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# EDUC 6040

## Applied Research Methods

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Fall Semester 2016

**Instructor:** Michael Oliva  
**Office Location:** STEM 244  
**Office Hours:** By appointment only  
**Email:** Michael.Oliva@Aggiemail.usu.edu  
**Class Time:** Tuesday and Thursday 4:30-5:45pm.  
**Class Location:** HPER 114A

**Contact Policy:** I am accessible to students by email or through Canvas. If you need a quick response, please e-mail me. I tend to check Canvas in the early afternoon and evenings.

**Canvas:** Please check Canvas each day for course updates, assignments, quizzes, exams, and grades.

### Required Reading Materials

- Mertens, D. M. (2014). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods*. Sage. Fourth Edition  
ISBN-13: 978-1-4522-4027-5

**Additional Readings:** Additional readings will be assigned throughout the semester and will be available via Canvas.

**Catalog Course Description:** This course is designed to introduce graduate students to the information and skills needed to read and critique research in education, psychology, and other social sciences. Students will develop a basic understanding of research perspectives, methods, statistical analysis, and quantitative and qualitative research designs.

**Course Content:** Reading assignments will be given each week, and **students will be expected to read them thoroughly BEFORE CLASS** and prepared to discuss the material contained in the textbook and other course material during our class discussion. Students will also have a variety of practical hands-on experiences and activities designed to master the course material. The course objectives will be accomplished through course readings and discussion, writing assignments, quizzes, and exams.

**Course Objectives:** The objectives for PSY/EDUC 6040 have been agreed upon by the department heads in the College of Education. The student will be able to do the following:

1. Use the reference area of the library, interlibrary loan services, and computerized databases to locate relevant articles and documents on a selected topic.
2. Use APA guidelines to appropriately cite and reference relevant articles in written work.
3. Describe the relationships among hypotheses, measures, and analysis procedures in a research proposal.
4. Define the major threats to the internal and external validity of an experiment.

5. Critically read published empirical studies to:
  - a. Identify authors' research questions or objectives.
  - b. Specify authors' conclusions.
  - c. Identify the major threats to internal validity and discuss the validity of the authors' conclusions in light of those threats.
  - d. Suggest improvements in the design of critiqued studies to remedy the perceived threats to internal or external validity.
6. Understand research ethics and protection of human subjects
7. Define target and accessible populations and explain the strengths and weaknesses of different sampling approaches and important considerations such as sample size, sampling bias, and external validity in sampling decisions.
8. Define and assess independent as well as dependent variables.
9. Understand the issues related to collecting research data using tests, questionnaires, interviews, observation, and content analyses.
10. Understand test validity and reliability and the importance of those concepts when conducting research.
11. Understand the differences among nominal, ordinal, interval, and ratio data and how these differences influence the selection of appropriate statistical procedures.
12. Understand the differences between descriptive and inferential statistics.
13. Understand the difference between statistical and practical significance including effect size
14. Understand approaches to take when analyzing qualitative data including computer software that can support qualitative analysis
15. Describe the methods and tools of different research designs:
  - a. Experimental and quasi-experimental research
  - b. Causal-comparative and correlational research
  - c. Survey research
  - d. Single-case research
  - e. Case study research
  - f. Ethnographic research
  - g. Phenomenological research
  - h. Grounded theory research
  - i. Participatory action research
  - j. Historical-narrative research
  - k. Mixed methods research
16. Understand strategies for writing research results in a way that improves its utilization

**Grading and Evaluation:** Your grade for this course will be calculated as detailed below.

Percentage	Grade
93 - 100	A
90 - 92.99	A-
87 - 89.99	B+
83 - 86.99	B
80 - 82.99	B-
77 - 79.99	C+
73 - 76.99	C
70 - 72.99	C-
67 - 69.99	D+
63 - 66.99	D
0 - 62.99	F

Evaluation Activity	Points
<b>Quizzes (10 total quizzes)</b>	<b>100</b>
<b>Article Critique Writing Assignments (5 total critiques)</b>	<b>75</b>
<b>Other Assignments</b>	
Library Search Assignment	25
Experimental Validity Assignment	25
Citi Training (Human Subjects Research)	25
<b>Exams</b>	
Midterm	100
Final	150
<b>Total Points</b>	<b>500</b>

**Quizzes:** There will be 10 quizzes throughout the semester. Each quiz will consist of both multiple-choice and short-answer questions. Questions will be created from class reading materials. Each quiz will be worth 10 points. Quizzes will be administered during the beginning of the Tuesday class testing the reading done in preparation for the week. Quizzes are closed book and should take no more than 10-15 minutes. The lowest quiz grade will be dropped. There will be no make-up quizzes.

