

**George Mason University  
College of Education and Human Development  
Program: Special Education**

**Course Title: EDSE 590- 5S1 – Research Methods in Special Education**

**Instructor:** Kelly Henderson, Ph.D., Adjunct Faculty

**Office Hours:** Before class and by appointment

**Phone:** 703-282-3408

**E-mail:** khender8@gmu.edu

**Credit Hours:** 3

**Course Days:** Mondays, January 23, 2012- May 16, 2012

**Location:** Kellar Annex 3807 University Dr., 102      **Course Time:** 7:20 - 10:00pm

**Course Description:** Describes fundamental concepts and practices in educational research in special education. Covers specific applications of educational research methods to problems in special education. Emphasizes review and critique of special education research, and applied classroom research for teachers.

**Nature of Course Delivery:** Learning activities include the following:

- Class lectures, slides, discussions, activities & active participation
- Study and independent library research
- Videos & other relevant media presentations
- Application activities
- Presentation of research article papers and research projects

**Student Outcomes:** 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**

EDSE 590 is part of the George Mason University, Graduate School of Education, Special Education Masters Degree Program. This program aligns with the standards for teacher licensure established by the Council for Exceptional Children, the major special education professional organization in the United States. As such, the curriculum for this course includes competencies for teaching students with disabilities from preschool through grade 12. 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](http://www.cec.sped.org/ps/perf_based_stds/common_core_4-21-01.html)

### **Required access to the class Organization, via my Mason**

This course uses a Blackboard-like Organization. This provides access to most of the assigned readings and other links of interest. Click on the Organizations tab at <https://mymasonportal.gmu.edu/webapps/portal/frameset.jsp> . You must be enrolled in the Organization to have access. Email Dr. Henderson immediately if you cannot access it.

### **College of Education and Human Development Student Expectations**

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/>

Students must adhere to the guidelines of the George Mason University *Honor Code* [See <http://academicintegrity.gmu.edu/honorcode/>].

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/>].

Students must follow the university policy for *Responsible Use of Computing* [See <http://universitypolicy.gmu.edu/1301gen.html>].

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.

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

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

### **Additional Student Expectations:**

TaskStream submission:

Every student registered for any EDSE course as of the Fall 2007 semester is required to submit signature assignments to TaskStream (regardless of whether a course is an elective, a one time course or part of an undergraduate minor). TaskStream information is available at <http://gse.gmu.edu/programs/sped/>. Failure to submit the assignment to TaskStream will result in

reporting the course grade as Incomplete (IN). Unless this grade is changed, upon completion of the required submission, the IN will convert to a F grade nine weeks into the following semester.\*

APA Formatting Guidelines: <http://www.apastyle.org/>

All papers are to be completed using style and formatting consistent with the APA manual, 6<sup>th</sup> edition. 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, 6<sup>th</sup> edition for the standard procedures for applying APA style.

### **Campus Resources:**

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/>].

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/>].

### **Required Textbooks:**

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

McMillan, J.H. (2012). *Educational research: Fundamentals for the consumer (6<sup>th</sup> 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.

### **Course Requirements, Performance-Based Assessment, and Evaluation Criteria:**

**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 10 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.

**Critique of Research Article:** There is one research article critique required. The article 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. Grading Rubric is available on Bb; attach a blank rubric to your assignments. One additional critique can be submitted by April 16 for a maximum of 5 extra credit points.

**CITI Module Completion:** The CITI Module involves the completion of GMU **Mandatory Training for Persons Conducting Research Using Human Subjects** (“Group 1 Social & Behavioral Research, Basic Course”) that is accessed at <http://www.citiprogram.org>. Seven learner modules in the Basic Course are required prior to conducting any research at Mason using human subjects. Copy certification of completion document and paste in a Word document, and submit via email for full credit. No partial credit will be given on this assignment.

