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### C&I 520.01: Educational Research

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*University of Montana - Missoula*

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<p><b>EDUCATIONAL RESEARCH</b></p> <p><b>C&amp;I /EDLD/HHP 520</b> <b>3 credits</b></p> <p><b>University of Montana</b> <b>Spring, 2003</b></p>
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<b>Instructor:</b> Dr. Richard Kiefer-O'Donnell	<b>Schedule:</b> Spring, 2003
<b>Contact information:</b> 243-4145  634 Eddy, in the basement  of the Curry Health Ctr.	<b>Sessions:</b> Wednesday, 7:10 pm - 10:00 pm
<b>Role/rank:</b> Director of training, Rural Institute  Research Associate Professor,  Dept. of Curriculum & Instruction	<b>Location:</b> Education Building, Rm 215
<b>Email address:</b> <a href="mailto:odonnell@ruralinstitute.umt.edu">odonnell@ruralinstitute.umt.edu</a>	<b>Office hours:</b> By appointment

Required text: Gall, J., Gall, M., & Borg, W. (2003). Applying educational research: A practical guide (7<sup>th</sup> ed.). New York: Longman

Required guidelines for written assignments: Refer to Publication Manual of the American Psychological Association (5<sup>th</sup> ed.). (2001). Washington, D.C.: American Psychological Association. While the book is optional, and may be obtained through the library, students are strongly encouraged to purchase it.

Additional readings will be available on the course website as per the course calendar.

All non-text readings, handouts, class notes, assignments or other documents are being made available electronically for the student to download. See attachment for detail. All weekly session materials, with the exception of articles that are required, will be available by 5 PM the Monday before a given class session.

**I. Course Overview**

This is an introductory course designed for educators to understand basic quantitative and qualitative research methodology and terminology, particularly as they are used in professional literature studies. Its purpose is to provide the background to make reasoned and informed professional decisions based on best practices, and to provide the beginning steps to develop or disseminate research.

This course will focus on the basic tenets within education. *This is not a course in statistics.* The course will focus on application of educational research methods to the literature and to areas of student interest. Students will critically read, understand, and apply the literature to educational issues, and will strategize ways to address these issues through research.

## **II. Course Objectives**

Each student will ....

1. Know the core research planning processes associated with quantitative and qualitative approaches to investigation.
2. Define and describe the four conditions of validity and reliability as they relate to educational research design.
3. Be able to state and describe the ethical issues associated with the use of human subjects, especially when those individuals are by definition highly vulnerable.
4. Differentiate between educational research and evaluation, and state the characteristics and 2 functions of each.
5. State and describe at least 5 different experimental, quasi-experimental, and non-experimental designs, and relate them specifically to important educational questions and issues.
6. State and describe at least 5 different qualitative designs, and relate them specifically to important educational questions and issues.
7. Summarize the issues and arguments associated with the current national discussion and "trend" over scientifically-based research.
8. Frame out each of the required elements of a basic educational study.
9. Critique relevant issues in education, using as a foundation.
10. Conduct a thorough and accurate review of literature on a relevant issue in education.

## **III. Special Needs of Students with Disabilities**

The University of Montana is committed to policies of equal opportunity and affirmative action, and prohibits discrimination on the basis of race, color, national origin, religion, gender, sexual orientation, age, status as a Vietnam veteran, disabled veteran, or person with a disability. The instructor seeks to provide equal access to its programs, services and activities for people with disabilities. Reasonable prior notice is needed to arrange accommodations. Evidence of practice not consistent with these policies should be reported to the Disability Services for Students, Lommasson Center 154 at 243-2243 (Voice/Text)

To that end, students are encouraged to articulate their special needs to the instructor. However, students must provide written documentation of these special needs. It is best if reasonable accommodations are negotiated and recorded in writing PRIOR to assignments and/or field experience activities. All course activities and assignments are intended to reflect the demands of the profession in authentic settings. Accommodations must be mutually determined in a way that does not compromise the role and responsibility of a professional who serves students with disabilities. If reasonable accommodation cannot be mutually negotiated, the matter will be referred to the Disability Services for Students for mediation. Students who have concerns or questions regarding any aspect of their course experience or requirements are expected to contact the instructor to seek clarification and guidance. If concerns or questions cannot be resolved satisfactorily with the supervisors, students should contact their academic advisor and/or

program coordinator. If concerns and questions remain unresolved, teacher candidates should directly consult with the chair of the department.

#### IV. Course Outline and Schedule

This schedule is subject to change based on the pace and needs of the class. The instructional methods for the course will include lecture, discussion, cooperative learning, whole and small group discussion, student presentations, guest speakers, and use of multimedia. The instructor will provide a revised syllabus as needed, and a current printout of your grade standing periodically. It is your responsibility to remain current. Do not hesitate to let me know how you are doing or what you need.

