

## SYLLABUS

**GEORGE MASON UNIVERSITY**  
**COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT**  
**PROGRAM NAME: Ph. D. in Education**  
**EDRS 810**  
**Problems and Methods in Educational Research**

Fall Semester, 2013

Meeting Time/Days: Wednesday: 4:30 - 7:10 pm

Location: Innovation Hall, Room 203

### **PROFESSOR:**

**Name:** Anthony E. Kelly, Ph.D.

**Office phone:** 703-993-9713

**Office location:** West Building, Room 2203

**Office hours:** 2:00-4:00 W, 2:00-4:00 TH and by appointment, email contact preferred

**Email address:** akelly1@gmu.edu

### **COURSE DESCRIPTION:**

- A. **Prerequisites:** Admission to the Ph.D. program or permission of instructor.
- B. **Course description from the university catalog:** This is an advanced course in the interpretation and application of education research methods. Emphasizes comparison of alternative philosophies of research, ways of formulating questions/hypotheses, research plans, and analysis procedures. Students evaluate existing studies and investigate a range of research approaches.

### **NATURE OF COURSE DELIVERY:**

This course consists of lectures, large group and online formats, in class, whole group, small groups, and individual activities and assignments and use of relevant software including SPSS. Some blended instruction will also occur.

### **LEARNER OUTCOMES:**

This course is designed to enable students to:

- understand what research is, and how it differs from other intellectual and practical activities in education;
- understand the major approaches to educational research, and the implications of the differences between these for doing and evaluating research in education;
- find, understand, evaluate, and apply published research that is relevant to their field;
- be able to design the basic components of small-scale research studies, both quantitative and qualitative, including

- identifying a research problem to study
- formulating the purposes of the study
- developing a conceptual framework for the study
- generating appropriate research questions
- planning relevant and feasible methods of sampling, data collection, and analysis
- anticipating plausible validity threats, and thinking of ways to deal with these
- dealing appropriately with ethical issues in the research
- write clearly and coherently about the conceptual framework, questions, and methods used in a research study;
- use the writing style described in the Sixth Edition of the *Publication Manual of the American Psychological Association* (APA) for writing term and research papers;
- reflect on their actions and choices and use that reflection to inform practice;
- present written research results clearly and coherently.

### **REQUIRED TEXT:**

Creswell, J.W. (2012). *Educational Research: Planning, conducting, and evaluating quantitative and qualitative research* (4<sup>rd</sup> ed.). Upper Saddle River, NJ: Pearson Education.

This text has a Companion Website that will be employed in this class:

<http://www.prenhall.com/creswell>

### **Recommended Texts**

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

Green, S.B., & Salkind, N.J. (2011). *Using SPSS for windows and Macintosh: Analyzing and understanding data* (6<sup>th</sup> ed.). Upper Saddle River, NJ: Pearson Education.

Tjeerd Plomp & Nienke Nieveen (2008). Introduction to Educational Design Research  
[http://www.slo.nl/downloads/2009/Introduction\\_20to\\_20education\\_20design\\_20research.pdf/download](http://www.slo.nl/downloads/2009/Introduction_20to_20education_20design_20research.pdf/download)

**Course Requirements:** It is expected that each of student will

- (1) Read all assigned materials for the course.
- (2) Attend each class session and participate in classroom activities that reflect critical reading of materials.
- (3) Complete the online Mandatory Training for Person's Conducting Research with Human Subjects.\*
- (4) Complete homework assignments, including weekly online tests and submit results to professor via Blackboard prior to each class meeting.\*

(5) Write and submit a complete human subject proposal for a quantitative intervention study, and for a qualitative study method section assignment.\*

(6) Write two method sections: one quantitative intervention study and one qualitative research study.

(7) Present one method section to the class.

\*Late assignments will not be accepted by the instructor. If an emergency occurs please notify the instructor in advance

### **Course Requirements**

**1. Online weekly multiple choice tests:** Students are asked to complete and submit online multiple choice tests on each week's assignment. Go to <http://prenhall.com/creswell> and complete multiple choice tests for each chapter (refer to syllabus for due dates). Submit exam results to yourself and upload a summary file to Blackboard with your name, the quiz topic, and date in the title of the upload.