**Exams:** There will be two exams during the course. The midterm and final make up 50% of your total grade. The midterm will cover materials covered up until that point. The final will be cumulative. Specific date and time for the final will be announced well in advance. There will be no make-up exams.

**Other Assignments:**

1. **Library Search Assignment.** Computer-assisted literature searches have greatly facilitated the retrieval of literature for doing research reviews. Students will complete the library assignment sheet, which requires them to use some of the most important techniques they learn during the guided tour with the library subject guide assigned to the course. This tour will take place during one of the first class sessions.
  - a. Submission: Please submit via Canvas as a Word .doc or .docx.
  - b. Evaluation: 25 points
  
2. **Experimental Validity Assignment.** Students will complete a worksheet in which they identify the most compelling threats to internal validity in a number of research situations.
  - a. Submission: Please submit via Canvas as a Word .doc or .docx.
  - b. Evaluation: 25 points.
  
1. **Article Critique #1-5.** The ability to critique and critically evaluate the adequacy of completed research is an essential skill. During the semester, students will do a short written critique of five different research articles.
  - a. Submission: Please submit via Canvas as a Word .doc or .docx
  - b. Evaluation: 15 points for each critique

**Late Assignments will receive an immediate deduction of half the available points and will only be accepted within a day (or 24 hours) after the assignment was due, except in the case of a properly documented, university-approved, emergency.** In the case of a properly documented, university-approved emergency, students must contact me and make necessary arrangements to submit their assignment at a later date.

**Learning Modules:** Learning Modules have been created for each day of class and are accessible to students on Canvas. Each Learning Module will include lecture presentations, assignments, links to the discussion and quiz/assessment, and other useful course information. Please check the Learning Module at the beginning of each week, as it will help guide you through the course material and assignments.

## Miscellaneous

**Changes in Assignments and Schedule:** The instructor reserves the right to make changes to this syllabus at any time. Changes will be announced in class and posted on Canvas. The included schedule and all deadlines are extremely tentative and will be adjusted as needed.

**Students Needing Assistance with the English Language:** Several assignments in this course require English composition. If you feel you need assistance, please visit the USU Writing Center. They have tutors available to help: <http://writingcenter.usu.edu>.

**Academic Integrity - "The Honor System":** Each student has the right and duty to pursue his or her academic experience free of dishonesty. The Honor System is designed to establish the higher level of conduct expected and required of all Utah State University students.

**The Honor Pledge:** To enhance the learning environment at Utah State University and to develop student academic integrity, each student agrees to the following Honor Pledge: "I pledge, on my honor, to conduct myself with the foremost level of academic integrity." A student who lives by the Honor Pledge is a student who does more than not cheat, falsify, or plagiarize. A student who lives by the Honor Pledge:

- Espouses academic integrity as an underlying and essential principle of the Utah State University community;
- Understands that each act of academic dishonesty devalues every degree that is awarded by this institution;
- Is a welcomed and valued member of Utah State University.

**Plagiarism:** Plagiarism includes knowingly "representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials." The penalties for plagiarism are severe. They include warning or reprimand, grade adjustment, probation, suspension, expulsion, withholding of transcripts, denial or revocation of degrees, and referral to psychological counseling.

