# **George Mason University Graduate School of EducationSpecial Education**

EDSE 590

Research Methods in Special Education

**Professor:** Dr. Kristy Lee Park, BCBA-D **Email:** kparkc@gmu.edu

**Office Hours:** Before class and by appointment **Phone:** 703.993.5251

**Course Days**: Tuesdays **Course Time:** 4:30-8:30 pm

 9/15/09 – 11/17/09

### Course Description: Describes 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.

**Student 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 theories and methods of educational measurement.
* 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

**Graduate School of Education Statements of Expectations**

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

* Students are expected to demonstrate professional behavior and dispositions. See www.gse.gmu.edu for a listing of these professional dispositions.
* Students must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catelog/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.

## Nature of Course DeliveryLearning activities include the following:

1. Class lecture, discussion, and participation.

2. Videotapes and other relevant media presentations.

1. Study and independent library research.
2. Applications with relevant hardware and software.
3. Application activities
4. Class presentations of papers and research projects.

**Required Text**

McMillan, J. (2007). *Educational research: Fundamentals for the consumer* (5th ed.). Boston: AB Longman.

Other readings relevant to special education research applications will be assigned by the

Instructor as indicated by the needs and interests of the class.

**Recommended Textbook:**

American Psychological Association (2001). *Publication manual* (5th ed.). Washington, DC: Author.

**University Resources**

*George Mason Blackboard*. Students are responsible for any information shared via blackboard and should check the site regularly. Important announcements, class materials, grades, and discussions will be posted on Bb. Each student is responsible for downloading class materials and bringing it to class.

*George Mason University email.* Students are responsible for any information shared electronically and should check their GMU email regularly. Email generated in Bb goes to your GMU email account. If the Mason account is not your primary, you can forward Mason email to one you check with regularity. Login to mail.gmu.edu and select "Options" then "Settings," insert your forwarding address in the last box then select "Save." Please contact the ITU Support Center at <http://itusupport.gmu.edu/> to activate accounts or trouble shoot difficulties in accessing your GMU email account.

*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.

*Advising contact information:*
Please make sure that you are being advised on a regular basis as to your status and progress through your program. You may wish to contact Jancy Templeton, GMU Special Education Advisor, at jtemple1@gmu.edu or 703-993-2387. Please be prepared with your G number when you contact her.

**Student Responsibilities**

*Absences:* Understanding you are individuals with full and active lives, who have made the intellectual and financial commitment to regularly attend class, there may be an instance when you are not able to attend a schedule class session. If this unlikely event should occur, it is your responsibility to make arrangements to obtain notes, handouts, and lecture details from another student. *There is no need to notify the instructor of your absence***.** Students who are absent are held responsible for the material covered and assignments due as if in attendance. Be aware any points earned for in class activities during a time of absence cannot be earned nor made up.

*Academic Integrity.* Students in this course are expected to exhibit academic integrity at all times*.*  Be aware that plagiarism is presenting someone else's work as your own. **Whether the act is deliberate or unintentional is irrelevant.** You must take great care to give credit to an author when you borrow either exact words or ideas. Generally, if you use 4 or more words in a row you should use quotation marks and a proper citation. Remember that plagiarism is a very serious offense and can result in dismissal from the University. Evidence of plagiarism or any other form of cheating in this class may result in a zero on that assignment and a report of the incident to the registrar. The instructor reserves the right to submit your work to SafeAssign, a plagiarism detection service, for an integrity assessment as needed. For a description, visit <http://www.irc.gmu.edu/safeassign/index.html>

*APA Formatting & Style:* The standard format for any written work in the College of Education. If you are unfamiliar with APA, it would benefit you to purchase the Publication Manual of the American Psychological Association (5th ed.) or to access one of the internet sites that provides a summary of this information. All work produced outside of class must be typed unless otherwise noted. http://www.psywww.com/resource/apacrib.htm 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, 5th edition for standard of procedures for applying APA style.

*In Class and During Class Expectations:*  The use of electronic devices that produce sound or otherwise interfere with the learning of others (i.e., cell phones, pagers, etc.) is prohibited during class. Please make certain the devices are turned off before class.

*Late Work:* Assignments submitted on time or early are eligible to earn full points. Points will be deducted for work submitted late. This includes any items that are not submitted upon request due to class absence or tardiness. Late assignments will be penalized 1 point per day with escalated penalties for repeat occurrences.

