

**REMS 5013: RESEARCH DESIGN AND METHODOLOGY
COURSE SYLLABUS**

Spring 2010

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Office Hours: Monday - Friday: 8:00a – 5:00p; Appointments recommended.

Course Materials

Textbook (*Required*):

Gay, L. R., Mills, E. G., & Airasian, P. (2009). *Educational research: Competencies for analysis and applications*. (9th ed.). Upper Saddle River, NJ: Merrill.

Reference Materials (*Recommended*):

American Psychological Association. (2009). *Publication manual of the American Psychological Association*. (6th ed.). Washington, D.C.: American Psychological Association.

Oklahoma State University. (2005). *Handbook for the protection of human subjects in research*. Stillwater, OK: Oklahoma State University.

Additional Materials:

Supplemental readings may also be used, and other course materials will be posted on the D2L course website (<http://oc.okstate.edu/>).

OSU Professional Education Council Mission and Conceptual Framework

The Professional Education Unit (PEU) prepares and develops professional educators who facilitate life-long learning and enrich quality of life for people in public schools and other educational settings. OSU's Professional Education programs are based upon the L.E.A.D.S. conceptual framework: **L**eadership; **E**thics and Professionalism; **A**cademics and Professional Roles, including Content Knowledge, Integration, Human Growth and Development, Learning Environment, Technology, Teaching/Professional Practice and Assessment; **D**iversity; and **S**ervice Orientation/Community Outreach. These core values are an expansion of the earlier conceptual framework based upon Professionalism, Integration and Diversity.

OSU Catalog Description of Course

Required of all graduate students in education. An introduction to the concepts of research design, methodology, sampling techniques, internal and external validity, and the scientific method in educational problem solving. Critical analysis of educational research studies and the writing of proposals. No credit for students with credit in ABSED 5015.

Course Description

The purpose of this course is to provide a general orientation to the field of research in education. Specifics of research design, measurement, and systematic study of educational problems will be considered. The ability to analyze published research is of major concern, and the practice of skills related to planning and conducting research will be an additional outcome of this course.

Style of Teaching

The purpose of this course is to create an environment for students to conceptualize, within methods of science, various issues related to research in education. The instructor will utilize a combination of lecture, group discussions, and in-class activities to achieve the desired learning outcomes. This is a master's level course of study with commensurate expectations.

Course Learning Objectives

After completion of this course, students should be able to:

1. Compare and contrast the major approaches to research;
2. Distinguish between common research designs and be able to select an appropriate design according to the research problem;
3. Effectively apply principles of research design in order to develop a research study;
4. Identify and be able to utilize a variety of data collection and data analysis techniques;
5. Make sound judgments concerning the value of published research in education.

Course Learning Opportunities

I. Attendance and Participation

Expectation: You are expected to prepare for and attend all class sessions and to participate in class discussions. Should you find an extreme circumstance that prevents you from attending class, arrangements must be made before class begins. Appropriate make-up work is mandatory or any absence will result in one half letter grade lower than the grade you would have otherwise earned.

Invitation: As you consider the wide range of possibilities for understanding research in education, you are invited to bring in relevant topics, cognitive connections, or articles of new knowledge and understanding to present to the class members. This is not graded but is a necessity for collegiality, collaboration and other professional skills of researchers and practitioners in education.

II. Demonstration of Competencies Learned (Breadth of Learning Content)

Expectation: You are expected to complete a Collaborative Institutional Training Initiative (CITI) training program to demonstrate your knowledge and understanding of ethical research practices involving human subjects. As a requirement for this course, you will be expected to complete the Human Research Curriculum Basic Course and submit your completion report and overall scores. If you have previously completed this training program, you should take either the Human Research Curriculum Refresher Course or the Responsible Conduct of Research course and submit your completion report and overall scores. More information, including instructions for accessing the training program, is available on the OSU IRB website at <http://compliance.vpr.okstate.edu/IRB/training.aspx>. The training program will comprise 20% of your final course grade.

Expectation: You are expected to complete both a mid-term exam and a final exam to demonstrate your mastery of the course objectives. The exams will primarily be comprised of multiple choice questions, though true-false, short answer, and essay questions may also be utilized as necessary to demonstrate mastery of the content. The final exam will also include a critique of a research article. Additional information concerning each exam will be provided during the class period immediately preceding the exam. The midterm and final exams will be graded by the instructor and will each comprise 20% of your final course grade.

Invitation: Several optional modules are provided in the Human Research Basic course, primarily concerning research with special populations. You are encouraged to review the list of optional modules to determine whether any of the training areas would be relevant to research topics that you wish to pursue, such as research with children or research in public schools. These optional modules will not be graded but they are a necessity if you wish to conduct research with special populations. Additionally, while you are only required to complete the IRB training program for this course, you are encouraged to complete the RCR training as well as OSU policies will soon require all faculty and graduate students to complete this training.

