

EDF 6400
Quantitative Foundations of Educational Research: Overview
Fall 2025

Course Information

Name: EDF 6400
Section: 11362
Time: Thursdays, 9:35am–12:35pm
Room: NRNA 707A
Prerequisite: Officially, STA 2023, STA 2122 or equivalent
Term Dates: 8/21/25–12/03/25

Instructor Information

Instructor: Dr. Eric Wright, Clinical Assistant Professor
Contact: ericwright@coe.ufl.edu
Office Hours: Fridays 2–4pm in my office at 2-711K.
Students can also come via Zoom. See Canvas for link.

Objectives

The objective of this course is to cover a variety of introductory topics in applied statistics, research methods, and design. The goal is to provide learning experiences that help you understand, apply, and interpret a variety of statistical methods and research designs commonly used in educational research. Through the use of course readings, lectures, in-class exercises, practice quizzes, and assignments, you will have the opportunity to construct a conceptual schema that should enable you to apply the concepts and ideas offered in this course to your own and others' research.

Course Website

The course website is on Canvas at <https://elearning.ufl.edu/>. It is a repository for all class activities, including the posting of readings, lecture slides, assignments, recordings, etc. Assignments and other materials should be submitted through the Canvas website unless otherwise instructed.

Required Readings

Textbook: Lomax, R.G., & Hahs-Vaughn, D.L. (2012). *An introduction to statistical concepts* (3rd ed.). Taylor & Francis Group.

This book is available electronically for free through Course Reserves on Canvas with a physical copy on reserve at the Education Library. While the course material will be in direct reference to the above 3rd edition, a 4th edition is also available that can be used if preferred.

Additional readings: Posted on Canvas.

Statistical Software

The IBM SPSS statistical software will be used in lectures and as the primary supported software for completion of coursework, and there is *limited support* in the course for learning and conducting analyses in the R programming language. However, you are welcome to use any other statistical software that can perform the same tasks if you prefer. While I cannot guarantee I will always have the time or knowledge to help troubleshoot issues with software other than SPSS, I will try my best.

SPSS can be used by students online for free via UFApps: <https://info.apps.ufl.edu/>. This is the recommended method for the course, and there are instructions on Canvas for how to best use that.

SPSS can also be rented from

- UF by physically going to the UF Computing Help Desk's Main Desk in HUB 132 on Main Campus. See here: <https://software.ufl.edu/software-listings/spss-licensing-for-students.html>
- The OnTheHub online store at <https://onthehub.com/spss>

Graded Course Requirements

Assignments: The content and weighting of assignments changes each semester, but you can see *some* of the planned assignments in the tentative course schedule. Assignments will be posted on Canvas at least one week prior to their due dates, and each will detail the specific grading schema and instructions. **Unless otherwise indicated, assignments can be resubmitted once to regain lost points from the first submission.** Additional resubmissions beyond that may be offered in some cases but are not guaranteed.

Quizzes: Canvas quizzes for checking comprehension will be given, some based on readings and some based on a general category of concepts up to a certain point. These quizzes are intended to be part of the learning process and therefore will generally allow two attempts and unlimited time per attempt up to the due date or the end of the semester, to be indicated. The purpose of these quizzes is to check your understanding with the first attempt, identify misunderstandings, and correct those misunderstandings for the second attempt.

Attendance

Students are responsible for the content of all classes, including issues raised during class discussions. However, attendance is not graded.

Breakdown of Grades

Assignments:	75% of total course grade
Quizzes:	25% of total course grade

Final grades will be assigned based on the scale below.

Overall course percent	Grade
93.0% - 100%	A
90.0% - 92.9%	A-
87.0% - 89.9%	B+
83.0% - 86.9%	B
80.0% - 82.9%	B-
77.0% - 79.9%	C+
73.0% - 76.9%	C
70.0% - 72.9%	C-
67.0% - 69.9%	D+
63.0% - 66.9%	D
60.0% - 62.9%	D-
59.9% or less	E

Late Work Policy

Each day a graded requirement for the class (except for quizzes) is late results in a deduction of 10% of the assignment point total. For example, if a student would have earned 95% on an assignment, they will instead receive 85% if it is one day late, 75% if it is two days late, and so on. The late penalty carries forward to resubmissions, and late resubmissions will not be accepted at all unless you are explicitly granted an extension.

Quizzes have no late penalty, but falling behind on them is not recommended.

You can request extensions to avoid the late penalty. In fact, I highly encourage you to request extensions. To obtain an extension, you need to send me an email or Canvas message with the request and, if possible under the specific circumstances, with the amount of time your request is for. If you make the request *prior to the assignment being due*, I will in all likelihood grant it even if you don't give me a reason for the request. That said, a request for too many extra days may require a good reason for it. Requests made after a due date must align with UF policies for excused absences or come with a heck of a good story. Repeated extension requests might eventually require more of a conversation just to make sure you're able to keep on track in the course.

Class Recordings

Most class sessions will be audio-visually recorded and posted to Canvas. These recordings may contain the voices of students who speak up during the class, so out of respect for their privacy, recordings should not be shared with anyone outside of class in any way (unless required for official university processes or legal matters). Class recordings are uploaded to YouTube for ease of access, but they are published as Unlisted so that only those who have the link can view them.

