

**George Mason University  
Graduate School of Education  
Program: Special Education  
Spring 2011**

**EDESE 590 5S1: Research Methods in Special Education**

Instructor: Dr. Carolyn Iguchi

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Location: Kellar Annex

Class Time: January 24 to May 16, 2011, Mondays, 7:20 pm to 10:00 pm

Office Hours: By appointment

**Course Description**

The purpose of this course is to describe fundamental concepts and practices in educational research in special education. Specific applications 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.

**Nature of Course Delivery**

- Lecture
- Cooperative learning groups

**Learner Outcomes**

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

- Identify and understand different models 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 applications of classroom research to address specific classroom problems.

**Relationship of Courses to Program Goals and Professional Organizations**

EDSE 590 is part of the George Mason University, Graduate School of Education, and Special Education Masters Degree Program. The 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 the 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 Texts and Other Readings**

McMillan, J.H. (2008). *Educational research: Fundamentals for the consumer* (5th ed.). Reading, MA: Addison-Wesley Longman.

American Psychological Association (2010). *Publication manual* (6th ed.). Washington, DC: Author.

Other readings relevant to special education applications assigned by instructor.

**NOTE:**

This syllabus and course schedule may change according to class needs.

If you need course adaptations or accommodations because of a disability or if you have emergency medical information to share with instructor or need special arrangements, **please call and/or make an appointment with instructor as soon as possible.**

**Evaluation**

1. Article Analysis Papers (30%, 10% each)
2. Class Attendance and Participation (15%)
3. Reading Quizzes (10%)
4. Final research paper (40%)
5. Research presentation (5%)

*It is recommended that students retain copies of all course products to document their progress through the GSE MR program. Products from this class can become part of your individual professional portfolio used in your portfolio classes that documents your satisfactory progress through the GSE program and the CEC performance based standards.*

**Grading criteria**

92 – 100% = A  
 90 – 92% = A-  
 80 – 89% = B  
 70 – 79% = C  
 < 70% = F

## COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

*Student Expectations*

- 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.

### *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/>].

GSE faculty may add at the conclusion:

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

RHT faculty may add at the conclusion:

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

### **Other Course Expectations**

1. Professional Behavior and Attendance Policy: For a satisfactory grade in this course, students are expected to attend all classes, arrive on time, be prepared for class, demonstrate professional behavior and complete all assignments with professional quality

in a timely manner. Students will be deducted 1 point from the Attendance/Participation grade for each class missed. To successfully complete this course, students need to adhere to the due dates for specific readings and assignments to be completed. If you feel you cannot adhere to the schedule noted in the syllabus, please contact the instructor immediately to discuss options for withdrawing and completing the course during another semester.

2. Promptness: All assignments must be submitted *on or before* the assigned due date. Papers are to be submitted via email by 4:30 pm on the assigned due date. For ease of evaluation all papers should be submitted in Microsoft Word. **In fairness to students who make the effort to submit work on time, 5% of the total assignment points will be deducted each day from your grade for late assignments. Assignments will not be accepted more than 3 days late.**

3. Written Products: All written assignments must be prepared in a professional manner following guidelines stated in the Publication Manual of the American Psychological Association (5th or 6th editions are acceptable). All final products must be typed. Products that, in the judgment of the instructor, are unreadable or unprofessionally prepared will be returned un-graded or assigned a lower evaluation. Plagiarism will not be tolerated.

4. Writing Support: All assignments should reflect graduate level spelling, syntax, and grammar. If you are deficient in any of these areas, you will need to document your work with the GMU Writing Center during this course to improve your skills (<http://writingcenter.gmu.edu>).

5. Signature Assignment: For student evaluation, program evaluation, and accreditation purposes, students will be required to submit a signature assignment from each of their Special Education courses to Taskstream, an electronic portfolio system. In addition, students completing Midpoint and Final Portfolio courses will use Taskstream to create a full portfolio of their work based on assignments completed throughout their program. For this reason, students will need to retain electronic copies of all course products to document their progress through the GSE Special Education program. In addition to the signature assignment, products from this class can become part of your individual program portfolio used in your portfolio classes that documents your satisfactory progress through the GSE program and the CEC performance based standards.

\*\* Note: **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 an F nine weeks into the following semester.** Please note: if you do not upload your paper PRIOR to the final exam, the instructor may not be able to change an assigned grade of IN until the next semester begins.\*\*

## ASSIGNMENTS

### Reading Quizzes

Students will complete the chapter practice tests on the textbook website for the assigned reading and email the results of the quiz to the instructor *before the start of class*. Practice test results will not be accepted late.

