Quantitative Research Methods

MUE 7784 (3)
Spring 2023
R, 4:05-7:05PM (Periods 9-11)
MUB 145

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Course Description

This course is intended to give students a thorough grounding in quantitative social science research methods. Topics to be covered include quantitative research designs, survey design, data gathering, statistical analysis, and interpretation of results.

Required Texts

Salkind, N. J. & Frey, B. B. (2019). *Statistics for people who (think they) hate statistics (7th ed.).* Sage.

Other Resources

1. Online resources have been established for use in this course in Canvas, available at https://ufl.instructure.com
2. Datasets for class assignments and access to statistical analysis software are available through the UFApps R Drive. Information about how to access this resource will be discussed in class.
3. Selected readings and other resources may be placed on reserve in the Music Library – http://www.uflib.ufl.edu/music/

Goals and Objectives

By the conclusion of this course, the graduate music education student will:

1. read, reflect on, and discuss quantitative research literature in the field of music education;
2. develop an understanding of quantitative research designs and methods of data collection;
3. acquire and apply knowledge about statistical data analysis;
4. develop and implement quantitative survey instruments; and
5. demonstrate growth in writing skills and research design.

University Required Statements:

Students Requesting Accommodations due to Disabilities
Students with disabilities who experience learning barriers and would like to request academic accommodations 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.

Academic Honor Policy
UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the 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." The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Click here to read the Honor Code. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Online Course Evaluations
Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Click here for guidance on how to give feedback in a professional and respectful manner. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students here.

Expectations

Workload: This graduate course requires considerable reading, along with discriminating reflection, writing, and discussion. Be prepared to devote the time necessary to be successful.

Attendance: Prompt attendance is expected as a demonstration of professional commitment. The heart of education at the University of Florida is the teaching/learning interaction between you the student and your instructors. Because of this belief, class attendance is regarded as an essential part of the "contract" between you and the University. You are expected to attend all classes for which you are registered. If you know you must be absent from this class, you should speak with Dr. Haning before your absence, stating the reasons for your absence and agreeing upon a way to make up the work. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies. Click here to read the university attendance policies.

Class Participation: Because active and articulate oral interchange increases verbal skills and promotes a stimulating classroom atmosphere, the instructor will evaluate the quality, quantity, and appropriateness of each student's oral contributions to the class. Although no attempt will be made to translate this evaluation into an objective number of points, the instructor will use his subjective judgment of this behavior in the determination of borderline final grades. The dynamics of this class, and its ultimate value to you, require you to come to class prepared (read assignments), bringing questions and comments to stimulate discussions.

Email: Your UFL email account is the official email address used by the University, where official correspondence is sent. Important communication regarding this course may also take place via email, and your UFL email address is what will be used. All students need to regularly check their email, at least one time per day. Make checking it part of your daily routine. Likewise, unless there are

extenuating circumstances, when you send me an email during the week (M-F) you can expect a reply within 24 hours. I will reply on weekends as I am able.

Assignments

In addition to all assigned course readings, students will complete the following assignments. More information about each of these assignments will be provided in class.

Weekly Assignments
Each week, you will be given small optional practice assignments to be completed by the next course meeting. These assignments will allow you to practice statistical methods studied in class, think more deeply about topics that are discussed in course materials, or otherwise engage with the ideas and skills that you will be learning throughout the semester. Details about these assignments will be provided each week.

Survey Project
Many of the quantitative research studies that are carried out in the field of music education are based on researcher-designed survey instruments. As a part of this course, all students will design a quantitative survey to collect data on a research question of their choosing. This survey will then be administered to an appropriate sample, and appropriate statistical analyses will be carried out to interpret the resulting data. More information about this project will be provided in class.

Research Article Reviews
Throughout the course of the semester, students will write reviews for a number of quantitative research articles. These reviews should be approximately four (double-spaced) pages long. The first two pages should be a brief summary of the research methodology, findings, and implications. The final two pages should contain a critique of the article, focusing especially on the researcher's use of quantitative methods, research design, and statistical analysis. Due dates for these reviews are indicated on the syllabus.

Research Project
Students will carry out a statistical research project using an existing dataset, such as the National Survey of Adolescent and Adult Health or the National Educational Longitudinal Survey. Students must use one of the methods of statistical analysis discussed in class to complete their study. Students will present their research findings to the class at the conclusion of the course. Additional information will be provided as the class progresses.

Exams
Students will be given two (non-cumulative) take-home exams to assess their understanding of and ability to apply the information that is covered in this course. Exams will cover both research design questions and statistical analysis, and will require both written and calculated responses. Exams must be completed independently, although reference to notes and other materials is permitted.

Damn Lies and Statistics Paper
One of the most pervasive problems with quantitative research is the misuse and misinterpretation of statistical results, especially in secondary sources such as the news media. Each student will find a media report describing the results of a quantitative research study, and will subsequently locate the scholarly paper on which the report is based. Students will then write a 4-5 page paper comparing the

media reports to the actual research findings, with special attention paid to the representation of statistical results. This paper will be due on the date indicated in the syllabus, and more information will be provided in class.

Assignment	Weight
Damn Lies and Statistics Paper	.05
Research Article Reviews	.15
Survey Project and Presentation	.25
Dataset Study and Presentation	.25
Exam #1	.15
Exam #2	.15

Grading Scale	
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
59 & below	E

COURSE CALENDAR

DATE	TOPIC
Week 1 Jan 14	Introduction to Statistics: Foundational Principles
Week 2 Jan 21	Descriptive Statistics and Correlations
Week 3 Jan 28	Hypothesis Testing; *t*-tests
Week 4 Feb 4	*t*-tests continued; Research Questions; Sampling; Variables
Week 5 Feb 11	ANOVA; Finding and Using Existing Datasets
Week 6 Feb 18	ANOVA Cont.; Chi-Squared
Week 7 Feb 25	Descriptive Research and Survey Design
Week 8 Mar 4	Linear Regression
Week 9 Mar 11	Experimental and Quasi-Experimental Research
Week 10 Mar 18	Presenting Quantitative Research
Week 11 Mar 25	Advanced Regression Techniques
Week 12 Apr 1	Other Advanced Techniques
Week 13 Apr 8	Statistical Review
Week 14 Apr 15	Project Presentations
Final Exams	Project Presentations

This syllabus is a guide. It may be varied as needed.