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

*Task Stream:* Each course in the program has an identified signature assignment.  A signature assignment is a specific assignment, presentation, or project that best demonstrates one or more CEC standard(s) connected to the course.  A signature assignment is evaluated in two manners.  The first is for a grade based on the instructor's grading rubric.  The second is for GSE program evaluation.  Each student must add the identified signature assignment for each course into the TaskStream portfolio system.  Additionally, students completing the portfolio courses will build their portfolios electronically via TaskStream <https://www.taskstream.com/pub/>
Students must retain electronic copies of all graded course products to document their progress in the Special Education program. Products from these classes are likely to become part of your individual performance based assessment portfolio (EDSE 791 & 792).

The required signature assignment for this course must be submitted electronically to Mason’s NCATE management system, TaskStream. Instructions for submitting work to TaskStream will be provided to you.  Failure to submit the assignment to TaskStream may result in reporting the course grade as an Incomplete (IN). The electronic submission to TaskStream is likely to be in addition to the version you submit to your instructor for a graded evaluation.

 **Evaluation and Points by Activity**

Students will be evaluated on the following (100 points total):

**10 points: Class Attendance and Participation**

 Completion of weekly class activities, participation in class discussions, and project presentation update discussions throughout the semester. Points missed due to absences cannot be made up. **Excessive absences can result in additional penalties and potential withdrawal from class.**

**5 points: CITI Module Completion Due: 9/29/09**

 Completion of GMU **Mandatory** Training for Persons Conducting Research Using Human Subjects 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. In addition, if the information in any of the optional modules relates to your research, you are required to complete the appropriate module. Copy certification of completion document and paste on a Word document, and submit on Digital Drop Box in Bb.

**10 points: Article Critique Due: 10/6/09**

A professional review of a research article is required. The critique will be **no more** five pages in length, applying APA formatting and writing, with the first page being the cover page and the second page being the abstract. The article will be individually selected by each student and is related to the research topic they have selected for research evaluation. Submit a copy of the selected article for the critique.

**15 points: HSRB Application Form Due: 10/13/09**

 The research application project is designed to provide experience with the

 following GMU requirements for conducting research with human subjects:

By Federal Policy ALL research activities involving human participants that are directed by a GMU faculty member, staff member, or student or involve GMU faculty, staff, or students as participants, must be reported to the Office of Sponsored Programs for review. The Human Subjects Review Board (HSRB) serves as the GMU institutional review board (IRB). As specified in the Code of Federal Regulations, 45 CFR 46, Protection of Human Subjects, certain categories of human subjects research may be classified as exempt from further IRB review. The Office of Sponsored Programs will determine if an activity is exempt or not exempt from further HSRB review. You may not begin research involving human participants until you receive written notification from this office.

 Completion of a GMU Human Subjects Application Form that is available
 on website:

<http://www.gmu.edu/research/ORSP/HumanFormsAndInstructions.html>

**20 points: Final Exam Due: 11/10/09**

 A take home final exam will be given. This exam is open notes and textbook, but you may not collaborate with colleagues, the Internet, or any other source.
Ally and Bacon Companion Website <http://www.ablongman.com/mcmillan5e>

 is a source for practice exams and chapter outlines.

**30 points: Research Paper: Signature Assignment Due: 11/17/09**

 Completion of 1 of 2 options:

* **Option 1**: Research application project
* **Option 2**: A 20-page research review paper

 ***Option 1: Research Application Project***

 The research application project is designed to provide experience in designing,

 implementing, and evaluating a research application project in special

 education. Any of the research designs covered are appropriate. Specific

 guidelines for the assignment will be provided. **Be sure to have your research**

 **question and design approved by the instructor PRIOR to beginning**

 **implementation**. A hard copy AND an electronic copy of the project should be

 submitted by 4:30 pm on the due date.

 ***Option 2: Library Research Literature Review***

You may select to complete library research. You may select to complete a traditional research review paper of a selected intervention area. You will need to collect 20 original research studies on a particular topic to include in your review paper (from journals or electronic journals). Specific guidelines will be provided. **Have your topic approved prior to beginning**. A hard copy AND an electronic copy of the project should be submitted by 4:30 pm on the due date.

**10 points: Paper Presentation** **Due: 11/17/09**

 Final presentation of results of the research project or literature review paper.

 All work must be submitted on Digital Drop Box on the class Blackboard site by

 the due date.