**2. Mandatory Training for Persons Conducting Research Using Human Subjects:** Students will be asked to complete Mandatory Training for Persons Conducting Research Using Human Subjects. Information is available online: <http://oria.gmu.edu/research-with-humans-or-animals/institutional-review-board/>. The training takes between two and five hours and can be accessed from: <http://www.citiprogram.org>. Copy and paste your completion certificate, then upload to Blackboard with your name, and "citiprogram" in the title of the file.

**3. Completion of Human Subjects Proposals:** Students will write two human subjects (IRB) proposals to accompany each of a quantitative intervention research method section, and a qualitative research methods section. Turn in a hard copy of each, and upload to Blackboard. Title the file with your name, qualitative IRB or quantitative IRB, and the date.

**4. Method Sections:** Students will write two different method sections replicating and extending previous research studies. Each method section will be written in APA format (see sample paper in the APA manual) and contain relevant sections specific to each type of research design. One will be a **quantitative intervention research** study; one will be a **qualitative research** study. Turn in hard copies, and upload to Blackboard. Title the file with your name, and as appropriate: qualitative method or quantitative method, and the date.

#### *Sample Method Section*

1. Statement of purpose and research questions, including a statement indicating research you are replicating and extending and a relevant citation for the study. (See also APA manual pp. 247-249). A model for qualitative research methods will be given during class.

2. Method (5-6 pages)

Participants characteristics

Sampling procedures,  
setting

Sample size

Materials

Content for all conditions

Method of implementation for all conditions

Deliverer

Setting

Time span, including number of sessions, duration of each session

Unit of analysis

Measures (Data sources) (dependent variables) instrumentation (where relevant) Procedures (proposed data collection process)

Proposed preliminary data analyses (table of research question by data source by proposed data analysis

3. References

**5. In class/Homework:** Students will be asked to work in small teams on in class/homework assignments throughout the semester. Some assignments are listed on the syllabus, although they may be amended throughout the semester. When you are requested to turn in a particular article (e.g., an experimental intervention research study, a survey research study) identify (either in the margins of the article or by highlighting within the articles), the relevant parts of the study. For example, identify the following parts: (a) the purpose; (b) the research questions; (c) the research design, including independent and dependent variables when relevant; (d) the participants; (e) the materials; (f) the data sources, outcome measures and/or dependent variables or measures; (g) the research procedures; (h) the data analysis procedures; (i) the results; and (j) implications, if any from the study. Each team will turn in one annotated article, and a one-page single-spaced critique of the claims of the article (a-j, as appropriate), each signed by each team member.

**6. Presentation:** A method section of the students' choice (qualitative or quantitative) will be presented orally using audio-visual aids (e.g., power point slides). Upload a copy of the slides to Blackboard. Sign-up sheets for presentation times will be distributed in class.

**7. Class Participation and Attendance Policy: It is the student's responsibility to ask questions if the material in the readings is unclear.** Because of the importance of lecture and discussion to your total learning experience, I wish to encourage you to both attend and participate in class regularly. Attendance, punctuality, preparation, and active contribution to small and large group efforts are essential. These elements of your behavior will reflect the professional attitude implied in the course goals and will account for 10% of your course grade. Students who must miss a class must notify the instructor (preferably in advance) and are responsible for completing all assignments and readings for the next class.

**8. Bring flash or other relevant media to class in order to save work completed during class.**

### **Course Evaluation**

#### **RUBRIC for Article Assignments (3 assignments \* 2 pts)**

*Adequate assignment* (2 point): Assignment is thorough, thoughtful, correctly done, and submitted on time.

*Marginal assignment* (1 point): Assignment is carelessly prepared, not thoughtful, or incomplete.

*Inadequate assignment* (0 points): Assignment has little or no value, or is not submitted on time.

#### **RUBRIC FOR WEEKLY On-Line TESTS (8 pts)**

*Adequate test* (1 point): Submitted on time; reflects a score of 90% or greater.

*Marginal test* (.5 point): Lower score reflects lack of content knowledge.

*Inadequate test* (0 points): Very low score or not submitted on time.

