George Mason University
Graduate School of Education
Program: Special Education

Course Title: EDSE 590 – Research Methods in Special Education

Instructor: Kelly Henderson, Ph.D., Adjunct Assistant Faculty
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Credit Hours: 3
Course Days: Wednesdays, January 20- May 5, 2010
Location: PW campus, 250 Bull Run Hall **Course Time:** 7:20 – 10:00 pm

Course Description: Describes fundamental concepts and practices in education research in special education. Specific application of educational research methods to problems in special education will be covered. Emphasis is on reviewing and critiquing special education research and applied classroom research for teachers.

Course Objectives: Upon completion of this course, students will be able to:

- Identify and understand different methods of educational research suitable for different research purposes in special education.
- Describe and discuss basic theories and methods of quantitative experimental and quasi-experimental research in special education.
- Describe and discuss basic theories and methods of survey research in special education.
- Describe and discuss basic theories and methods of single subject research in special education.
- Describe and discuss basic theories and methods of qualitative research in special education.
- Describe and implement teacher application of classroom research to address specific classroom problems.

Relationship of Course to Program Goals and Professional Organizations

This course is part of the George Mason University, Graduate School of Education, Special Education Program for teacher licensure in the Commonwealth of Virginia in the special education areas of Emotional Disturbance and Learning Disabilities, and Mental Retardation. This program complies with the standards for teacher licensure established by the Council for Exceptional Children, the major special education professional organization. As such, the learning objectives for this course cover many of the competencies for learning environments and social interactions.

The CEC Standards are listed on the following web site:
http://www.cec.sped.org/ps/perf_based_stds/common_core_4-21-01.html

Nature of Course Delivery: Learning activities include the following:

- Class lectures, power point handouts, discussions, activities & active participation
- Study and independent library research

- Videos & other relevant media presentations
- Application of relevant hardware and software
- Application activities
- Presentation of research article papers and research projects

Required Textbooks:

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

McMillan, J.H. (2008). *Educational research: Fundamentals for the consumer (5th ed.).* Boston: Pearson Education.

It is highly recommended that students bring the McMillan textbook to class each week as the instructor may make specific reference to it during class.

Other reading relevant to special education research applications will be assigned by the instructor as appropriate.

Classroom Accommodations for Students with Disabilities: If you need course adaptations or accommodations because of a documented disability or if you have emergency medical information to share with the instructor or need special arrangements, please call or make an appointment with the instructor as soon as possible.

Course Companion Websites and Student Responsibilities:

Educational Research text Companion Website: http://www.ablongman.com/mcmillan5e
This link is the website for the textbook, *Educational Research: Fundamental for the Consumer 5th edition*. From this link, you can access the practice tests for assigned chapters (see **Evaluation and Course Requirements** for details). Additionally this website provides learning objectives, chapter outlines, application exercises, and additional web sites.

George Mason University Email: https://mserver3.gmu.edu/
From this link, follow the directions for activating an email account. Every student is required to establish a GMU email account. Course email correspondence and other important university emails will be sent to GMU email accounts. Once an email account has been established, it is possible to forward email sent to the GMU account to another email account.

Blackboard (Bb): http://gmucommunity.blackboard.com
I have created an EDSE 590 course here and have online access to most of the assigned readings and other links of interest. I need your login name (usually first letter of first name and full last name) and GMU email address. I will enroll you after the first class. Email me immediately if you cannot access it before the 2nd class.

George Mason Patriot Web: https://patriotweb.gmu.edu/
A self-service website for students, faculty, and staff of George Mason University. There is a wealth of useful links, information, and online forms on this website including program of studies details, application for graduation, request for transfer of credit, and internship application.

George Mason University Honor Code: http://www.gmu.edu/facstaff/handbook/aD.html
This URL defines student and faculty conduct to promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community. The honor code deals specifically with cheating and attempted cheating, plagiarism, lying, and stealing.