1. Make a brief (10-15 minute) PowerPoint presentation that summarizes your

 written research project or literature review. Be prepared to answer
 questions about your project.

1. Prepare visual materials use in your presentation – use power point slides, and

copies of charts, graphs and photos.

 3. Prepare a one-page summary hand-out for classmates.

**Self-Monitoring Grade Sheet**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Class Activities & Participation | HSRB Forms | CITI Course | Article Critique | Final Exam | Research Paper | Research Presentation | *Total* |
| *Earned* |  |  |  |  |  |  |  |  |
| *Possible Points* | 10 | 15 | 5 | 10 | 20 | 30 | 10 | 100 |

\* Late assignments will be penalized 1 point per day

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

 *A = 94-100 points B+ = 87-89 C = 70-79*

1. *= 90 - 93 points B = 80-86 F = < than 70*

 **Article Critique Scoring Rubric**Exemplary critique (10 points):Article critique follows APA formatting with no errors. Sections include an introduction, method, procedures, results, and discussion. Under each section, salient points are addressed as indicated by the model provided in class. The critique is **no more** five pages in length, applying APA formatting and writing, with the first page being the cover page and the second page being the abstract. A copy of the article is included.Adequate presentation (8-9 points):Article critique follows APA formatting with 1-3 minor errors. Most sections identified key points, but may be lacking in one or two of the main ideas. May not have clearly described all the elements listed above, went over the page length requirement, or did not provide a copy of the article.
Marginal presentation (6-7 points):Article critique may not follow all the APA formatting rules with 3-4 major errors. Critique may provide relevant information, but demonstrates only a limited understanding of some of the key elements. Style and organization may be less than adequate. Inadequate presentation (1-5 points):Article critique may have 5 or more errors in APA formatting and provides very little knowledge of the elements of the article. Key elements were not addressed or points were not related to the article.
Unacceptable/no presentation (0 points): Completely unsatisfactory presentation, with no reasonable reference to topic or project; or no presentation made.

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| --- | --- | --- | --- | --- |
| Exemplary presentation | Adequate presentation | Marginal presentation | Inadequate presentation | Unacceptable/no presentation |
| 10 | 8-9 | 6-7 | 1-5 | 0 |

**HSRB Application Scoring Rubric**

Exemplary application (14-15 points):Appropriate and clearly described answers to questions including: implementation procedures, careful measurement and evaluation of results, thorough and appropriate discussion of implications of findings. Good writing style, free of mechanical or stylistic errors, appropriate use of APA format.

Adequate application (12-13 points):Good overall proposal, lacking in one or two of the criteria for an exemplary paper. Not entirely reflective or thoughtful, may be vague in some place, or minor writing style errors may be present.

Marginal application (10-11 points):Overall, acceptable but with one or more significant problems. Contains some useful information, but may have substantial problems with evaluation, writing style, or implementation of project.Inadequate application (1-9 points):Proposal with substantial problems in important areas such as writing, implementation of intervention, evaluation of results, overall thoughtfulness. Does not adequately respond to questions.

Unacceptable/no paper (0 points): Completely unsatisfactory proposal; or no proposal made.

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| --- | --- | --- | --- | --- |
| Exemplary application | Adequate application | Marginal application | Inadequate application | Unacceptable/no application |
| 14-15 | 12-13 | 10-11 | 1-9 | 0 |

**Research Application Scoring Rubric**

Exemplary paper (27-30 points):Appropriate topic, thorough and thoughtful review of previous research, appropriate and clearly described implementation procedures, careful measurement and evaluation of results, thorough and appropriate discussion of implications of findings. Good writing style, free of mechanical or stylistic errors, appropriate use of APA format.

Adequate paper (24-26 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 errors may be present.

Marginal paper (22-25 points):Overall, acceptable but with one or more significant problems. Contains some useful information, but may have substantial problems with evaluation, writing style, or implementation of project.

Inadequate paper (1-21 points):Paper with substantial problems in important areas such as writing, implementation of intervention, evaluation of results, overall thoughtfulness. Contains little or no information of value to special education practice.

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.

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| --- | --- | --- | --- | --- |
| Exemplary paper | Adequate paper | Marginal paper | Inadequate paper | Unacceptable/no paper |
| 27 - 30 | 24-26 | 22-25 | 1-21 | 0 |

 **Literature Review Scoring Rubric**

Exemplary paper (27-30 points):Appropriate topic, thorough and thoughtful review of previous research. Good writing style, free of mechanical or stylistic errors, appropriate use of APA format.