#### **RUBRIC FOR METHOD SECTION ASSIGNMENTS (30 = 2 assignments \* 15 pts)**

**Exemplary paper (13-15 points):** Appropriate topic, thorough and thoughtful purpose and research questions with appropriate study cited for replication and extension, appropriate and clearly described research design, participants, materials, data sources, implementation procedures, and careful brief description of data analyses. Good writing style, free of mechanical or stylistic errors, appropriate use of APA format.

**Adequate paper (10-12 points):** Good overall paper, lacking in one or two of the criteria for an exemplary paper. Not entirely reflective or thoughtful, or minor writing style or APA format errors may be present.

**Marginal paper (6-9 points):** Overall, acceptable but with one or more significant problems. Contains some useful information, but may have substantial problems with evaluation, writing style or APA format, or unclear or inappropriate description of implementation of project.

**Inadequate paper (1-5 points):** Paper with substantial problems in important areas such as writing, proposed implementation of intervention, procedures for evaluation of results, or

overall thoughtfulness. Contains little or no information of value to field of education.

**Unacceptable/no paper (0 points):** Paper with no value whatsoever relative to the assignment, or no paper turned in at all. May describe a project of no value that was not approved for this assignment.

### **RUBRIC FOR PARTICIPATION, AND ATTENDANCE**

**Exemplary (9-10 points):** The student attends all classes, is on time, is prepared and follows outlined procedures in case of absence; the student actively participates and supports the members of the learning group and the members of the class.

**Adequate (7-8 points):** The student attends all classes, is on time, is prepared and follows outlined procedures in case of absence; the student makes active contributions to the learning group and class.

**Marginal (5 points):** The student is on time, prepared for class, and participates in group and class discussions. The student attends all classes and if an absence occurs, the procedure outlined in this section of the syllabus is followed.

**Inadequate (5 or fewer points):** The student is late for class. Absences are not documented by following the procedures outlined in this section of the syllabus. The student is unprepared for class and does not actively participate in discussions. The student may fail to exhibit professional behavior and dispositions. **Excessive absences can result in additional penalties and potential withdrawal from class.**

### **RUBRIC for HUMAN SUBJECT PROPOSAL (10 points \* 2 assignments)**

**Exemplary (9-10 points)** Appropriately written document containing all components, including: protocol contains answers to all questions, clearly written, informed consent forms written in readability and format appropriate for target audience.

**Adequate (7-8 points)** Good overall proposal, but is lacking in one or two of the criteria for an exemplary proposal. Not entirely reflective or thoughtful, or minor writing style or APA format errors may be present.

**Marginal (6-7 points)** Overall, is acceptable but contains one or more significant problems. Contains some useful information, but may have substantial problems with procedures, writing style or APA format, or unclear or inappropriate description of implementation of project.

**Inadequate (<6 points)** Proposal contains substantial problems in important areas such as

writing, proposed implementation of intervention, procedures for evaluation of results, or overall thoughtfulness.

### **RUBRIC for Presentation (20)**

**Exemplary (19-20 points)** Well-designed, cogent presentation that stays within the time limit and touches main points in the method section. Well-written and clear content slides that support the presentation. Professional demeanor and presentation skills. Faculty and audience questions answered thoroughly.

**Adequate (16-18 points)** Good overall presentation, but somewhat poor in time management, adequate but non-specific slides, faculty and audience questions not answered in depth.

**Marginal (10-15 points)** Contains significant problems in one of presentation, content slides, and question responses.

**Inadequate (<10 points)** Contains significant problems in two or more of presentation, content slides, and question responses.

### **Grading Policy**

|  |                |
|--|----------------|
| Weekly on-line tests                       | 8 pts          |
| Human Subjects on line training completion | 6 pts          |
| Human Subject Proposal/qualitative         | 10 pts         |
| Human Subject Proposal/quantitative        | 10 pts         |
| Method Sections/quantitative               | 15 pts         |
| Method Sections/qualitative                | 15 pts         |
| In Class/Homework                          | 6 Pts (3*2)    |
| Class Participation and Attendance         | 10 pts         |
| Method Section Presentation                | 20             |
| <b>TOTAL</b>                               | <b>100 pts</b> |