III. Integrative and Creative Thought (Depth of Learning Content)

Expectation: You are expected to develop a research study based upon an area of academic or professional interest. Your final product includes the research proposal and a completed IRB application. The research proposal is divided into three sections: one is an idea paper with your initial thoughts that will be developed into your introduction, the second is a brief literature review to refine your ideas and define your research questions, and the third is the integrated paper that incorporates the method section and the instructor's feedback from the prior two sections. Criteria for evaluation of the research proposal are included at the end of the syllabus. The final research proposal will be graded by the instructor and will comprise 30% of your final course grade. Failure to submit the idea paper or the literature review by the stated deadline will result in a 10% reduction from your final research proposal grade.

Expectation: You are expected to prepare an IRB application based upon your research proposal that adheres to the requirements of the OSU Institutional Review Board. Evaluation criteria for the IRB application will be discussed in class and posted on the course D2L website. The IRB application will be graded by the instructor and will comprise 10% of your final course grade.

Invitation: You are strongly encouraged to select a research topic that is both personally and professionally meaningful, including topics that can be used as the basis for future thesis or dissertation research or other productive, scholarly endeavors. Should you wish to pursue the project after the conclusion of the course, the instructor will provide additional guidance and feedback upon request.

Grading and Other Important Details

- The contribution of each requirement to the grade is as follows:

<u>Course Requirement</u>	<u>Pts</u>	<u>Due Date</u>
Human Subjects Research Training	100	February 3 rd
Research Proposal	150	April 21 st
Introduction	(45)	February 10 th (Draft)
Literature Review	(45)	March 24 th (Draft)
Method	(45)	April 21 st
Style and Mechanics	(15)	April 21 st
IRB Application	50	April 28 th
Midterm Exam	100	March 10 th
Final Exam*	100	April 28 th

- Course grades will be calculated as follows:

A: 90% or above
B: 80% - 89%
C: 70% - 79%
D: 60% - 69%
F: 59% or below.

- All written assignments are required to be submitted electronically using the course website (<http://oc.okstate.edu/>). Assignments must be submitted by the end of the scheduled class period on the date they are assigned.
- Because attendance is expected, late or make-up work will not be accepted except in the case of rare emergencies, which the student is required to document (e.g., accident report, signed/dated doctor's note, etc.). If suitable documentation is provided, all make-up work must be submitted within 3 working days of the absence. In the case of foreseen, documented absences, all assignments are expected to be submitted prior to the absence. If necessary, make up exams will be given at the convenience of the instructor and may be significantly more difficult than the scheduled exam (since you will have had additional preparation time).
- It is highly unlikely that extra credit will be allowed as ample opportunities have been provided for students to demonstrate their mastery of course objectives. If an extra credit opportunity does become available, however, it will be announced to the entire class and never offered on an individual basis.
- Use a realistic estimate when predicting the time you will need to complete the course activities and requirements. Although the option of taking an incomplete ("I") is available to you at the end of the semester should you encounter an emergency or other unexpected events, it will mean that you will receive one letter grade decrease in your course grade.

If you find that you are falling behind or are experiencing difficulty in completing course assignments, please discuss the situation with the instructor as soon as possible so that mutually-negotiated accommodations can be made that will enable you to fulfill the requirements of the course and to avoid having to take an incomplete. University policy dictates that incomplete grades can only be given if 70% of the course requirements have been completed by the end of the grading period.

- In an effort to ensure a quality learning environment for everyone involved, it is imperative that classroom disruptions, such as unnecessary conversations, be eliminated. As ringing cell phones, text messaging, and playing games typically cause a disruption, you are expected to ensure that your cell phone is turned off before entering the classroom. If you must keep an electronic device turned on for emergency communications, please inform the instructor before the class period begins.
- Learn and practice APA (6th edition) style of writing early as all written assignments in this course must be submitted using this style. For more information regarding APA Style, including changes in the sixth edition, visit <http://www.apastyle.org/>.
- Students are expected to search library databases to retrieve scholarly research articles. This information will not be covered during class meetings, though the OSU library staff will assist students to become proficient in using academic search engines and databases.
- You are encouraged to structure professional input from others throughout the semester to promote optimal success. In other words, fully utilize your colleagues as appropriate – including fellow students and the instructor – as you work on course products.