Textbook website:

[http://wps.ablongman.com/ab\\_mcmillan\\_edresearch\\_5/65/16694/4273674.cw/index.html](http://wps.ablongman.com/ab_mcmillan_edresearch_5/65/16694/4273674.cw/index.html)

### Article Analyses

Each student is required to submit three article analysis papers during the course of the semester representing three of the research methodologies we will be studying. The purpose of this assignment is for students to learn to assess the quality of published educational research and to distill the most pertinent information.

Students will select a research article published in the last 5 years from a peer-reviewed academic journal. Students may use articles that will be included in the literature review for their final research paper. The article selected must use the appropriate type of research methodology (if in doubt, students are encouraged to email the instructor a copy of the research article before hand as article analysis papers based on the incorrect methodology will not be accepted for credit).

The paper will start with a brief summary of the research problem, participants, experimental methodology, and findings (approximately 2 pages). This summary will be followed by an assessment/critique of the article (approximately 1 page). One of the key aspects of this assignment is to teach students to communicate the most important information from the study; therefore, there is a **strict three page limit** for the paper.

The focus of the critique will depend on the specific article. Students should refer to McMillan's guidelines for assessing published research on pages 362-367. For example, the critique may examine several of the following elements:

- (1) The fit between the research problem and the research methodology or design
- (2) Appropriate or inappropriate use of data collection instruments
- (3) The author's attention of data collection procedures and data analysis
- (4) Apparent flaws in execution of the research
- (5) Quality of sampling procedure, description of participants or inclusion criteria for participants

Papers will be evaluated on selection of an appropriate research article, clarity of written expression, demonstration of understanding of the research methodology and execution, through assessment of the strengths and weaknesses of the article, and correct usage of APA formatting.

Paper Format:

- APA formatted cover sheet
- Article assessment (3 pages)
- APA formatted reference page

### **Final Research Paper\***

For the final signature assignment, students will develop a research question relevant to the field of special education and write a research proposal that will describe how to carry out a study to answer their question. *Actual data collection and analysis is not required for this assignment.* The research proposal paper will follow the appropriate experimental methodology for the research question. The paper will be formatted according to the APA manual and include the following sections: literature review, methods, and validity and limitations. Papers will be approximately 10 to 15 pages in length.

### **Literature Review**

The purpose of the literature review is to introduce the reader to the research question, strategically explore previous research in this area, and argue for the rational of the present study. Students should cite at least ten articles published in peer reviewed journals in the literature review. The literature review should include the following components: a broad introduction to the research problem, a focused assessment and integration of previous research to provide justification for the present study, a statement of the research questions, and research hypotheses. Students will be evaluated on clarity of written expression, strong justification of the significance of the research problem, thorough assessment of published research with strong integration of the research to establish a foundation for the proposed study, and strength of research questions according to the criteria established by McMillan in chapter 2 of the text.

### **Methods**

The methods sections will contain the following subsections: participants, measures, and procedure.

The participants section should include (a) a description of the population being examined, (b) a plan for selecting the sample from the population, (c) a rationale or justification of why the sampling method was selected, and (d) a hypothetical description of the participants selected.

The measures section will describe the key variables examined in your research and the materials or measures used to collect data on these variables. The description of the variables will contain both conceptual and operational definitions and specify both dependent and independent variables. In the description of the materials, APA formatted citation must be included for published measures.

The procedure section starts with a description of the specific type of research methodology and a justification for this research methodology based on your research question. The procedure section will thoroughly describe **each step** in the execution of

the research. Summarize or paraphrase instructions (if applicable). The description of the procedure should be sufficient to allow for **exact replication** of the study. The procedure for conducting the study should follow the type of research methodology selected. Students will not be required to collect actual data, but a plan for conducting analysis of the data should be included. Students will be evaluated on the strength of the experimental design.

### **Validity, Limitations, and Anticipated Results**

In this section, students must address potential threats to internal and external validity as described in McMillan. Students will describe how they will address these threats. The student must also address the limitations of the current study and provide recommendations for future research that would address these limitations. The paper will conclude with a statement of the predicted results.

### **Scoring Rubric**

A detailed scoring rubric will be provided by the instructor.

### **Research Presentations**

Students will prepare a brief presentation to share their research proposal with their peers. A successful presentation will contain the following: (a) key findings from previous research as outlined in the literature review, (b) the research question(s), (c) a brief description of the participants, (d) a brief description of the study procedure, and (e) predicted findings. Presentations should be well organized and visually appealing. Presentations should be no longer than 10 minutes per student.

\*These assignments are probable entries for the student portfolio

### **Course Schedule**

\*Schedule is subject to change to meet the needs of the class.