**Letter grades will be assigned as follows:**

|    |          |   |           |    |        |
|----|----------|---|-----------|----|--------|
| A+ | 98-100%  | A | 93-97%    | A- | 90-92  |
| B+ | 88-89%   | B | 83-87%    | B- | 80-82% |
| C  | 70-79 n% | F | below 70% |    |        |

**Tentative Course Organization and Schedule**

| DATE    | TOPIC   |   | Activity  |
|---------|---|---|---|
| 1. 8/28 | Review syllabus- Introduction<br>EDRS810 and the Field of Educational Research; What does it mean to observe? What is a research question? What is a warranted claim? | Download, read and bring to next class an article in the <i>Educational Researcher</i> journal by Kelly and Yin (2007). | Introduction to various websites we will be accessing: Prentice Hall web site: <a href="http://www.prenhall.com/creswell">www.prenhall.com/creswell</a> ; human subjects' training site: <a href="http://www.citiprogram.org">http://www.citiprogram.org</a> ; GMU HSRB sites; <a href="http://oria.gmu.edu/ethical-conduct-of-research/">http://oria.gmu.edu/ethical-conduct-of-research/</a> , and <a href="http://oria.gmu.edu/research-with-humans-or-animals/institutional-review-board/">http://oria.gmu.edu/research-with-humans-or-animals/institutional-review-board/</a> – (more detail, next week, with IRB visitor)<br>GMU Library guides: <a href="http://infoguides.gmu.edu/education">http://infoguides.gmu.edu/education</a><br>Campus resources (see end of syllabus): writing, counseling, disabilities |
| 2. 9/4  | Guest: 1 <sup>st</sup> hr; Aurali Dade; GMU IRB<br><br>Conducting Research and Steps in the Research Process<br>Reviewing the literature                              | Human Subjects and IRB issues<br>Chapter 3<br>Chapters 1 and 2  | Finding online peer reviewed published research. Exploration of Psyc Info (see <a href="http://infoguides.gmu.edu/education">http://infoguides.gmu.edu/education</a> ). See journals cited under Browse, see thesaurus under Term Finder. Do a Search, explore categories under Narrow Results By.<br><br>With the help of the instructor, find three articles, three books/chapters, dissertations in your area of interest. From home use GMU login; never pay for an article!<br><br>Discuss <i>Educational Researcher</i> journal by Kelly and Yin (2007).  |
| 3. 9/11 | Conducting Research and Steps in the Research Process   | Chapters 1 and 2  | Submit online test results for chapters 1, 2; <a href="http://www.prenhall.com/creswell">www.prenhall.com/creswell</a><br>Locate a <b>quantitative</b> article. Identify the research problem, the literature review, the purpose or research questions, the method section, the data collection procedures, the data analyses and the discussion.<br><br>What do you think of the article's claims? Compare critiques across teams.  |