SESSION DATE	#	TOPIC	REQUIRED READING	ASSIGNMENT DISTRIBUTED OR DUE
January 29	1	Course Overview and Introductions		Get book
February 5	2	Historical overview of educational research; The research process (All assignment descriptions and required readings available 2/5/03)	Chapt 1, 2	Critique assignment description distributed/ website reviewed
February 12	3	The ethics of human research and education	Chapt 3, supplemental article on website	
February 19	4	Preparation for research and reviews of the literature: framing your questions and hypotheses	Chapt 4, 5, 6	
February 26	5	Overview to research designs; Research design and methodology – quantitative/experimental	Chapt 7, 12,	Critique 1 due
March 5	6	Research design and methodology – quantitative/quasi-experimental	Chapt 9, 13	
March 12	7	Research design and methodology – quantitative/non-experimental	Chapt 8, 10, 11	
March 19	8	Research design and methodology – qualitative - Case Studies and Ethnographic	Chapt 14, 15	Mid-term (take home), Critique 2 due
March 26	n/a	Spring Vacation Week		
April 2	9	Research design and methodology – qualitative – Historical and Action Research	Chapt 16, 18	
April 9	10	Framing your research design and establishment of a research plan	2 supplemental articles on website, App. A and B	Critique 3 due
April 16	11	Institutional review board proposals and approval	2 supplemental articles on website, Appendix C and D	

SESSION DATE	#	TOPIC	REQUIRED READING	ASSIGNMENT DISTRIBUTED OR DUE
April 23	12	Data collection and analysis; writing reports (article, thesis and dissertation structures)	2 supplemental articles on website	Interview or Review of Literature due
April 30	13	Program evaluation	Chapt 17, supplemental article on website	
May 7	14	Open (used for special topics or if calendar gets changed)	TBA'ed	
May 14		Finals Week		Final exam (in class)

## V. Course Requirements

The assignments are geared toward your academic and professional interests. This course should give you an opportunity to reflect on research as a basis for classroom use, and provide time to discuss content. All assignments will be read, proofed and edited, and graded by this professor only.

There are five types of assignments, each with differing point value. You have the choice of doing assignment 4 (interview of a researcher) or 5 (review of literature) The maximum number of points that one can earn in this course is 300. **No extra credit will be awarded.** Point values for the assignments are not negotiable. Neither are the deadlines, without just cause and at least one calendar week notice by the student. The decision to extend any deadlines is left to the instructor.

1. Critiques (3). From a collection of 10 categories of educational research, students will critique research from 3 areas of interest. For each critique, students must choose 2 articles from a pool of 4 to 5 that the instructor has provided. **THE STUDENT THEN MUST ADD ONE MORE ARTICLE THAT RELATES TO ONE OR BOTH PIECES THAT THE INSTRUCTOR HAS PROVIDED.** Each critique must be at least 5 pages in length, in full A.P.A. style (see below). A description of the components of the critique, along with the pool of readings will be made available through the course website starting session 2.

Each critique will be worth **20 points**, earning a maximum of **60 of the 300 points** possible. The 10 educational research areas that are reflected through this pool of 40-45 articles include:

- a) Education reform and/or organizational change.
- b) Effective instruction
- c) Secondary transition/school to work\
- d) Multicultural education and/or inclusive schools
- e) Behavioral change or reduction
- f) Education finance/policy
- g) Longitudinal studies in education
- h) Behavioral change or reduction
- i) Early intervention
- j) Personnel preparation/ professional development

2. Examinations (2). Both a mid-term and final examination are required. The mid-term will be a take home exam and will be worth **40 points**, and the final will be completed in class during finals week, earning you a maximum of **50 points**. Therefore, the examination assignments of the

course will count for a total of **90 of the 300 points**. Both exams will be comprehensive to the day of the examination.

3. Discussions/simulations (5). A series of 5 graded simulations related to the practice of research will be conducted over the course of the semester. These will take place either in class, during class time, or if resources are available to all students, online through a threaded discussion format. Each of these simulations will be worth a maximum of **20 points**, earning a total of **100 points of the 300 points**. Two initial simulations will take place in class that will not be graded. **Then, the five simulations will take place without prior announcement by the instructor, other than the fact that if they take place online, that they have begun.** No make-up opportunities for these simulations will be granted, unless students have given prior notice to the instructor that s/he will be unable to attend a specific future class. In that case, the assignment will be completed prior to the class session, independently by the student.

4. Review of literature (1). Students may choose to complete assignment 4 or 5 for the final **50 points** of the course. In the review of literature, students will be expected to complete a 15 to 20 comprehensive review and analysis of the educational research literature on a crucial educational issue of personal choice. Students must follow the core structure provided by the instructor and fully comply with A.P.A. style.

5. Interview of a university professor who is either currently conducting human subjects-based research or has recently (within the last year) completed a similar research study (1). Again, students may choose to complete assignment 5 or 4 for the final **50 points** of the course. Through this assignment, students will schedule and conduct an interview of a university professor. From that experience, and materials provided by the researcher, the student will complete a 15 to 20 page summary and analysis of the investigation. Students must follow the core structure provided by the instructor and fully comply with A.P.A. style.

## VI. Grades

Letter grades correspond to the following percentages used frequently in University of Montana at Missoula graduate courses in Education:

<b>100-93% = A,</b>	(300 to 279 points)
<b>92-84% = B, ,</b>	(278 to 252 points)
<b>83-72% = C, ,</b>	(251 to 216 points)
<b>71-62% = D, ,</b>	(215 to 186 points)
<b>61-0% = F,</b>	(185 to 0 points)

## VII. Grading Criteria of Written Assignments

All critiques, assignment 4 and assignment 5 will be graded based on the extend to which students effectively followed assignment guidelines, using the following basic rubric.

1. Scope and depth of content communicated through the paper (30%)
2. Organization and clarity of thought (30%)
3. Spelling, grammar, punctuation (20%)
4. Strict adherence to A.P.A style, 5<sup>th</sup> Edition only (20%)