Students with Disabilities: www.gmu.edu/student/drc
Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DCR) and inform the instructor, in writing, at the beginning of the semester. See the website or call 703.993.2474 to access the DRC.

Responsible Use of Computing: http://mail.gmu.edu
Students must agree to abide by the university policy for Responsible Use of Computing. From the link above, click on Responsible Use of Computing link found at the bottom of the screen.

Microsoft 2007: GMU has moved to Microsoft 2007 (including Word and PowerPoint). Information on the crosswalks between 03 and 07 versions can be found at http://transition.gmu.edu/cross.html The Microsoft tutorial on PowerPoint 2007 can be found at http://office.microsoft.com/training/training.aspx?AssetID=RC100687671033. This will help you learn to navigate through the PPT slides for your presentation. GMU offers IT training free to all students: http://ittraining.gmu.edu/default.cfm .

TaskStream submission:
The signature assignment required for this course must be submitted electronically to Mason's NCATE management system, TaskStream: (https://www.taskstream.com). **Every** student registered for **any** EDSE course as of the Fall 2007 semester is required to begin submitting signature assignments to TaskStream (regardless of whether a course is an elective or part of an undergraduate minor). TaskStream information is available at http://gse.gmu.edu/programs/sped/. Failure to submit the assignment to TaskStream may result in reporting the course grade as Incomplete (IN).

APA Formatting Guidelines: http://www.apastyle.org/
This website is offered as a companion to the APA style manual. However, it should not be considered a substitute for directly consulting the APA manual, 6th edition for standard of procedures for applying APA style. Please note that there are corrections to the hard copy version of the 6th edition APA manual, including those to the sample paper, pages 41-59. Consult apastyle.org for the correct version.

U.S. Department of Education links: http://nces.ed.gov/ and
http://www.ed.gov/about/offices/list/osers/osep/index.html
These sites provide links to research reports and statistical information that will be referenced in class.

Course Requirements, Performance-Based Assessment, and Evaluation Criteria

Homework: An essential part of the course, the practice tests, is provided on-line at http://www.ablongman.com/mcmillan5e as indicated on p. xvii of the McMillan textbook. Prior to class the following activities should be completed. Students should log on to the website and select the chapter they will be studying, (a) review the objectives/outline, (b) read/study the respective

chapter in the textbook, (c) take the practice test and (d) score the test electronically. If you achieve 70% or higher on the test, you have passed. Print and save your test and send an email copy of the test to Dr. Henderson and to yourself for your records. If you have achieved less than 70% on the test, review your incorrect answers, study the textbook, and retake the test. You may retake the test as many times as you need till you achieve a passing score of 70%. Note: Grading is pass/fail only. **An electronic copy of the practice tests are due PRIOR to each class according to the schedule provided.** In order to earn credit you must pass each test prior to class. In the rare instance you are not able to attend class, email your saved copy to the test to the instructor prior to class to earn credit. Under normal circumstances, there are no allowances for late practice tests. Timely and successful completion of the practice tests should prepare students for active class participation.

In-class Pop Quizzes: To reinforce the textbook content and encourage thorough reading, Dr. Henderson will give unannounced pop quizzes that include questions similar or identical to the online practice tests. These pop quizzes will be given via the classroom's lab computers or in paper. At least three will be given throughout the semester and will be averaged and collectively contribute up to 5 points of your semester grade. There are no make-ups for these quizzes.

Participation & Class Attendance: Students are expected to attend class and actively participate in all assignments, group activities, and class discussions. Active participation includes the asking of questions and the presentation of one's own understanding with regard to the readings and lectures as well as interactive discussion and participation in activities with other class members. This will require all students to complete the required readings, activities, and assignments for that specific class meeting.

While we all have busy lives as well as professional and personal commitments outside this course, you have made a commitment to be present for this course and to complete the requirements therein. If an extenuating circumstance was to occur and prevent you from attending class, please arrange to obtain notes and handouts from another student. Notify that person in sufficient time for them to be of assistance for you.