|          |   |   |   |
|----------|---|---|---|
| 4 9/18   | Specifying a Purpose; Research Questions; Reporting & Evaluating Research                       | Chapters 4-5  | Submit online test for chapter 3. <a href="http://www.prenhall.com/creswell">www.prenhall.com/creswell</a><br>Bring to class a <b>correlational</b> study, <b>article 1</b> , to class for discussion. What do you think of the article's claims? Compare critiques across teams. Focus on research purposes and questions.<br><a href="http://www.citiprogram.org">http://www.citiprogram.org</a> review on line module prior to class.  |
| 5. 9/25  | <i>Collecting, Analyzing and Interpreting Quantitative Data</i>                                 | Chapter 6   | Submit online tests for chapters 4,5<br><b>Submit</b> review of highlighted sections of <b>article 1</b> with attached critique of article's claims.<br>Find three <b>intervention</b> research studies in class. Discuss features of intervention studies.<br>Mandatory Training for Persons Conducting Research Using Human Subjects must be completed and certification document submitted.<br>Find and review an intervention study for next week (article 2)   |
| 6. 10/2  | Using SPSS and Analyzing Quantitative Data; Experimental designs, correlations, survey research | Chapters 10, 11, 12   | Submit online test for chapter 6.<br>Bring to class a n <b>intervention</b> study, <b>article 2</b> , to class for discussion. What do you think of the article's claims? Compare critiques across teams.<br>Find three <b>survey</b> research articles in class. Identify the parts of the article in the margins. Discuss features of survey studies.<br>Review <a href="http://thedianerehmsnow.org/shows/2011-02-02/vaccines-and-autism-story-medicine-science-and-fear">http://thedianerehmsnow.org/shows/2011-02-02/vaccines-and-autism-story-medicine-science-and-fear</a><br>Write a 1 page critique of the claims and methods used; bring to next class. |
| 7. 10/9  | Research and public opinion   |   | Submit highlighted sections of <b>article 2</b> (intervention study) with attached critique of article's claims.<br>Using <a href="http://thedianerehmsnow.org/shows/2011-02-02/vaccines-and-autism-story-medicine-science-and-fear">http://thedianerehmsnow.org/shows/2011-02-02/vaccines-and-autism-story-medicine-science-and-fear</a> , discuss the use of quantitative data in public opinion and decision making.<br>Identify quantitative intervention research article, and begin method extension and IRB. Continue during week.   |
| 8. 10/16 | Extending a methods section   | Chapters 7 & 8<br>Collecting<br>Analyzing and<br>Interpreting<br>Qualitative Data | Bring draft of quantitative intervention research method and matching Human Subject proposal for in-class peer review;<br>Work on quantitative method and HSRB proposals  |
| 9. 10/23 | Online discussion   |   | No face-to-face class. Blackboard discussion of method extension and IRB forms.   |

|           |  |                      |  |
|-----------|--|----------------------|--|
| 10. 10/30 | Analyzing and Interpreting Qualitative   | Chapters 7& 8        | <p><b>Quantitative Research Method and matching Human Subject Proposal (and all consent forms) due</b></p> <p>Submit online tests for chapters 7, 8</p> <p>Find three <i>qualitative</i> research studies in class. Identify the research problem, the literature review, the purpose or research questions, the method section, the data collection procedures, the data analyses and the discussion. Highlight each area by identifying it in the margins. Discuss across teams. Critique.</p> |
| 11. 11/6  | More examples and work data analyses   |                      | <p>Bring to class a <b>qualitative</b> study, <b>article 3</b>, to class for discussion. What do you think of the article's claims? Compare critiques across teams.</p> <p>For next week, listen to the documentary, <a href="http://soundportraits.org/on-air/they_shall_take_up_serpents/">http://soundportraits.org/on-air/they shall take up serpents/</a></p> <p>Write a one-page reflection. Bring to next class</p>   |
| 12. 11/13 | Grounded Theory, Ethnographic and Narrative Designs  | Chapters 13, 14 & 15 | <p><b>Draft of Qualitative research method due for in-class peer review.</b></p> <p>Discuss "They shall take up serpents" as a source for ethnographic of narrative analysis.</p> <p>Submit highlighted sections of <b>article 3</b> (qualitative study) with attached critique of article's claims.</p>   |
| 13. 11/20 | Mixed Method and Action Research Designs Review of design-based research<br>Plomb download | Chapters 16 & 17     | <p>Discussion of <i>mixed method</i> research studies. Identify the research problem, the literature review, the purpose or research questions, the method section, the data collection procedures, the data analyses and the discussion. Highlight each area by identifying it in the margins. Discuss across teams. Critique.</p> <p>Work on qualitative research methods extension and IRB.</p>   |
| 14. 11/27 | Thanksgiving   |                      |  |
| 15. 12/4  | Method section presentations   |                      | <p>Class presentations</p> <p><b>Qualitative Research Method extension and matching Human Subject Proposal (and all consent forms) due</b></p>   |

### GMU Policies and Resources for Students

1. Students must adhere to the guidelines of the George Mason University Honor Code [See <http://oai.gmu.edu/honor-code/>].
2. Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>]
3. Students are responsible for the content of university communications sent to their

George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.

4. Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.

### Professional Dispositions

Students are expected to exhibit professional behaviors and dispositions at all times.

### Core Values Commitment

The College of Education & Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles. <http://cehd.gmu.edu/values/>

For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website [See <http://gse.gmu.edu/>]

### *Campus Resources*

**Writing.** The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].

**Counseling.** The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].

**Disabilities.** Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].