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

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**Professor**

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**Graduate Student Instructors (GSIs)**

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**Course Description**

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

**Schedule of Meetings and Office Hours**

Class Meeting @ School of Education, Room 2229	Tuesdays 1:00pm–4:00pm
Lab with Boileau @ School of Education, Room 2302	Thursdays 10:00am–12:00pm
Lab with Gadd @ School of Education, Room 2302	Thursdays 1:00pm–3:00pm
Bahr’s Office Hours	by appointment
Boileau’s Office Hours	Wednesdays 11:00am–2:00pm
Gadd’s Office Hours	Fridays 9:00am–12:00pm

**Required Text**

Agresti, A., & Finlay, B. (2009). *Statistical methods for the social sciences, 4<sup>th</sup> edition*. Upper Saddle River, New Jersey: Pearson. ISBN 9780130272959.

**Recommended Text**

Acock, A. C. (2014). *A gentle introduction to Stata, 4th edition*. College Station, Texas: Stata Press. ISBN 9781597181426.

**Other Required Materials and Resources**

1. Daily access to your U-M email account and to the course *Canvas* website
2. Several pencils (pencil, not pen, must be used to complete the exams)
3. One basic hand calculator (not a phone or a graphing calculator) for class and lab exercises, assignments, and exams
4. Two decks of standard playing cards
5. One USB flash drive
6. Dedicated AFS space<sup>1</sup> from the University of Michigan

**Grading**

The components of your course grade include:

Assignments (4 assignments @ 7.5 points each)	30 points
Exam #1	15 points
Exam #2	15 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 is due in hardcopy (paper) format in the designated mailbox in Room 2117 of the School of Education at 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. It is recommended but not required that you write your answers to the assignment questions by hand and in pencil.

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<sup>1</sup>AFS stands for Andrew File System, about which extensive information may be found on Wikipedia. At the University of Michigan, it is known simply as AFS, pronounced “a-fis”. Members of the student and faculty communities at the University of Michigan may obtain AFS space at no cost via <http://mfile.umich.edu/>.

## **Exams**

Two non-comprehensive, in-class exams will be administered in this course. During each exam, you will be allowed to use a basic hand calculator (neither a phone nor a graphing calculator will be allowed), four pages (both sides of four 8.5" x 11" sheets of paper) of *handwritten* notes (not typed, photocopied, or electronically printed), and Dr. Bahr's *Guide to Statistics*. You will not be allowed to use any other aids during the exams. Each exam will be offered on one date only, at one time only, and in one place only, except in cases in which the *Americans with Disabilities Act* applies. 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 of modest length and of similar organization and format to a manuscript for a scholarly journal. The paper will be graded with respect to demonstration of course-relevant knowledge, creativity, insightfulness, accuracy, clarity, professionalism, adherence to the formatting requirements, grammar, punctuation, and compliance with widely accepted standards for college-level writing. You may complete the final paper alone or in a team of two; the requirements of the paper are the same whether you choose to work alone or in a team.

## **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, 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, 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

Except in the most extreme and unusual of situations, late assignments and papers will not be accepted and will receive zero credit. Likewise, missed exams will result in zero credit. Situations that are sufficiently extreme and unusual to warrant the acceptance of a late assignment or paper may include cataclysmic destruction of the planet by an asteroid, abduction for a prolonged period of time by beings of extraterrestrial origin and hostile intention, widespread outbreak of zombies, or other extraordinary circumstances that would make for a good action flick with Jennifer Lawrence or Brad Pitt as the lead actor. Extenuating conditions of similar magnitude will be considered on a case-by-case basis.

### 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.

### Recording of Lectures, Labs, and Other Class Activities

Audio and/or video recording of class activities is prohibited, except as a pre-arranged accommodation for students with disabilities. Under all other circumstances, you are prohibited from using recording equipment, including cellular phones, to make recordings of lectures, labs, or other class-related activities.

### 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 <http://www.lib.umich.edu/shapiro-undergraduate-library/understanding-plagiarism-and-academic-integrity> for more information about plagiarism.

### Retention of Documents

Paper copies of graded documents that you submit in this course that are not returned to you will be retained until May 31, 2018, and then discarded.

### Guidelines for Class and Lab Discussions

This classroom is inclusive of a wide range of backgrounds, experiences, perspectives, and beliefs. I am 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 me 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](http://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.