Adequate paper (24-26 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 errors may be present.

Marginal paper (22-23 points):Overall, acceptable but with one or more significant problems. Contains some useful information, but may have substantial problems with evaluation, writing style, or review of relevant literature.

Inadequate paper (1-21 points):Paper with substantial problems in important areas such as writing, evaluation of research, overall thoughtfulness. Contains little or no information of value to special education practice**.**

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

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| --- | --- | --- | --- | --- |
| Exemplary paper | Adequate paper | Marginal paper | Inadequate paper | Unacceptable/no paper |
| 27-30 | 24-26 | 22-23 | 1-21 | 0 |

 **Presentation of Project Scoring Rubric**Exemplary presentation (10 points):Presentation clearly describes major elements of the project; poster reflects clarity, organization, knowledge and interest in the content being presented; reflects a high level of preparation; makes effective use of visual format and presents an interesting, attractive appearance; describes very clearly the methods under consideration; presentation keeps the audience engaged; provide information of interest and value to audience. Presenter is able to answer basic audience questions about the proposal with poise, clarity, and thoughtfulness.
Adequate presentation (8-9 points):Good overall poster presentation, but may be lacking in one or two of the criteria specified in exemplary response. May seem a little less polished or prepared, may be vague in some places, or may fail to completely answer audience questions.
Marginal presentation (6-7 points):Poster presentation provides relevant information, but demonstrates only a limited understanding of the topic or project. Style, organization, or visual elements may be less than adequate. Responses to audience questions may reflect lack of understanding of relevant research methods.
Inadequate presentation (1-5 points):Weak overall presentation that reflects very little knowledge of topic or project. May appear very poorly prepared, or may not have followed directions. Style or visual elements may be inadequate or lacking.
Unacceptable/no presentation (0 points): Completely unsatisfactory presentation, with no reasonable reference to topic or project; or no presentation made.

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| --- | --- | --- | --- | --- |
| Exemplary presentation | Adequate presentation | Marginal presentation | Inadequate presentation | Unacceptable/no presentation |
| 10 | 8-9 | 6-7 | 1-5 | 0 |

|  |  |
| --- | --- |
| **Introduction** (2 points)* Problem Clear
* Purpose Clear (R? and Hyp)
* DV/IV Clear
 | /2 |
| **Review of Lit** (5 points)* DV lit
* IV lit
* Other lit (if needed)
* Logic is Clear
 | /5 |
| Method | /2 |
|  Participants (2)* Subjects
* Sampling Method
* Other Participants
 |
|  Setting (2)* School Context
* Study Context
 | /2 |
|  Materials & Procedures (5)* Sub Plan Clarity
* Step-by-step
* Appendix links
 | /5 |
|  Research Design (2)* Actual design used
* Why design was selected
 | /2 |
|  Data Analysis (2)* Descriptive
* Inferential
 | /2 |
| Results (3)* Descriptive
* Inferential
* Table
 | /3 |
| Discussion (4)* Conclusions (address Hyp.)
* Interpret results (link to lit)
* Limitations
* Recommendations
 | /4 |
| APA Style/Form (6) | /3 |

**Research Application Checklist**

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### Literature Review Checklist

|  |  |
| --- | --- |
| **Criteria and Qualities**  | 30 pts |
| **Introducing the idea: Problem statement**The topic is introduced, and groundwork is laid as to the direction of the article. | /3 |
| **Body: Flow of the review**The summary goes from general ideas to specific conclusions. Transitions tie sections together, as well as adjacent paragraphs. | /2 |
| **Coverage of content**The appropriate content in consideration is covered in depth without being redundant. Sources are cited when specific statements are made. Significance to the course is unquestionable. | /5 |
| **Clarity of writing and writing technique**Writing is crisp, clear, and succinct. The writer incorporates the active voice when appropriate and supports ideas with examples. No spelling, grammar, or punctuation errors are made. | /5 |
| **Conclusion: A synthesis of ideas and application to education**The author was able to make succinct and precise conclusions based on the review. Insights into the problem are appropriate. Conclusions and the application to education are strongly supported in the review. | /10 |
| **Citations/References: Proper APA format**Citation for the article did follow APA format and style. * Ref. list
* In-text
* Table(s)
* Appendix
* Title Page
* General
 | /5 |