Course Schedule

<u>Session</u>	<u>Topics</u>	<u>Readings & Due Dates</u>
1 – January 13	Introductions (to each other and the course)	
2 – January 20	Introduction to Educational Research	Gay, Mills, & Airasian: Ch. 1
3 – January 27	Selection and Definition of a Problem	Gay, Mills, & Airasian: Ch. 2, 3
4 – February 3	Preparation of a Research Plan	Gay, Mills, & Airasian: Ch. 4 Human Research Course Completion
5 – February 10	Selecting a Sample and Instruments	Gay, Mills, & Airasian: Ch. 5, 6 Research Proposal Idea Paper Due
6 – February 17	Survey & Correlational Research	Gay, Mills, & Airasian: Ch. 7, 8
7 – February 24	Causal-Comparative Research	Gay, Mills, & Airasian: Ch. 9
8 – March 3	Experimental Research	Gay, Mills, & Airasian: Ch. 10, 11
9 – March 10	Midterm Exam	
<i>March 17</i>	<i>Spring Break – No Class</i>	
10 – March 24	Descriptive Statistics	Gay, Mills, & Airasian: Ch. 12 Literature Review Draft Due
11 – March 31	Inferential Statistics	Gay, Mills, & Airasian: Ch. 13
12 – April 7	Qualitative Research	Gay, Mills, & Airasian: Ch. 14
13 – April 14	Qualitative Data Collection and Analysis	Gay, Mills, & Airasian: Ch. 18
14 – April 21	Preparing and Evaluating Reports	Gay, Mills, & Airasian: Ch. 21, 22 Research Proposal Due
15 – April 28	Make-Up Day	IRB Application Due
Friday, May 7 th	Final Exam*	

* The final exam is scheduled to be given at the officially scheduled time. However, all students will be polled on the first day of class, and consent of all students will result in moving the final exam to pre-finals week. If the course schedule is required to be altered due to inclement weather, the instructor reserves the right to move the final exam back to the regularly schedule final exam time, Friday, May 7th, 2:00 – 3:50 p.m.

Possible Changes in the Syllabus

This syllabus is your contract for production in the course. Any changes made to it will be announced in class and posted on D2L as soon as possible. No changes increasing requirements will be made as these might adversely affect your grade.

Students Rights and Responsibilities

<http://www.okstate.edu/ucs/sja/srr.html>

Classroom Conduct Policy

Classroom conduct will be governed by Student Rights and Responsibilities Governing Student Behavior, Fall 2009, Section IX, Academic Policies, Rights, and Responsibilities, Subsection C, last sentence: "It is the responsibility of the student to conform to conduct conducive to learning by being prepared, prompt, attentive, and courteous in the classroom and by conforming to policies set by the teacher to maintain an academic decorum". <http://www.okstate.edu/ucs/SJA/sectionIX.htm>.

Academic Integrity

Consistent with Oklahoma State University policy, academic dishonesty and/or misconduct will not be tolerated. It is important that you are aware of university policy and procedures in the event that violations of academic dishonesty or misconduct do occur (please see www.okstate.edu/ucs/srr.html). Should a violation of this policy occur (and following a meeting between the instructor and the accused student), disciplinary actions consistent with university policy would be initiated. A description of behaviors that constitute academic dishonesty and/or misconduct can be found online at <http://osu.okstate.edu/acadaffr/aa/ai-violations.htm>

Intellectual Property Policy

Words and ideas are the intellectual property of the individuals who originated them. Thus, whenever you quote more than three words in sequence from any single source, you must enclose those words in quotation marks. Cite in parentheses the author of the book or article, the year of publication, and the number of the page on which the words were written (e.g., Solomon, 2003, p. 125). Include the complete citation of the source in your references at the end of your paper. Failure to follow these procedures will result in loss of points on any paper in which such failure occurs. Furthermore, failure to follow these procedures may be viewed as plagiarism and, thus, a violation of university policies that pertain to academic integrity. **The instructor reserves the right to report academic integrity violations and assign a grade of "F" in the course.**

Sexual Harassment

Please see the link below to review university policy and procedures regarding sexual harassment and gender discrimination.

<http://home.okstate.edu/policy.nsf/0/1fed349052d11b0a862562d8007c090f?OpenDocument>

Drop and Add Policy

The standard drop/add policy for fall classes will be followed as described in the Fall 2009 Syllabus Attachment.

Students with Disabilities

If any member of this class feels that he or she has a disability and needs special accommodations of any nature, the instructor will work with you and the Office of Student Disability Services (Student Union Room 326) to provide reasonable accommodations to ensure that you have a fair opportunity to perform in this class. Please advise the instructor of such disability and the desired accommodations no later than the end of the first week of classes.

