
Introduction to Quantitative Research Methods in Education Education 793 *Syllabus*

Professor

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Course Description

This course provides the opportunity for students to develop and advance their quantitative skills for applied empirical research. It will focus on the inferential logic of selected bivariate statistics and multiple regression, on the application of these statistics to research questions, and on the communication of quantitative findings in scholarly manuscripts.

Schedule of Meetings and Office Hours

Class Meeting @ Zoom	Tuesdays 1:00pm–4:00pm
Lab with Bennion @ Zoom	Thursdays 9:00am–11:00am
Lab with Kapp @ Zoom	Thursdays 1:00pm–3:00pm
Bahr's Office Hours @ Zoom	by appointment
Bennion's Office Hours @ Zoom	Tues 12:00pm-1:00pm, Wed 1:00–3:00pm
Kapp's Office Hours @ Zoom	Mon 1:00-3:00pm, Tues 4:00-5:00pm

Required Text

Agresti, A. (2018). *Statistical methods for the social sciences, 5th edition*. Boston: Pearson. ISBN 9780134507101.

Other Necessary Materials and Resources

1. Daily access to your U-M email account and to the course *Canvas* website
2. A computer for virtual class and lab meetings, which must have the following features:
 - Functioning camera
 - Zoom software installed and updated
 - Software that supports opening, reading, saving, and printing Adobe PDF documents, Microsoft word documents, and Microsoft Excel worksheets
3. Functioning headphones/earbuds with a built-in microphone.
4. A printer for printing course documents and several hundred pages of white printer paper.
5. A readily available means of quickly scanning and uploading assignments and exams, which could be a dedicated scanner or a smartphone with a scanning app. In the absence of a dedicated scanner, we have investigated the following apps and found them potentially useful: Adobe Scan, Office Lens, or Scanner Pro.

6. A reliable internet connection with sufficient bandwidth to support two-way video and audio transmission in virtual class and lab meetings, as well as transmission of digital documents.
7. A hand calculator or smart phone calculator app for class and lab exercises, assignments, and exams.
8. A current license for version 15 or 16 of Stata/IC, Stata/SE, or Stata/MP.

Grading

The components of your course grade include:

Assignments (4 assignments @ 10 points each)	40 points
Exams (2 semi-comprehensive exams @ 10 points each)	20 points
Stage 1 of the Final Paper	10 points
Stage 2 of the Final Paper	<u>30 points</u>
	<i>Total of 100 points</i>

Course grades will be determined by the total number of points achieved, as follows:

≥ 98.00 points	A+	80.00–81.99 points	B-	62.00–67.99 points	D
92.00–97.99 points	A	78.00–79.99 points	C+	60.00–61.99 points	D-
90.00–91.99 points	A-	72.00–77.99 points	C	< 60.00 points	F
88.00–89.99 points	B+	70.00–71.99 points	C-		
82.00–87.99 points	B	68.00–69.99 points	D+		

Assignments

Four assignments will be made available to you via Canvas. Each assignment must be submitted in PDF format in the designated assignment submission location on the course Canvas website by the specified date and time. Although you will receive feedback on your work, each assignment will be graded only as “complete” (100% of the possible points) or “incomplete” (0% of the possible points). In other words, if you complete and submit each assignment on time, you will receive full credit even if corrections to your work are necessary. Late and incomplete assignments, however, will receive zero credit.

Exams

Two semi-comprehensive, time-limited exams will be administered via Canvas. Each exam will be offered in a single specified period of time. A missed exam will result in zero credit on that exam.

Final Paper

The culmination of this course is a final paper on a topic of your choice that is relevant to education research, policy, and/or practice. The paper will take the form of an empirical research manuscript that is similar in organization and format to a manuscript for a scholarly journal though shorter in length. The paper will be graded with respect to demonstration of course-relevant knowledge, accuracy, clarity, insightfulness, professionalism, adherence to formatting requirements, grammar, punctuation, and compliance with widely accepted standards for college-level writing.

