**Course Title and Number: Educational Research, EDRS 590**
**Instructor: Dr. John J. Ketterer**
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**Semester: Spring 2006**

"The most important questions of life are, for the most part, really only problems of probability."
--Pierre Simon De Laplace

## Course Overview and/or Rationale

This course is designed to teach students the value of being consumers of research and the ability to develop skills to engage in their own research as leaders in their profession.

## Relevant Professional Standards

NCATE Standards
Professional and Pedagogical Knowledge and Skills for Teacher Candidates (Initial and Continuing Preparation of Teachers):

Candidates reflect a thorough understanding of professional and pedagogical knowledge and skills delineated in professional, state, and institutional standards, as shown in their development of meaningful learning experiences to facilitate student learning for all students. They reflect on their practice and make necessary adjustments to enhance student learning. They know how students learn and how to make ideas accessible to them. They consider school, family, and community contexts in connecting concepts to students' prior experience, and applying the ideas to real-world problems.

Professional Knowledge and Skills for Other School Personnel:
Candidates have an adequate understanding of the professional knowledge expected in their fields and delineated in professional, state, and institutional standards. They know their students, families, and communities; use current research to inform their practices; use technology in their practices; and support student learning through their professional services.

Candidates have an in-depth understanding of professional knowledge in their fields as delineated in professional, state, and institutional standards. They collect and analyze data related to their work, reflect on their practice, and use research and technology to support and improve student learning.

## University Policies
Students must follow the guidelines of the University Honor Code. See
http://www.gmu.edu/catalog/apolicies/#TOC_H12 for the full honor code.

The Graduate School of Education (GSE) expects that all students abide by the following:

Students are expected to exhibit professional behavior and dispositions. See gse.gmu.edu for a listing of these dispositions.

Students must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catalog/apolicies/#TOC_H12 for the full honor code.

Students must agree to abide by the university policy for Responsible Use of Computing. See http://mail.gmu.edu and click on Responsible Use of Computing at the bottom of the screen.

Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DRC) and inform the instructor, in writing, at the beginning of the semester. See www.gmu.edu/student/drc or call 703-993-2474 to access the DRC.

Approved March 2004

**Course Policy**

You are encouraged to share your questions, concerns, and work with the other students. I will not give information about your grades or any comments about your ratings to others, but in the spirit of cooperation, a community of learning, and effective research methodology, sharing and consultation among class members is absolutely necessary. To this end, the "Discussion Board" has strands corresponding to each week of class work. Talk to each other about your assignments and research papers. (Do your own work and draw your own conclusions. Our work should be available for public scrutiny, evaluation, and comment. We can also learn a great deal from each other this way. This is part of the peer review process.

All research that is published is criticized. If you have critical comments or praise that you do not wish to share online or in a discussion forum, direct it privately to the person. However, I will make comments and criticism only as a response to the required assignments submitted through the "Assignments" function of Blackboard. This is not different than what would happen in a conventional classroom, it is part of the learning process. As teachers, you know we all learn from others and from our own mistakes.

Unless you have a valid medical excuse or some extraordinary circumstance, late work will not be recorded. You will still be expected to submit the late work, but there will be no points awarded for it.

**Textbook**

Charles, C.M. & Mertler, C.A. (2002). Introduction To Educational Research, 4th Edition. Boston: Allyn and Bacon.

or

Charles, C.M. & Mertler, C.A. (2005). Introduction To Educational Research, 5th Edition. Boston: Allyn and Bacon.

**Related Materials**

For statistical operations you may use Statistical Package for the Social Sciences (SPSS), Excel, online applications, a calculator, and the Smith package that is free to download.

**Bibliography**

<u>Relevant Journals</u>

Active Learning
Adult Learning
ALN [Asynchronous Learning Networks] Magazine
Australian Educational Researcher
Australasian Journal of Educational Technology
Broadcast: Journal of the Scottish Further Education Unit
Community Update
Contemporary Issues in Early Childhood
Contemporary Issues in Technology and Teacher Education
Continuing Professional Development Journal
Current Issues in Education
Current Issues in Comparative Education
Early Childhood News: The Journal of Professional Development
Education and Aging
Education International
Education Policy Analysis Archives
Education Review: A Journal of Book Reviews
Education Statistics Quarterly
Education Today: UNESCO Education News
Educational Action Research
Educational Innovation and Information
Educational Leadership
Educational Researcher
Educational Technology Review
Educational Technology & Society
Educational Theory
ERIC Review
ERIC Elementary and Early Childhood Education Newsletter
European Educational Research Journal
European Educational Researcher
European Journal for Open and Distance Learning
Evaluation Comment