**Quantitative Analysis:** To increase familiarity with existing national and state data sources, students will identify and examine currently available data from one published national or state data 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 (6<sup>th</sup> 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 8 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, points equal to half of a letter grade are deducted for each class session past due.*

**Evaluation and Grading:**

**Individual Student Grade Sheet**

	<i>Attendance participation</i>	<i>Critique</i>	<i>CITI module</i>	<i>Quant. Analysis</i>	<i>Pop Quizzes</i>	<i>Research Project</i>	<i>Research Presentation</i>	<i>Total</i>
<i>Earn</i>								
<i>Points</i>	<b>10</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>10</b>	<b>35</b>	<b>10</b>	<b>100</b>

It is strongly recommended that students retain copies of all graded course products to document their progress throughout the CEHD, Graduate School of Education 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** = **80 - 89 points**
- C** = **70 – 79 points**
- F** = **< than 70 points**

**Tentative class schedule,** subject to change:

<b>Week</b>	<b>Date</b>	<b>Big Topics</b>	<b>Readings/Assignments Due</b>
<b>1</b>	January 23	<ul style="list-style-type: none"> <li>• Introductions</li> <li>• Start of Class Logistics</li> <li>• Introduction to Research in Education</li> <li>• Research Problems</li> <li>• Variables, Hypotheses, &amp; Research Questions Introduction</li> <li>• Components of Research Report or Article</li> <li>• APA Writing Style</li> <li>• Research Problems in Special Education</li> <li>• Ethical Standards for Conducting Research</li> <li>• Implementing Research in Your Classroom</li> </ul>	<ul style="list-style-type: none"> <li>• McMillan – Chap. 1 &amp; 2</li> <li>• APA – Ch. 2; skim Ch. 1, 3 &amp; 6</li> <li>• “Teachers as Researchers” article, Babkie &amp; Provost</li> <li>• Activate GMU email account and check that you can access Blackboard. Email me by noon Wednesday 1/25 if you cannot.</li> </ul>
<b>2</b>	January 30	No class-	<ul style="list-style-type: none"> <li>• Work on CITI module</li> <li>• Identify topic for research project and begin searching for potential journal articles for</li> </ul>

			critique
3	February 6	<ul style="list-style-type: none"> <li>• Locating Literature</li> <li>• Educational Searches Via the Internet</li> <li>• Identifying research sources;</li> </ul>	<ul style="list-style-type: none"> <li>• Meet in room 214 Fenwick Library</li> <li>• Directions at <a href="http://library.gmu.edu/libinfo/fenwick.html">http://library.gmu.edu/libinfo/fenwick.html</a></li> <li>• If possible, bring laptops.</li> <li>• Read “Research in Special Education: Scientific Methods and Evidence-Based Practices” (Winter 05 EC articles, Odom et al.)</li> </ul>
4	Feb 13	<ul style="list-style-type: none"> <li>• Quantitative and Qualitative Research Characteristics</li> <li>• Hypotheses – Generating and Writing</li> <li>• Purpose and Steps for Conducting a Literature Review</li> <li>• Primary and Secondary Sources</li> <li>• Writing a Review of the Literature</li> <li>• Characteristics of Quality Research Article Critiques</li> </ul>	<ul style="list-style-type: none"> <li>• McMillan – Chap. 3 &amp; 4</li> <li>• Print out or be able to access electronic copies of “Research in Special Education...” by Odom et al. and “Peer Assisted Learning strategies” by Saenz, Fuchs &amp; Fuchs</li> </ul>
5	Feb 20	<ul style="list-style-type: none"> <li>• Subjects, Participants, and Sampling</li> <li>• Probability and Non-probability Sampling</li> </ul>	<ul style="list-style-type: none"> <li>• APA editing activity, in class</li> </ul>
6	Feb 27	<ul style="list-style-type: none"> <li>• Descriptive Statistics: Definition and Essential Terms</li> <li>• Validity and Reliability</li> <li>• Measurement, Evaluation, and Assessment</li> <li>• Educational Measures</li> <li>• Questionnaires, Observations, &amp; Surveys</li> </ul>	<ul style="list-style-type: none"> <li>• McMillan – Chap. 5 &amp; 6</li> <li>• <b>Research Article Critique due</b></li> </ul>
7	March 5	<ul style="list-style-type: none"> <li>• Experimental and Non-Experimental Quantitative Research Designs</li> <li>• Descriptive, Comparative, &amp; Correlational, &amp;</li> </ul>	<ul style="list-style-type: none"> <li>• McMillan – Chap. 7 &amp; 8 (except pp.238-242)</li> <li>• Read “<a href="#">Quality Indicators for Group Experimental and Quasi-Experimental Research in Special Education</a>” (Winter 05 EC articles, Gersten et al.)</li> <li>• Read “Evaluating the Quality of Evidence</li> </ul>