APA Editing Activity: To increase awareness of APA standard of procedures for professional writing, students will complete an editing activity in class in small groups. This will include reviewing a "sample" paper, then editing this paper to identify and suggest specific APA style errors and strengths. The editing task includes applying the APA guidelines for format, writing style, references, etc. for the sample paper.

Critique of Research Articles: There are two research article critiques required. The first article will be provided by the instructor. The article for the second critique will be individually selected by each student and may be related to the research topic selected for the research application paper. When submitting a hard copy of the critique you have selected, the original article must be included. The copy of the original article is necessary so the instructor will be able to review the article as necessary to evaluate the critique. If you are missing the class a research critique is due, you may email a copy of your critique to the instructor. Use MS word format for the attached file. Grading Rubric is available on Bb; attach a blank rubric to your assignments.

Quantitative Analysis: To increase familiarity with existing national data sources, students will identify and examine currently available data from one national source. In addition to examining and describing the data, students will write a "conclusions" section identifying and commenting on

the major findings, with respect to their utility to school and classroom settings. A grading rubric is available on Bb; attach a blank rubric to your assignment.

Research Application: Students will employ appropriate research methodology to investigate a problem of interest in a classroom, using group-experimental or quasi-experimental, single-subject, survey, or qualitative methodology. Students will prepare a research report on this project using the format recommended by the Publication Manual of the American Psychological Association (5th ed.). This includes Title page; Abstract; Introduction and purpose; Method (participants, materials, procedures); Findings or Results; Discussion; References. A grading rubric is on Bb.

Research Presentation: Students will present the results of their research project to the class in a formal research presentation format. The presentation should not exceed 5 minutes, most of which should be spent on your method and findings. The use of audiovisual, posters, handouts, or other presentation materials is encouraged. Grading rubric is on Bb.

Other Assignments: Additional assignments related to the application of the concepts of the course may be given in class as appropriate.

Points will be deducted for assignments not submitted on time. Generally, half of a letter grade is deducted for each class session past due.

Evaluation and Grading:

Individual Student Grade Sheet

	Attend, participate, quizzes	*APA* Activity	*Critique 1*	*Critique 2*	*Quant. Analysis*	*Pract. Tests*	*Research Project*	*Research Presentation*	*Total*
Earn									
Points	**10**	**5**	**10**	**10**	**10**	**10**	**35**	**10**	**100**

It is strongly recommended that students retain copies of all graded course products to document their progress through out the GSE ED/LD program. Products from this class should become part of your individual professional portfolio that documents your satisfactory progress through the GSE program and the CEC performance based standards.

Grading: The course letter grade will be determined by a point system in which the following thresholds will be used:

A = ***95-100 points***
A- = ***90 - 94 points***
B = ***85 - 89 points***
B- = ***80 - 84 points***
C = ***70 – 79 points***
F = ***< than 70 points***

Tentative class schedule, subject to change:

Class	**Date**	**Big Topics**	Readings/**Assignments Due**/*Activities*
1/2	January 20 and 27	• Introductions • Start of Class Logistics • Introduction to Research in Education • Research Problems • Variables, Hypotheses, & Research Questions Introduction • Components of Research Report or Article • APA Writing Style • Research Problems in Special Education • Ethical Standards for Conducting Research • Implementing Research in Your Classroom • Quantitative and Qualitative Research Characteristics	• *Blackboard IDs* • McMillan – Chap. 1 & 2 • APA – Ch. 2 and skim Ch. 3 & 6 • "Teachers as Researchers" article, Babkie & Provost • **Activate GMU email account and check that you can access Blackboard. Email me by noon Friday 1/22 if you cannot.** • **Practice tests 1 & 2 (due 1/27)**
3	February 3	• Locating Literature • Educational Searches Via the Internet Identifying research sources;	• *Meet in classroom, presentation by Janna Mattson, MLS, Social Sciences Liaison Librarian, then tour of Mercer Library* • Read "Research in Special Education: Scientific Methods and Evidence-Based Practices" (Winter 05 EC articles, Odom et al.)
4	February 10	• Qualitative Research • Mixed Methods Design	Guest lecturer- Katherine Black, Administrative Coordinator, Office of Special Education, Prince William County Public Schools • Read "Qualitative Studies in Special Education" (Winter 05 EC articles, Brantlinger et al.) • McMillan – Chap. 11 and 12 • **Practice Tests 11 & 12**
5	Feb 17	• Hypotheses – Generating and Writing • Begin Purpose and Steps for Conducting a Literature Review • Review of APA Editing Activity • Finish Purpose and Steps for	• "Peer Assisted Learning strategies" article, Saenz, Fuchs & Fuchs • McMillan – Chap. 3 & 5, skim chapter 4 • **Practice Tests 3 & 5**