Hands On! (Technical and Educational Research Center)
Harvard Education Letter Research Online
IMHE-Info [Institutional Management of Higher Education
Innovation in Education
Insight (National Centre for Vocational Education Research, Australia)
Interactive Multimedia Electronic Journal of Computer-Enhanced Learning
International Electronic Journal for Leadership in Learning
International Journal of Artificial Intelligence in Education
International Journal of Electrical Engineering Education
International Review of Research in Open and Distance Learning
International Studies in Sociology of Education
Issues in Educational Research
Journal of Asynchronous Learning Networks
Journal of In-service Education
Journal of Industrial Teacher Education
Journal of Information Technology and Teacher Education
Journal of Interactive Media in Education
Journal of Maltese Education Research
Journal of Research for Educational Leaders
Journal of Statistics Education
Journal of Technology Education
Journal of Vocational Education and Training
KAIROS: A Journal for Teachers of Writing in Webbed Environments
Learning Technology
Networks: An On-line Journal for Teacher Research
Newsletter for the International Textbook Research Network
Observations
Online Chronicle of Distance Education and Communication
Pedagogy, Culture and Society
Phi Delta Kappa
Prospects: Quarterly Review of Comparative Education
Research in Education [SCRE]
Research in Post-Compulsory Education
Research Intelligence [British Educational Research Association]
School Library Media Research
Sociological Research Online
Teacher Development
Teachers College Record
Teaching Scotland
Teaching Today for Tomorrow
Technological Horizons in Education Journal
Technology Source
The Future of Children
Thinkers on Education
Times Educational Supplement
Ultibase Journal

Cox, N. (1999). Gender, attitude, group composition, and student achievement in computer-based cooperative learning, Virginia Society for Technology in Education, 13(3).

Keating, J, Diaz-Greenberg, R., Baldwin, M., & Thousand, J. (1998). A collaborative action research model for teacher preparation programs, Journal of Teacher Education. 49(5).

McGregor, M, & Schnorr, D. (April 28, 2000). Predicting Standardized Test Scores: Are Multiple Measures of Assessment the Answer? Paper presentation on the use of multiple methods of assessment for reading comprehension. International Conference for Teacher Researchers, New Orleans.

Painter, D. (Spring, 1999). What does teacher-research influence? Findings often influence curriculum and instruction, planning, evaluation and staff development initiatives, Virginia Society for Technology in Education.

Schnorr, D. & Painter, D. (1999). Partnering the university field experience research model with action research, Resources in Education ERIC #ED 428058.

Schnorr, D., English, M., Armani, D., & McCabe, J. (1999). The relationship between secondary education teacher technology training and teacher technology usage, Virginia Society for Technology in Education, 13(2).

Schnorr, D.L, & Painter, D. (April 24-25, 1999). The Field Experience Research/Service Model. The International Conference for Teacher Researchers in Quebec.

Schnorr, D.L., & Painter, D. (February 24-27, 1999). Paper presentation at the Annual Meeting of the American Association of Colleges For Teacher Education.

Comprehensive Links for Resources
http://www.emtech.net/actionresearch.htm
http://www.emtech.net/statistics.htm

**Course Goals/Objectives**

Upon completion of course, students will be able to:

Knowledge:

- describe and determine the appropriateness of basic types of research methods
- articulate research terminology including, quantitative and qualitative research terminology
- recognize computer applications to compute parametric and non-parametric statistics and qualitative data analysis software

Skills:

- design a research proposal
- project and conceptualize the realization of a research study
- write a research proposal
- use computer applications to compute parametric and non-parametric statistics and qualitative data analysis software
- use the internet and apply computer programs for literature reviews, data management and analysis

Dispositions:

- recognize the value of educational research for assessing educational processes and learner outcomes
- understand relevant ethical and legal considerations in conducting, analyzing, and interpreting research
- recognize the cultural bias in some research instruments and the subsequent cultural bias in the results of such research studies
- Appreciate multiple perspectives, learning styles, and multiple intelligences during the group process while developing and implementing the research study

**Course Evaluation and Assignments**

All course components are evaluated with rubrics. Students are invited to discuss and/or challenge any evaluation privately with the professor.

Course Components

Weekly Assignments,      33% of final grade.

Midterm & Final Exam,    34% of final grade (17% apiece).

Research Proposal,         33% of final grade

| Dates | |
|---|---|
| Week One  - First class | January 23-27 |
| Week Two | January 30-Feb 3 |
| Week Three | February 6-10 |
| Week Four | February 13-17 |
| Week Five | February 20-24 |
| Week Six | February 27-Mar 3 |
| Week Seven | March 6-10 |
| Spring Break | March 13-17 |
| Week Eight | March 20-24 |

| | |
|---|---|
| Week Nine  - Midterm Exam | March 25-31 |
| Week Ten | April 3-7 |
| Week Eleven | April 10-14 |
| Week Twelve | April 17-21 |
| Week Thirteen | April  24-28 |
| Week Fourteen | May 1-5 |
| Week Fifteen  - Final Exam | May 6-15 |

**Last day to drop with no tuition penalty -  February 7, 2006**
**Last day to drop with 33% tuition penalty - February 14, 2006**
**Last day to drop with no rebate - February 24, 2006**


N.B., The use of the discussion board is an ungraded expectation for students in this class. As mention

Calculation of Final Grades

A =  90% and above
B =  80-89%
C =  70-79%
F =  69% or below

Plus and minus grades are determined as above or below the halfway points between percentage breaks; for example - 81 to 84 is a minus, 86 to 88 is a plus.