**TENTATIVE CLASS SCHEDULE**

|  |  |  |
| --- | --- | --- |
| **Date** | **Class Topic & Reading Assignments** | **Readings and Assignments Due** |
| 9/15/09Class 1  | Course overviewWays of knowingEducational research as scientific inquiryFunctions of researchQuantitative/Qualitative research methodology overview List of Special Education Journals | **Class Assignments:** Pre-post test Ways of knowing Formulate research topics/ABC BrainstormPersonality testArticle review- Boardman, Arguelles, Vaughn, Hughes, & Klingner (2005) |
| 9/22/09Class 2  | Research interest groupsDissecting a journal article* Critique of quantitative/qualitative research- in-class

Ethics of educational research* Introduction to Protection of Human Subjects in Research On-line module (CITI)
* Review of HSRB process

APA formatting * APA editing activity
 | **Assignments Due**: * McMillan - Chapter 1
* Bring a peer-reviewed research article to critique in class

**Class Assignments:** * Formulate research topics/ ideas: Think/Pair/Share activity
* Research Methods word sort
* Journal article evaluation & critique
 |
| 9/29/09Class 3 | Pretest/Vocabulary for Educational ResearchResearch Process* Research methods activity
* Research Problem, Hypothesis, & Variables

Introduction* Writing a literature reviews
* Annotated Bibliography

Sampling- Subjects, participants* Probability and nonprobability
 | **Assignments Due**: * CITI Program Human Subjects Certification (submit through Bb)
* McMillan – Chapters 3, 5, 9 (p. 217-227)
* Bring Article Critique for APA peer edits
* Identify your research problem, hypothesis, and variables

**Class Assignments:** Finalize topic or idea for final project Research Methods activityAPA editing activity – Review formatting for Article Critique  |
| 10/6/09Class 4 | Research Designs* Qualitative Research Designs
* Experimental Research Designs
* Mixed Methods Research

HSRB and your project: Begin HSRB | **Assignments Due**: * Article Critique
* Draft of Introduction
* McMillan chapter 5, 9 (p. 227-234), 11, 12 (p.309-329)

**Class Assignments:** Start HSRB process in classFormulate plan of your research design |
| 10/13/09Class 5 | Articulating a Research Proposal Quantitative Research Designs* Descriptive
* Correlational
* Causal-comparative
* Ex post facto
* Surveys
 | **Assignments Due**: * HSRB
* McMillan chapter 8
* Draft of literature review

**Class Assignments:** Create in-class survey  |
| 10/20/09Class 6 | Measurements: Instruments / data collectionEducational measures* Tests
* Questionnaires
* Interviews

Review of Internal and External ValidityQuantitative Research: Data Analysis * Introduction to statistical analysis software
 | **Assignments Due**: * McMillan chapter 6, 7
* Draft of methods section

**Class Assignments:** Take survey, create statistical file, run descriptive statistics  |
| 10/27/09Class 7 | Analysis of data* Descriptive & Inferential statistics

Results* Recognizing statistical significance

Single-subject designs* Types of designs and criteria for establishing functional control
 | **Assignments Due**: * Complete data collection

**Class Assignments:** * Analyze in-class survey results
 |
| 11/3/09Class 8 | Bringing meaning to data* Connecting results back to the hypothesis

Conclusion and Discussion sections* Interpretations and limitations
* Implications and recommendations
 | **Assignments Due**: * Draft of result section
* Read McMillan chapter 13

**Class Assignments:** * Identify limitations to the survey and results
 |
| 11/10/09Class 9 | Mixed Methods and Action Research * Advantages and disadvantages
* Procedural considerations
* Steps in conducting a study

Criteria for evaluating research* Peer edits of papers
 | **Assignments Due**: * FINAL TAKE HOME EXAM DUE BEFORE START OF THIS CLASS
* Read McMillan chapter 12
* Draft of Research Paper for peer review

**Class Assignments:** Peer review of research paper drafts |
| 11/17/09Class 10 | **PROJECT PRESENTATIONS** Research presentations with peer reviewWrap up & celebrate | **Assignments Due**: * PROJECT PRESENTATIONS
* PAPERS DUE

Project papers due and submitted to Taskstream **BEFORE** 4:30 PM |

\*\* Any changes to this or other class dates will be posted as an announcement on Blackboard prior to class. Syllabus is subject to change as needed.