		<p>Causal-Comparative Studies</p> <ul style="list-style-type: none"> <li>• Validity: Internal &amp; External</li> <li>• Types of Experimental Designs</li> <li>• National data resources</li> <li>• Introduction to statistical analyses</li> <li>• Making Statistical Inferences</li> <li>• Interpreting the Findings</li> <li>• Statistical Analysis software</li> </ul>	<p>from Correlational Research for Evidence-Based Practice” (Winter 05 EC article, Thompson et al.)</p>
8	March 12-	<ul style="list-style-type: none"> <li>• GMU Spring break</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
9	March 18	<ul style="list-style-type: none"> <li>• Single Subject Research Designs</li> </ul>	<ul style="list-style-type: none"> <li>• McMillan – pp. 238-242</li> <li>• Read “The Use of Single-Subject Research to Identify Evidence-Based Practice in Special Education” (Winter 05 EC articles, Horner, et al.)</li> </ul>
10	March 26	<ul style="list-style-type: none"> <li>• Inferential Statistics</li> <li>• Null Hypotheses</li> <li>• Type 1 &amp; Type 2 Errors</li> <li>• Statistical Significance</li> </ul>	<ul style="list-style-type: none"> <li>• McMillan Chap. 9</li> <li>• <b>Quantitative Analysis due</b></li> </ul>
11	April 2	<ul style="list-style-type: none"> <li>• Qualitative Research</li> <li>• Mixed Methods Design</li> <li>• Action Research</li> </ul>	<ul style="list-style-type: none"> <li>• Read “<a href="#">Qualitative Studies in Special Education</a>” (Winter 05 EC articles, Brantlinger et al.)</li> <li>• McMillan – Chap. 10, 11. 12</li> </ul>
12	April 9 – FCPS Spring Break	<ul style="list-style-type: none"> <li>• Catch up on previous topics</li> </ul>	<ul style="list-style-type: none"> <li>• <b>CITI Basic Course completion certificate due</b></li> </ul>
13	April 16	<ul style="list-style-type: none"> <li>• Discussion Section of a Research Report: Interpretations, Conclusions, Recommendations, and Limitations</li> <li>• Connecting the Results Back to the Hypothesis</li> </ul>	<ul style="list-style-type: none"> <li>• McMillan- Chap. 13</li> <li>• Read “Tips for Readers of Research- ‘Seeing Through’ the Graphs” and “Trouble with Research”, Bracey</li> <li>• <b>Optional 2<sup>nd</sup> Article Critiques for extra credit due</b></li> </ul>

<b>14</b>	April 23	<ul style="list-style-type: none"><li>• Research Project <b>Presentations (first half)</b></li></ul>	<ul style="list-style-type: none"><li>• Drafts of final Research Project papers for feedback must be emailed or delivered to Dr. H by 4/23 (this is completely optional!).</li></ul>
<b>15</b>	April 30	<ul style="list-style-type: none"><li>• Research Project <b>Presentations (2<sup>nd</sup> half)</b></li><li>• End of Course Logistics</li></ul>	<ul style="list-style-type: none"><li>• <b>Research Projects Due</b> April 30 (or earlier!)</li></ul>