- I. January 24
  - a. Topics
    - i. Introduction to Research in Education
  - b. Reading: N/A
  - c. Assignments due: N/A
- II. January 31
  - a. Topics
    - i. Research Problems, Variables, and Hypotheses
  - b. Reading
    - i. McMillan Chapter 1
    - ii. McMillan Chapter 2
  - c. Assignments due
    - i. Make sure your GMU email account is active and checked regularly or forwarded to another email account. The email ID and password are necessary for using library resources and for class communication.
    - ii. Email instructor results from Chapter 1 and 2 Practice Tests

- d. February 7
  - e. Topics
    - i. The Literature Review
  - f. Reading
    - i. McMillan Chapter 3
    - ii. Read the tutorials on “Accessing Individual Research Reports” and “Integrating Multiple Studies On A Given Topic” (<http://www.gwu.edu/~litrev/index.html#search>)
  - g. Assignments due
    - i. Develop two researchable questions as potential topics for the final paper. Bring your questions to class for peer feedback. (Completion of assignment counted toward Attendance/Participation grade)
    - ii. Email instructor results from Chapter 3 Practice Test
- III. February 14
- a. Topics
    - i. Participants, Subjects and Sampling
  - b. Reading
    - i. McMillan Chapter 5
  - c. Assignments Due
    - i. Email instructor final research paper topic and revised research question for approval by 12 am the *night before* our class meeting. (completion of assignment counted toward Attendance/Participation grade)
    - ii. Schedule two hours to devote to searching for relevant literature on your final paper topic. Bring to class the citations and abstracts for the articles you identified. The emphasis at this point is quantity over quality – you can weed out studies that will not work for your literature review later.
    - iii. Email instructor results from Chapter 5 Practice Test
- IV. February 21
- a. Topics
    - i. Educational Measurement
  - b. Reading
    - i. McMillan Chapter 6
  - c. Assignments Due
    - i. Bring to class two copies of the participants section of your final paper in draft form.
    - ii. Email instructor results from Chapter 6 Practice Test
- V. February 28
- a. Topics
    - i. Educational Measures
  - b. Reading
    - i. McMillan Chapter 7
  - c. Assignments Due
    - i. Email instructor results from Chapter 7 Practice Test



- VI. March 7
  - a. Topics
    - i. Nonexperimental Quantitative Research Designs
  - b. Reading
    - i. McMillan Chapter 8
  - c. Assignments Due
    - i. Bring to class two copies of the measures section of your final paper in draft form.
    - ii. Email instructor results from Chapter 8 Practice Test
- VII. March 14: GMU Spring Break, no class session
- VIII. March 21/22
  - a. Topics
    - i. Experimental Research Designs
    - ii. Introduction to Statistical Inference
  - b. Reading
    - i. McMillan Chapters 9 and 10
  - c. Assignments Due
    - i. Email instructor results from Chapter 9 and Chapter Practice Tests
- IX. March 28
  - a. Topics
    - i. Qualitative Research Designs
  - b. Reading
    - i. McMillan Chapter 11
  - c. Assignments Due
    - i. Experimental Article Analysis Paper, submit electronically by the start of class
    - ii. Email instructor results from Chapter 11 Practice Test
- X. April 4
  - a. Topics
    - i. Mix-Method and Action Research
    - ii. Single Subject Research
  - b. Reading
    - i. McMillan Chapter 12
    - ii. Review McMillan's section on single subject research in chapter 9, starting on page 241
  - c. Assignments Due
    - i. Email instructor results from Chapter 12 Practice Test
- XI. April 11
  - a. Topics
    - i. Discussion and Conclusions
  - b. Reading
    - i. McMillan Chapter 13
  - c. Assignments Due
    - i. Qualitative Research Article Analysis Paper, submit electronically by the start of class
    - ii. Email instructor results from Chapter 13 Practice Test

- iii. Bring to class two copies of the procedures section of your final paper in draft form
- XII. April 18
  - a. Topics
    - i. APA Style Workshop
    - ii. Review of validity and limitations for the final paper
  - b. Reading
    - i. Familiarize yourself with the structure of the APA manual
    - ii. Read all of chapters 2 and 3 and section 6.01 on plagiarism
  - c. Assignments Due
    - i. Single-Subject Research Article Analysis Paper, submit electronically by the start of class
- XIII. April 25
  - a. Topics
    - i. Writing workshop
  - b. Assignments due
    - i. Schedule three hours to work on the literature review section of your final paper
    - ii. Bring to class all of what you have completed on the final paper to date
- XIV. May 2: Independent Study, no class session
- XV. May 9
  - a. Assignments Due
    - i. Group A Presentations
- XVI. May 16: Final Class Meeting
  - a. Assignments Due
    - i. Group B Presentations
    - ii. Final Papers due electronically by midnight