REMS 5013: Research Design & Methodology
EVALUATION CRITERIA FOR RESEARCH PROPOSAL

<u>Component</u>	<u>Total Points</u>	<u>Points Earned</u>
I. INTRODUCTION		
A. <u>Introduction</u>		
1. Is the background information on the problem thoroughly presented? (i.e. Is the context within which the study will be conducted identified giving background information to clarify it?)	6	___
2. Is a clear and succinct description provided, citing relevant sources of how present knowledge about how the problem has evolved and what issues remain unsolved?	6	___
B. <u>Formal Statement of the Problem</u>		
1. Is there a summary and statement of the problem?	6	___
C. <u>Purpose of the Study</u>		
1. Is there a statement of the purpose of the study?	4	___
2. Is the problem and the purpose of the problem researchable?	4	___
3. Does the purpose of the study indicate the variables of interest and the specific relationship between those variables which are to be investigated?	4	___
D. <u>Significance of the Study</u>		
1. Is a description provided of the importance of this study and the contribution to knowledge that this study will make? (i.e. Who will use this information and in what way? How will this information impact the profession?)	6	___
E. <u>Limitations of the Study</u>		
1. Is there an identification of any aspect of the study that may negatively affect the results or generalizability of the results over which the researcher has no control?	5	___
F. <u>Organization of the Study</u>		
1. Is a paragraph provided describing what topics will be presented in each section following and including the introduction?	4	___
II. REVIEW OF THE LITERATURE		
A. <u>Introduction</u>		
1. Does the first paragraph(s) introduce the purpose of the review and the order in which the topics will be presented?	5	___

B. Body

This section will contain a presentation and discussion of the issues that are relevant to the problem and purpose of the study using subheading to denote changes in topics.

1. Are all referenced sources relevant to the problem to be investigated? 6 ___
2. Does the information logically flow in such a way that the references least related to the problem are discussed first and the most related references are discussed last? (Remember the "V"). 6 ___
3. Are the specific variables addressed in the problem and purpose of the study thoroughly discussed in the review? 6 ___
4. Is there a logical flow from one point to the next or is the information presented in fragments? 4 ___

C. Summary

1. Is there a summary of the review that presents the major findings relevant to the problem that directs this study? 6 ___

D. Hypotheses/Research Questions

1. Does each hypothesis state an expected relationship or difference between two or more variables? Or, do the research questions reflect the variables included in the problem? 4 ___
2. If necessary, are variables included in the hypotheses/questions directly defined or if operationally defined, included in the Definition of Terms? 4 ___
3. Is each hypothesis/question testable/answerable? 4 ___

III.METHOD

A. Introduction

1. Does the Introduction provide a brief paragraph describing the topics to be addressed in this section of the proposal? 3 ___

B. Participants/Subjects

1. Is there a description of the population represented by the sample (e.g. size and major characteristics of the community in which the sample resides, their demographic statistics/ descriptions relevant to the problem investigated)? 2 ___
2. Is the method for selecting the sample and its size clearly described? 2 ___
3. Does the sample size meet the suggested guidelines for minimum sample size appropriate for the research design? 3 ___
4. Is there a list of the relevant characteristics of the sample that will be included in the study (e.g. age, gender, position, ethnicity, years of experience, marital status, etc.)? 3 ___

C. Instrument(s)

- | | | |
|--|---|-----|
| 1. Is each instrument described in terms of its purpose and context? | 3 | ___ |
| 2. Is/Are the instrument(s) appropriate for measuring the intended variables? | 3 | ___ |
| 3. Is/Are the instrument(s) to be developed specifically for the study, are the procedures involved in its development and validation described? | 5 | ___ |
| 4. Is evidence presented that indicates that each instrument is appropriate for the sample under study? | 3 | ___ |
| 5. Is the type of validity and size of validity coefficients reported for each instrument? | 3 | ___ |
| 6. Is the type of reliability and size of reliability coefficients reported for each instrument? | 3 | ___ |

D. Research Design & Procedure

- | | | |
|--|---|-----|
| 1. Is there a description of the design chosen for this study and its appropriateness? | 3 | ___ |
| 2. Is the design appropriate for testing the hypotheses/answers of the questions of the study? | 3 | ___ |

E. Procedure

- | | | |
|---|---|-----|
| 1. Is there a clear description of how this study will be conducted? | 3 | ___ |
| 2. If appropriate, will a pilot study be conducted? If so, are its procedures described? | 1 | ___ |
| 3. Are control procedures described (i.e. is there a description of how potentially confounding variables will be conducted)? | 2 | ___ |

IV. STYLE AND MECHANICS

A. Style

- | | | |
|---|---|-----|
| 1. Is the word choice appropriate for the task, using precise, vivid vocabulary? | 3 | ___ |
| 2. Is the proposal written using a consistent and appropriate point of view and tone? | 2 | ___ |

B. Mechanics

- | | | |
|---|---|-----|
| 1. Is standard grammar, spelling, and punctuation used? | 5 | ___ |
|---|---|-----|

C. Documentation

- | | | |
|--|---|-----|
| 1. Are sources cited according to the American Psychological Associations' (APA) Publication style of writing? | 3 | ___ |
| 2. Are the references in the bibliography cited according to APA's style of writing? | 2 | ___ |

TOTAL 150 ___