**Materials in Course Documents**

- Analysis Form (For Analyzing Articles)
- Matrix for Synthesizing Articles
- Research Paper Outline
- Rubric for Research Paper
- Article Review Form
- Literature Review Rubric
- APA Style crib sheet
- Glossary
- Link to free statistics software by Smith
- Selected statistical tables
- Permission letter template
- Examples of former students' research papers
- Educational Research Resources

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**Course Organization**

While there are specific assignments for each week of the course and for the entire course, there will be periodic announcements and related work that may be assigned during the course of the semester. Please be sure to check the announcements.

From the first week, you need to start planning for your final product, which is the capstone of the course. This is a completed research project. You may want to skip around to get a feel for the whole course and not let too much time slip by before you get too far into the semester. For the research project you need to (a) select a topic, (b) begin reading articles related to the topic and doing reviews, (c) collect your data, and (d) prepare the final product before the end of the semester. The process involves these major steps and:

**Article reviews**

You must have a minimum of 10 articles that you will review for your research paper. There are two tools that must be used for formatting and producing reviews of research articles. These are:

- An **Analysis Form**
- A **Matrix for Synthesizing Articles**

All students will be required to find at least 10 article reviews. Each article must be related to your chosen research topic. All students are required to use the form for Analysis (see Course Documents) to analyze each article. You must use a word processor to complete your article review forms and attach each review in the appropriate discussion board. By utilizing these forms for analysis of articles, you will be better prepared to synthesize the elements to each article in the literature review section of your research paper.

Criteria: Student collected all 10 articles and analyzed them in-depth as evidenced by the Analysis Form for student typed responses using a word processor and the format provided and attached by the appropriate due dates. Student utilized third person in their reactions and analyzed the article using APA format for referencing and citations.

Please note that the **writing style for your articles and your final project must conform to the standards of the American Psychological Association (APA) 5th Edition**.

I do not recommend that you purchase a copy of the manual, unless you really want it, because you can learn enough from imitation and online sources to learn APA style. There is a quick reference for APA in the Course Documents.

Here is a good online source: A Guide for Writing Research Papers based on Styles Recommended by The American Psychological Association

**A Research Paper Outline**

The outline is just that, the major headings and subheadings you have developed for your

research paper, due in the ninth week. See the template for the Research Paper Outline in Course Documents..

**Rough Draft of Literature Review**

The rough draft is due in the eleventh week of the course. This is essentially chapter 2 of your paper and will not have to be edited or changed after it is finished.  This will be the result of your reading and use of the articles you have reviewed.  While there is a minimum of ten, you are certainly welcome to have more. The rubric for the literature review is in the Course Documents section.

**Permission Letter**

Depending upon the kind of research you do, you will need some kind of permission letter to protect your subjects and yourself.  If you use students in your own classroom or school, or subjects in another setting, you will have to inform them, their parents, their guardians, or others about what you intend to do and get their permission.  Find a template in the Course Documents section.

**Midterm Examination**

Week nine:  You will receive a midterm examination worth 50 points.  It will cover all the readings and lectures up to the ninth week. If you keep up with your readings and activities, you will have no trouble with the examination.  The examination will consist of some mixture of short essay and objective questions.

**Final Examination**

You will receive a final examination worth 50 points.  It will cover all the readings and lectures from the tenth week.  If you keep up with your readings and activities, you will have no trouble with the examination.  The examination will consist of some mixture of short essay and objective questions.

**Course Participation**

- Please respond to any inquiries and react to e-mail promptly,.

- **Discussion Forum:**  Active participation in the weekly forum is worth 50 points, which will be awarded by analysis of all contributions made by all participants. Useful, pertinent communication on topics is expected.

**Final Research Paper**

The final paper will be worth 200 points, or approximately 25% of your grade. However, you must submit a research paper in order to complete the course.  That is to say, if you do

submit the final paper.  It will be graded using the a research rubric, found in Course Documents.

Be sure to use the Research Paper Outline in Course Documents.  It will make your task of writing much easier.

**Bonus Points**

An award of up to 25 points can be made by the professor for students who maintain frequent and useful e-mail contact. E-mail should be related to the topics and to personal matters beyond the course content. In other words, just sending in your assignments is adequate, but more contact is desirable and will be rewarded.

**Topics/Activities**

For your convenience, each week has the associated readings and assignments at the beginning of each topic.  Remember that the research paper; article reviews, and ancillary activities that may be assigned with announcements will not be mentioned in the weekly assignments.

For each weekly assignment, the rubric for scoring these activities is as follows:

Each aspect of the activity was addressed accurately.
1  2  3  4  5
Concepts are accurately identified and clearly  understood.
1  2  3  4  5
The information addressed the defined problem appropriately.
1  2  3  4  5
The end product was sufficient and comprehensive.
1  2  3  4  5
The product conformed to proper form and correct grammar and presentation, and APA style, if required.
1  2  3  4  5
Total Rating Points Possible: 25 rating points

Rating points are used as formative assessment.  A product is worth whatever value is associated with it, if you meet the rating point minimum of 15 points.