Academic Honesty

Unless otherwise indicated, all submitted work should represent the effort of the individual student. In other words, do not cheat, plagiarize, or submit AI-produced work. All UF students are bound by the Honor Pledge: “*We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Student Honor Code. On all work submitted for credit by Students at the University of Florida, the following pledge is either required or implied: ‘On my honor, I have neither given nor received unauthorized aid in doing this assignment.’*” ([As per the Student Honor Code and Student Conduct Code regulations.](#)) You are welcome to discuss assignments and material with classmates, but what you turn in should solely reflect your own efforts and understandings. Violations will be assessed in part using Turnitin and will be reported to UF.

Artificial Intelligence and Coursework

“Students are encouraged to use artificial intelligence among many other (re)search resources if a student finds the resources a useful tool. **Students must not substitute the substance of their work with the results of such (re)search tools**, however, as that act would contravene the rules of academic integrity and their underlying academic values.” (Source: [Tracy Mitrano](#); bold added.)

For example, using ChatGPT to generate responses to an assignment is cheating because the responses did not originate from the student’s thoughts and knowledge. Writing a response and then having an “AI” service like Grammarly improve upon the *presentation* of ideas in terms of grammar would be acceptable because the *ideas* still come only from you, the student.

Additional Academic Policies and Resources

Visit the [Academic Policies and Resources webpage](#) to access general current policies and university-wide support services. This includes, but is not limited to, the nuances of the university excused absences policy, course evaluation information, the in-class recording policy, and other campus academic, health, and wellness resources.

Valuable Student Resources

I want to emphasize the below resources because I have found that many students and faculty are not very familiar with them.

Accommodation for students with disabilities

A wide range of accommodations are available that you might qualify for without realizing it. Students with disabilities who experience learning barriers and would like to request academic accommodation should connect with the Disability Resource Center. [Click here to get started with the Disability Resource Center](#). It is important for students to share their accommodation letter with their instructor and discuss their access needs as early as possible in the semester. If you have a disability that presents only occasional learning barriers, it is better to register early than to wait until the barriers are causing a problem.

Mental health

Mental health is more than a diagnosis. You do not need to be “officially” experiencing depression, anxiety, etc. to benefit from counseling and related services. Mental health can even just be about learning to manage stress.

[The Counseling and Wellness Center](#) provides mental health assistance to students, including emergency consultations with a crisis counselor, short-term individual counseling, group counseling, a wide range of workshops, and assistance finding a local therapist for longer term counseling. These services are available to all students who pay the student activity fee, which is all students in on-campus programs and some students in online-only programs. However, *emergency consultations are available to all students regardless of activity fee payment.*

Even if you don't think you need mental health assistance, I encourage you to [check out their list of upcoming workshops](#) to see if any sound interesting to you.

Hitchcock Field & Fork Pantry

“The Pantry is a free resource for members of the UF community to access supplementary food staples such as bread, nonperishable canned items, frozen meat, and seasonal produce from the Field & Fork Farm and Gardens.” You can learn more about the Pantry [on their website](#) and view the hours and address [by clicking here](#).

Tentative Course Schedule

This schedule will likely change as the semester progresses.

Week 1 (8/21)

Module 0: Course Introduction

Week 2 (8/28)

Module 1: Introduction to Quantitative Research

Module 2: Some Basics of Measurement

Major planned assignments: Research reflection; Measurement instrument reflection.

Week 3 (9/4)

Holiday: Monday 9/1, Labor Day

Module 3: Introduction to Statistics

Module 4: Data Representation

Major planned assignments: Personalization article critique.

Week 4 (9/11)

Module 5: Centers, Dispersion, Distributions, and Transformations

Major planned assignments: Representing and describing data.

Week 5 (9/18)

Module 6: Probability and Inferential Hypothesis Testing

Major planned assignments: One-sample t test.

Week 6 (9/25)

Module 7: Exploring Quantitative Knowledge

Major planned assignments: Reflections on postpositivism.

Week 7 (10/2)

Module 8: Independent and Dependent t tests

Major planned assignments: Dependent t test.

Week 8 (10/9)

Module 9: Research Design and Validity Part 1 (statistical conclusion and internal validity)

Major planned assignments: Independent t test.

Week 9 (10/16)

Holiday: Friday 10/17, UF Homecoming

Module 9: Research Design and Validity Part 1 (statistical conclusion and internal validity)

Major planned assignments: Differences in differences with t tests.

Week 10 (10/23)

Module 9: Research Design and Validity Part 1 (statistical conclusion and internal validity)

Major planned assignments: Internal validity critique.

Week 11 (10/30)

Module 10: Measures of Association (correlations)

Major planned assignments: Correlations.

Week 12 (11/6)

Module 11: Research Design and Validity Part 2 (construct and external validity)

Week 13 (11/13)

Holiday: Tuesday 11/11, Veterans Day

Module 11: Research Design and Validity Part 2 (construct and external validity)

Major planned assignments: Another t test

Week 14 (11/20)

Module 11: Research Design and Validity Part 2 (construct and external validity)

Major planned assignments: Construct validity critique.

Week 15 (11/24–11/28 NO CLASS)

Holiday: Thanksgiving break!

Week 16 (12/1–12/3 NO CLASS)

Major planned assignments: Course reflection

Friday 12/12

Final deadline for any remaining work.