Seize this Learning Opportunity

This course will provide the opportunity to develop skills and knowledge that will be useful for your entire professional career, whether in your own research or in making sense of the research of others. In that regard, the principal determinant of how much you learn in this course is how much effort you put into the course: engaging with the readings and completing them on time, motivating yourself to exceed the minimum expectations of the assignments and the course paper, participating actively and regularly in class and lab activities, meeting with your colleagues outside of class to discuss the work of the course, and the like. In sum, the potential of this course, although built upon the structure provided by the instructional team, ultimately is realized through your daily commitment and effort to learn all that can be learned.

As a result, I encourage you to seize this learning opportunity by reading each assigned reading carefully and arriving to each class and lab meeting prepared to participate actively and respectfully, to ask questions, to discuss the salient issues that emerge from the readings, and to contribute your knowledge and experiences in addressing the course material. Further, I encourage you to seize the learning opportunities embodied in the assignments and course paper, committing yourself to achieving your best possible work in all respects. Finally, I encourage you to seize the opportunity represented in the feedback that you receive on your work in this course, recognizing that you will encounter few such opportunities in your career in which others invest so much effort in your development as a scholar.

Selected Course Policies (a guide, not an exhaustive list)

Attendance

Class and lab attendance is a necessary cause, though not a sufficient cause, of participation in the course, and participation is expected and required.

Assigned Reading

The assigned readings are a fundamental part of this course. The lecture and lab will not serve as a complete substitute for these readings, and, hence, you will not gain all that there is to acquire from this course without completing these readings. In addition, the design and expectations of the assignments, exams, and final paper presume that you have read and understood the readings and will be graded accordingly.

Late Assignments and Missed Exams

Late assignments and papers will not be accepted and will receive zero credit. Likewise, missed exams will result in zero credit.

Electronic Communication

The instructional team assumes that you have read any electronic communication that is sent to you within 24 hours of it being sent. You may assume the same about electronic communication that you send to a member of the instructional team. However, you should anticipate that it may be as long as 48 hours before you receive a response to your electronic

communication during the course of the workweek. Response times may be longer on the weekends.

Citations and References

The APA citation format must be employed in all documents submitted in this course because it is ubiquitous (and, in many cases, required) in education research publications.

Plagiarism

Plagiarism — the intentional or unintentional use of the ideas or words of another person or organization without citing the source appropriately — is among the most stigmatizing of academic offenses. Plagiarism will not be tolerated in this course and will result in a failing grade on the associated assignment and a report to the appropriate institutional authorities. Please see <https://www.lib.umich.edu/academic-integrity/resources-students> for more information about plagiarism.

Retention of Documents

Graded documents that you submit in this course that are not returned to you will be retained until April 30, 2021, and then discarded.

Guidelines for Class and Lab Discussions

This classroom is inclusive of a wide range of backgrounds, experiences, perspectives, and beliefs. The teaching team is committed to ensuring that differing viewpoints are welcomed and valued here, and that everyone who wants to speak to a particular issue has the opportunity to do so in an environment of mutual respect. I ask you to join us in that commitment and to strive to uphold the goal of healthy discussion and debate without challenging any individual's right to speak. Further, I ask that you listen carefully to others, especially when you disagree, and assume that each person in this classroom is speaking in good faith and with good intentions. If you ever feel that a discussion did not meet these guidelines, or otherwise has left you with negative feelings about the classroom environment, please speak with me about it.

Accommodations for Students with Disabilities

If you think that you need accommodation for a disability, please speak with me as early as possible. Some aspects of this course may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, we can work together with the Office of Services for Students with Disabilities (SSD) to help us determine appropriate academic accommodations. SSD (734-763-3000; www.ssd.umich.edu) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. Any information that you provide is confidential.

Students' Rights and Responsibilities

Membership in the academic community that is the University of Michigan affords you a number of important rights, as well as a number of important responsibilities. Please see <http://www.oscr.umich.edu/statement/> for information about these rights and responsibilities.