		Conducting a Literature Review • Primary and Secondary Sources • Writing a Review of the Literature • Characteristics of Quality Research Article Critiques • Subjects, Participants, and Sampling • Probability and Non-probability Sampling	• *Review Odom et al. overview article, assigned for 2/3* • *APA Editing Activity (bring copy of article and APA manual)* • *Identifying possible research terms & sources for conducting a literature review*
6/7	Feb 24 and March 3 (no class on March 10- GMU spring break)	• Descriptive Statistics: Definition and Essential Terms • Validity and Reliability • Measurement, Evaluation, and Assessment • Educational Measures • Questionnaires, Observations, & Surveys	• Skim through "Identifying and Implementing Educational Practices Supported by Rigorous Evidence: A User-Friendly Guide" report by the Coalition for Evidence-Based Policy • McMillan – Chap. 6 & 7 • **Practice Tests 6 & 7** • **1st Research Article (Saenz et al.) Critique due March 3** • *Review critiques of 1st article* • *Refine classroom research problem for investigation and identify possible variables for research (independent & dependent)* • *Craft possible research hypothesis for investigation*
8	March 17	• Experimental and Non-Experimental Quantitative Research Designs • Descriptive, Comparative, & Correlational, & Causal-Comparative Studies • Validity: Internal & External • Types of Experimental Designs • National data resources	• Read "Quality Indicators for Group Experimental and Quasi-Experimental Research in Special Education" (Winter 05 EC articles, Gersten et al.) • Read "Evaluating the Quality of Evidence from Correlational Research for Evidence-Based Practice" (Winter 05 EC article, Thompson et al.) • McMillan – Chap. 8 & 9 • **Self Assessment Tests 8 & 9**
9/ 10	March 24 & 31 (PW and FCPS spring break)	• Single Subject Research Designs • Inferential Statistics • Null Hypotheses • Type 1 & Type 2 Errors • Statistical Significance	• Read "The Use of Single-Subject Research to Identify Evidence-Based Practice in Special Education" (Winter 05 EC articles, Horner, et al.) • McMillan – Chap. 10 • **Practice Test 10** • **Research Article Critique 2 due March 24**

			• *Work on Quantitative Research Analysis*

11	April 7	• Introduction to statistical analyses
		  • Making Statistical Inferences
		  • Interpreting the Findings
		  • Statistical Analysis software	

12	April 14	• Catch-up on Experimental, Quasi-Experimental and Single Subject Research Designs	• **Quantitative Research Analyses due April 14**
13	April 21	• Discussion Section of a Research Report: Interpretations, Conclusions, Recommendations, and Limitations • Connecting the Results Back to the Hypothesis	• McMillan – Review Chap. 10 and read Chap. 13 • Read "Tips for Readers of Research-'Seeing Through' the Graphs" and "Trouble with Research", Bracey • **Self Assessment Test 13**
14	April 28	• Research Project Presentations • End of Course Logistics	• **Research Projects Due April 28 (or earlier!)**
15	May 5 (exam date)	•	• *Use this date for presentations if need be*