ERMA 7200 Basic Methods in Educational Research

William M. Murrah

Summer 2021

E-mail: wmm0017@auburn.edu Web: statistical-thinking.com

Office Hours: M 2 - 4 pm, W 2 - 4 pm Class Hours: Mon 4:00 pm - 8:00 pm

Office: 4064 Haley Center Class Room: Haley 2454

Course Description

The broad aim of this course is to prepare you to think like a scientist. The goals of this course focus on preparing you to evaluate the most common research methods used in modern educational and social science research. This course is an introduction to the philosophical foundations of educational research methods, and covers the major methods of inquiry in contemporary educational research including experimental, quasi-experimental, observational, qualitative inquiry, and mixed-methods research. To further prepare students for current changes in science, this course also introduces students to modern computational research methods.

Course Objectives

- 1. Students should become **critical consumers** of research reported in popular media, recognizing whether reported results reasonably follow from the study and analysis conducted.
- 2. Students should be able to recognize questions for which the **investigative process** in research would be useful and should be able to answer questions using the investigative process.
- 3. Students should be able to interpret **graphical displays** and **numerical summaries** and interpret what graphs do and do not reveal.
- 4. Students should demonstrate an awareness of **ethical issues** associated with sound statistical practice.
- 5. Students should demonstrate the ability to distinguish empirical research from non-empirical forms of knowledge generation.

Textbooks

For the first section of the course we will use the Okasha (2016) book (see below). The rest of the course will we will use an open source textbook and journal articles and other readings you can access online.

Required

Okasha, S. (2016). Philosophy of science: very short introduction. Oxford University Press.

Online textbook:

https://kpu.pressbooks.pub/psychmethods4e/

Graduate Teaching Assistants

TBA

Course Requirements and Evaluation

Learning Methods: Lectures, demonstrations, discussions, readings, class exercises, and other assignments.

Grading Policy

Student Assessment

Assessment	percent of grade
Homework Assignments	25%
Quizzes	35%
Final Project	40%

Grade	Scale
A:	90 – 100%
B:	80 - 89%
C:	70 – 79%
D:	60 – 69%
F:	below 60%

Homework Assignments (25%)

There will be almost weekly homework assignments throughout the semester.

Quizzes (35%)

There will be 2 quizzes over the duration of the semester. These quizzes will assess conceptual understanding of the topics explored in class and reading assignments. These are to be completed without the assistance on any resources (e.g. no textbook, notes, or help from others). Quizzes will

be done outside of class and can be started anytime during the week between classes, but once started students have two hours to complete.

Final Project (40%)

The final project will consist of a brief annotated bibliography of 5 related peer-reviewed articles, with critiques. The The purpose of the project is to give students the opportunity to deepen understanding of a chosen topic. You will be asked to write a brief review of the 5 articles, focused on a key research question or questions, evaluate each articles strengths and limitations, and demonstrates the need for particular research. More information about the project will be provided as the course progresses.

Class Policy Statements

Attendance and Participation Policy

- Excellent attendance is expected. If you miss class, you will need to get notes from another student.
- I will start class on time, so if you are late you will need to get notes from another student.

Late Assignments Policy

- Assignments turned in late will receive a 3% reduction in earned points per day. The only exception will be in the case of emergency.
- All work must be typed or it will not be graded. Late penalty will be applied to work completed in writing and then turned in late in typed format for a grade.

Honor Code Policy

- All portions of the Auburn University Honesty Code will apply to this class.
 - Auburn University Honor Code
- In addition, each student will be required to read and sign the following Honor Pledge when submitting class quizzes and exams.

Honor Pledge – On my honor as a student, I have neither given nor received assistance on this assignment.

Computer Classrooms

The Computer classrooms have a no food and drink policy. There is an exception for bottled water, which should remain sealed when not being consumed. If laptops are present, bottled water should be kept away from laptops. This policy is to ensure the room remains free from liquid stains and food crumbs that result in room repairs or the expense of spraying for roaches. With the room being a technology room, it falls under OIT policy and violators can lose campus computer privileges (e-mail & Internet access) if not adhering to this policy. If accommodations are needed, please inform the LRC staff. Thank you for your cooperation.

Incompletes and Withdrawals

Grades associated with incomplete course work or withdrawal from class will be assigned in strict conformity to University policy (see Auburn University Bulletin). If you wish to drop this course

you may do so by the 10^{th} class day with no grade assignment. From the 10^{th} class day to midquarter a (withdrawn-passing) grade will be recorded in your transcripts. After this period withdrawal from the course will only be granted under unusual circumstances and must be approved by the Dean of the College of Education.

Note that a new incomplete grade (IN) policy is in effect. The new policy requires that students complete a form requesting that an IN grade be assigned. If this form in not completed and given to the instructor of the class, a grade will be assigned with a score of zero (0) for work that has not been completed and turned in by the time the instructor reports grades.

Academic Misconduct

The Department of EFLT recognizes university policy regarding academic misconduct. Violations include, but are not limited to: plagiarism, unauthorized assistance during examinations, submitting another's work product as your own, using another's words as your own without appropriate citation, sharing unauthorized materials with another that contain questions or answers to examinations, altering or attempting to alter assigned grades. In accordance with University policy regarding academic misconduct, students may be subject to several sanctions upon violations of the Student Academic Honesty Code. See the Tiger Cub publication for the current year for specifics regarding academic misconduct as well as student's rights and responsibilities associated with the Code.

Disability Accommodations

Students who need special accommodations in class, as provided for by the American Disabilities Act, should arrange a confidential meeting with the instructor during office hours the first week of classes - or as soon as possible if accommodations are needed immediately. You must bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have these forms but need accommodations, make an appointment with the Program for Students with Disabilities, 1244 Haley Center, 844-2096.

Academic Contingency and Remote Instruction Modification Policy

If normal class and/or lab activities are disrupted due to illness, emergency, or crisis situation (such another COVID outbreak), the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to your syllabus and/or course assignments will replace the original materials. In the event that Auburn University institutes remote instruction for the semester this course is offered, the following changes will be made to the course to comply with this mandate.

Lectures, demonstrations, and other aspects of the course will be provided as videos with screen capture and made available before the scheduled class covering that content. In addition to other requirements (e.g. studying chapters from the textbook and other readings), students will be expected to watch the videos, making notes of questions and comments related to the material. The class will meet during the regularly scheduled class time, but will consist of an open forum of questions and answers related to the material. The duration of the class time may be adjusted to reflect the replacement of lecture time with the posted videos. Adjustments may also be made to assignments as needed. For example, instead of in class presentations of the final project, a written document may be required. Note that such adjustments are in response to university mandates, and will not be made on an individual basis.