**Sexual Harassment:** Sexual harassment is defined by the Affirmative Action/Equal Employment Opportunity Commission as any "unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature." If you feel you are a victim of sexual harassment, you may talk to or file a complaint with the Affirmative Action/Equal Employment Opportunity Office located in Old Main, Room 161, or call the AA/EEO Office at 797-1266

**Students with Disabilities:** Qualified students with disabilities may be eligible for reasonable accommodations. If a student has a disability that will likely require some accommodation by the instructor, the student must contact the instructor and document the disability through the Disability

Resource Center (797-2444 voice, 797-0740 TTY, or toll free at 1-800-259-2966; Room 101 of the University Inn), preferably during the first week of the course. Any request for special consideration relating to attendance, pedagogy, taking of examinations, etc., must be discussed with and approved by the instructor. In cooperation with the Disability Resource Center, course materials can be provided in alternative format, large print, audio, diskette, or Braille."

**Withdrawal Policy and "I" Grade Policy:** Students are required to complete all courses for which they are registered by the end of the semester. In some cases, a student may be unable to complete all of the coursework because of extenuating circumstances, but not due to poor performance or to retain financial aid. In such cases an 'I' will be submitted as the grade for the semester. The term 'extenuating' circumstances includes:

- (1) incapacitating illness which prevents a student from attending classes for a minimum period of two weeks,
- (2) a death in the immediate family,
- (3) financial responsibilities requiring a student to alter a work schedule to secure employment,
- (4) change in work schedule as required by an employer, or
- (5) other emergencies deemed appropriate by the instructor.

## Tentative Course Schedule:

Week	Reading Assignments	Assignments
<b>1</b> 8/30, 9/1	<b>Chapter 1</b>	Review of Syllabus Introductions <b>Chapter 1: An Introduction to research.</b>
<b>2</b> 9/6, 9/8	<b>Chapter 2</b>	<b>Chapter 2: Evaluation</b> <b>Quiz 1</b>
<b>3</b> 9/13, 9/15	<b>Chapter 3</b>	<b>Chapter 3: Literature review and focusing the research</b> <b>Quiz 2</b>
<b>4</b> 9/20, 9/22	<b>Chapter 4</b>	<b>Chapter 4: Experimental and quasi-experimental research</b> <b>Quiz 3</b>
<b>5</b> 9/27, 9/29	<b>Chapter 5</b>	<b>Chapter 5: Causal Comparative and Correlational Approaches</b> <b>Quiz 4</b>
<b>6</b> 10/4, 10/6	<b>Chapter 11</b>	<b>Chapter 11: Sampling</b> <b>Quiz 5</b> <b>Library Search Assignment - Due</b>
<b>7</b> 10/11, 10/13	<b>Chapter 12</b>	<b>Chapter 12: Data Collection</b> <b>Article Critique #1 - Due</b> <b>Quiz 6</b>
<b>8</b> 10/18	<b>Chapter 13</b>	<b>Chapter 13: Data Analysis, Interpretation, and Use</b> <b>Experimental Validity Assignment - Due</b> <b>Quiz 7</b>
<b>9</b> 10/25, 10/27	<b>Midterm</b> <b>Chapter 13</b> <b>(Cont.)</b>	<b>Midterm – Tuesday, October 25<sup>th</sup>.</b> <b>Chapter 13 (Cont.)</b>
<b>10</b> 11/1, 11/3	<b>Chapter 6</b>	<b>Chapter 6: Survey</b> <b>Article Critique #2 - Due</b> <b>Quiz 8</b>
<b>11</b> 11/8, 11/10	<b>Chapter 7</b>	<b>Chapter 7: Single-Case Research</b> <b>Article Critique #3 - Due</b> <b>Quiz 9</b>
<b>12</b> 11/15, 11/17	<b>Chapter 8</b>	<b>Chapter 8: Qualitative Methods</b> <b>Citi Training Assignment - Due</b> <b>Article Critique #4 - Due</b> <b>Quiz 10</b>
<b>13</b> 11/22	<b>Chapter 9</b>	<b>Chapter 9: History and Narrative Study of Lives</b>
<b>14</b> 11/29, 12/1	<b>Chapter 10</b>	<b>Chapter 10: Mixed Methods Research</b> <b>Article Critique #5 - Due</b>
<b>15</b> <b>TBD</b>		<b>Final Exam</b>