applied statistics that concerns the collection, processing, dissemination, and analysis of economic data. The skills acquired in this course will enable students to make recommendations and key decision making. Students will also become familiar with statistical methods associated with evaluations and problem solving through mathematical programming.

## OBJECTIVES

A. General competencies to be achieved. The student will:

1. Describe the major differences between quantitative and qualitative research designs (PLO 1, 2, 3; Course Assessments A, B, C).
2. Demonstrate an understanding of the characteristics of quantitative research including survey, correlational, causal-comparative designs (PLO 2, 3; Course Assessments A, B, C).
3. Apply the appropriate quantitative methods to a research study (PLO 2,3; Course Assessments A, B, C).
4. Understand the concerns associated with interpreting research data (PLO 2,3; Course Assessments A, B, C).
5. Understand the ethical considerations when conducting research (PLO 1,2,3; Course Assessments A, B).
6. Utilize electronic databases to support a quantitative research proposal (PLO 2,3; Course Assessments A, B, C).
7. Complete a quantitative research proposal (PLO 2,3; Course Evaluation B).
8. Correctly use APA style in a research proposal (PLO 1,2,3; Course Assessments A, B, C).

## REQUIREMENTS (ASSESSMENTS)

- A. Lectures and Discussion Questions. All students will answer discussion questions and participate in each discussion. After viewing lectures, you will answer discussion questions normally associated with the lecture. You will comment on at least one classmate's post. Discussion questions are normally due to be completed within one week of posting.
- B. Research Proposal: You are required to complete a quantitative research proposal following an outline provided in class. The proposal will be prepared as if to be submitted to the Institutional Review Board (IRB) for approval. Preparation and submission of the proposal will be the culminating project for the course.
- C. Homework: You will have four statistically based homework assignments due throughout the course. Students will need access to Excel with the Data Analysis Package activated in order to complete the homework assignments.

## METHODS

- A. Lecture (recorded and available via Canvas for online students) and Discussion Questions. You will watch the lecture (online students) and answer discussions questions normally associated with each course lecture. You will comment on at least one classmate's post. Discussion questions are normally due to be completed within one week of posting.
- B. Assignments: You will have statistical homework and the research proposal to complete during the course with due dates as assigned within Canvas.
- C. Attendance and Grading: Attendance accounts for 20% of your overall grade. I expect students to attend class regularly. My attendance policies are:

For online students, I will take attendance once a week on Friday. Attendance is based on academic activity, which includes responding to discussion questions, submitting research papers, book reports or similar assignments, or taking an examination. I will deduct 2.50% from your grade for each week in which an online student fails to demonstrate academic activity

In computing the final grade, I will weigh the work of the course in the following proportions:

|                      |     |
|----------------------|-----|
| Discussion Questions | 20% |
| Statistical Homework | 20% |
| Research Proposal    | 40% |
| Attendance           | 20% |

## MATERIALS

- A. Leedy, Paul and Jeanne Ellis Ormrod, *Practical Research: Planning and Design* (10<sup>th</sup> Edition). ISBN 978-0132825610, available used for approximately \$13.00. You may use other editions of this text.
- B. American Psychological Association, *Publication Manual of the American Psychological Association* (7<sup>th</sup> Edition), ISBN: 978-1433832178, list price \$39.87, available used for approximately \$21.00.
- C. Microsoft Excel. ASIN: B09H7GPR1G (ISBN not available), List price: \$149.99. NOTE: This listing reflects the one-time purchase price for Word and Excel home and student package on Amazon at the time this syllabus was prepared. Students who already possess Excel DO NOT NEED TO PURCHASE THIS PRODUCT.
- D. The Bible is a required textbook in every course at Calvary University. To facilitate academic level study, students are required to use for assignments and research an English translation or version of the Bible based on formal equivalence (meaning that the translation is generally word-for-word from the original languages), including any of the following: New American Standard (NASB, English Standard Version (ESV), New King James (NKJV), or King James (KJV). Other translations and versions based on dynamic equivalence (paraphrases, and thought-for-thought translations like NLT and NIV) may be used as supplemental sources. Please ask the professor if you have questions about a particular translation or version. The Holy Bible, [www.gatewaybible.com](http://www.gatewaybible.com), Price: \$0

**TENATIVE CLASS SCHEDULE:** Details are available in the Canvas portal for this class.

| Weeks/Dates                              | Modules  | Subject   | Reading                 |
|--|----------|---|-------------------------|
| Week 1<br>August 18-22, 2025             | Module 1 | Course Introductions/Syllabus Review/Research Tools         | Chapter 1, Leedy        |
| Week 2<br>August 25-29, 2025             | Module 2 | Beginning the Research Process and Literature Review        | Chapters 2 and 3, Leedy |
| Week 3<br>September 1-5, 2025            | Module 3 | Planning the Project and Writing a Proposal                 | Chapters 4 and 5, Leedy |
| Week 4<br>September 8-12, 2025           | Module 4 | Descriptive Research  | Chapter 8, Leedy        |
| Week 5<br>September 15-19, 2025          | Module 5 | Experimental, Quasi-Experimental, and Ex Post Facto Designs | Chapter 9, Leedy        |
| Week 6<br>September 22-26, 2025          | Module 6 | Mixed Method Designs  | Chapter 10, Leedy       |
| Week 7<br>September 29 – October 3, 2025 | Module 7 | Analyzing Quantitative Data                                 | Chapter 11, Leedy       |

| Weeks/Dates                  | Modules  | Subject  | Reading           |
|------------------------------|----------|--|-------------------|
| Week 8<br>October 6-10, 2025 | Module 8 | Planning and Preparing a<br>Final Research Project | Chapter 12, Leedy |

### Special Notes:

- Grades on late assignments will be reduced by 4% for each day the assignment is late.
- I will accept late assignments until midnight on the last day of the session or semester (whichever is appropriate for the course). I will not accept assignments beyond that point.
- Students may contact the registrar to apply for additional time to complete the class.
- Students with disabilities have the responsibility of informing the Accommodations Support Coordinator ([aso@calvary.edu](mailto:aso@calvary.edu)) of any disabling condition that may require support.
- Plagiarism is defined as copying any content without identifying the source. This also includes taking another person's or AI entity's ideas or constructs and presenting them as your own. Plagiarism of any kind will not be tolerated. Most assignments at Calvary require the student to produce original work. Therefore, unless specifically permitted by the instructor, the use of AI-generated content is prohibited (even if cited) as it does not represent original work created by the student and is an unreliable aggregate of ideas from other sources. AI, however, may be utilized in cases where the instructor has explicitly permitted its use to accomplish specific tasks. It is only in these cases that AI-generated (or modified) content may be submitted by the student. If there are any questions as to the permissibility of AI use for an assignment, please ask your instructor for clarification.
- The Clark Academic Center ([learning@calvary.edu](mailto:learning@calvary.edu)) is dedicated to providing free academic assistance for Calvary University students. Student tutors aid with all facets of the writing process, tutor in various subject areas, prepare students for exams and facilitate tests. Please take advantage of this service.
- All class papers must follow the APA style according to the *Publication Manual of the American Psychological Association, 7<sup>th</sup> edition*.