



**College of Education and Human Development  
Division of Special Education and disAbility Research**

Spring 2016

EDSE 846 001: Assessment, Evaluation, and Instrumentation in Special Education  
Research

CRN: 18299, 3 - Credits

<b>Instructor:</b> Dr. Frederick Brigham	<b>Meeting Dates:</b> 01/19/16 - 05/11/16
<b>Phone:</b> 703 993 1667	<b>Meeting Day(s):</b> Wednesday
<b>E-Mail:</b> fbrigham@gmu.edu	<b>Meeting Time(s):</b> 4:30 pm-7:10 pm
<b>Office Hours:</b> by appointment (Mondays are a good bet)	<b>Meeting Location:</b> Fairfax; Finley 119

***Note:** This syllabus may change according to class needs. Students will be advised of any changes immediately through George Mason e-mail and/or through Blackboard.*

**Course Description**

Provides in-depth study, analysis and discussion of the past, present and future directions of assessment, evaluation, and instrumentation research in special education. Emphasizes reliability and validity of the research instruments, evaluating research methodology, analyzing results, synthesizing findings with respect to present assessment and evaluation policies; formulating future research questions relevant to assessment and evaluation of individuals with disabilities.

Hours of Lecture or Seminar per week: 3

Hours of Lab or Studio per week: 0

**Prerequisite(s):** Admission to PhD program, or permission of Instructor.

**Co-requisite(s):** None

**Advising Contact Information**

Please make sure that you are being advised on a regular basis as to your status and progress through your program. Mason M.Ed. and Certificate students should contact the Special Education Advising Office at (703) 993-3670 for assistance. All other students should refer to their faculty advisor.

## **Nature of Course Delivery**

Learning activities include the following:

1. Class lecture and discussion
2. Application activities
3. Small group activities and assignments
4. Video and other media supports
5. Research and presentation activities
6. Electronic supplements and activities via Blackboard

## **Learner Outcomes**

- Describe various methodologies used in special education assessment and evaluation research.
- Analyze the reliability and validity of research instruments.
- Determine the implementation mechanisms for various assessment and evaluation procedures in special education.
- Demonstrate how to analyze and synthesize special education assessment research.
- Describe issues surrounding special education assessment research.
- Develop and present an applied project investigating a selected topic in special education assessment and evaluation.

## **Required Textbooks**

DeVellis, R. F. (2012). *Scale development: Theory and applications* (3rd ed.). Thousand Oaks, Calif.: SAGE.

Nugent, W. R. (2010). *Analyzing single system design data*. New York: Oxford University Press.

## **Digital Library**

Effective summer 2015, the Division of Special Education and disAbility Research will discontinue the use of the Pearson Digital Library. No further registrations will be accepted. Students who hold current subscriptions will continue to have access to the library for the remainder of their subscription time. However, no further updates will be made to the digital library. During this time, should a textbook be revised or a new book is adopted for a class where the text is included in the digital library, Pearson will have options available to you and will provide you with an individual e-text or, if there is no e-text, a printed copy. Students, who have purchased a 3-year subscription directly through Pearson Education, will also have an option to obtain a prorated refund. However, 3-year subscription access cards purchased via the GMU bookstore will need to speak with a George Mason Bookstore Representative. Please be aware that the issuance of a refund, in this case, is at the discretion of the George Mason bookstore. Concerns or questions may be directed to Molly Haines at [Molly.Haines@pearson.com](mailto:Molly.Haines@pearson.com).

## **Recommended Textbooks**

APA Manual American Psychological Association (2010). *Publication manual of the American Psychological Association* (6 ed.). Washington, DC: Author.

## **Required Resources**

SPSS software via GMU's Virtual Computing Lab at <https://www.vcl.gmu.edu>. The VCL has SPSS, NVIVO, ArcGis, Stata and MatLab. Faculty, staff and students can login with their GMU credentials to use this software. We will also have access to SPSS software in class using supplied computers in the classroom. In addition, all computer labs on campus have SPSS installed.

### Access to Course Blackboard Site

Blackboard will be used to post important information for this course. Plan to access the Blackboard site several times per week; announcements and resources are posted on the Blackboard site in between class sessions. In addition, you will need to login to Blackboard to upload assignments and to access the exam for the course.

Access Blackboard at "my mason portal site" Your login and password are the same as your George Mason e-mail login. Once you enter, select EDSE 846 to access copies of class materials, readings in pdf formats, and links to relevant sites. Additional sources as needed from the library.

## **Additional Readings**

Additional Readings appear on the class bibliography at the end of this document.

## **Course Relationships to Program Goals and Professional Organizations**

This course is part of the George Mason University, College of Education and Human Development (CEHD), Graduate School of Education, Special Education, CEHD PhD in Education Program. This program complies with university and program standards.

## **GMU Policies and Resources for Students:**

- a. Students must adhere to the guidelines of the George Mason University Honor Code [See <http://oai.gmu.edu/the-mason-honor-code/>].
- b. Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>].
- c. 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.
- d. 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/>].

e. Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services and inform their instructor, in writing, as soon as possible. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor. <http://ods.gmu.edu/>].

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

g. 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/>].

### **Professional Dispositions**

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

### **Core Values Commitment**

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. [See <http://cehd.gmu.edu/values/>]

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

### **Course Policies & Expectations**

#### *Attendance.*

Part of the responsibility that professional educators assume is punctual and active performance of their duties. Such behavior is expected in this class as well as in the performance of the duties of being a professional educator. Therefore, two points will be awarded for being in class on time each week and two points will be awarded for remaining in the class the entire time of the class meeting. Two points will be available for active participation in class each week as well.

*Active participation includes:*

- Listening to class discussions
- Making relevant contributions to class discussions
- Taking notes
- Listening to instructor lectures and feedback

- Coming to class with materials including textbooks and relevant materials from the class website.

*Active participation does not include:*

- Sleeping in class
- Surfing the web, doing email, and otherwise engaging in non-instructional activities during class time.
- Holding conversations with your classmates during whole class instruction.
- Taking cell phone calls during class and
- other off-task behaviors that are not relevant to instruction.

Students will fail to earn the points for coming late, leaving early or non-engagement in the instructional activities during the time that they are in class. Repeated violations of these standards of deportment will be referred to the George Mason University Special Education Department faculty as evidence that the individual lacks the “disposition to be a teacher.” Such a finding can result in dismissal from the education program.

#### *Late Work.*

##### *Online Submission Of Student Work Required*

All student work with the exception of the protocols for the standardized test administration *must* be submitted through the **Blackboard** class website. Due dates are posted at the end of the syllabus and also on the blackboard site. On time submissions are required to be in the class Blackboard Assignment folder by the beginning of the class session on the due date.

Only submissions through the Blackboard Assignment folder will be accepted. **Assignments sent as email attachments will be deleted without opening them.** Assignments that are not in the Blackboard assignments folder at the appropriate time *are late*.

**Ten percent of the available points** for the assignment will be deducted for late submissions during the **first week after the due date. After one week** from the due date, assignments will be penalized **an additional 10% of the total available score for each week they are late.** Thus an assignment that is three weeks late is able to obtain only 75% of the points for the assignment regardless of the quality of the work. After three weeks, the assignment will no longer be accepted and a score of zero will be entered into the grade book for that assignment.

The point deduction will be made after the grading is complete. In the case of an assignment that earned 90 out of 100 points, the student grade would be a score of 65 (90-25). The points are deducted for each week at the time that the assignment was originally due.

The date that the assignment was loaded into the Blackboard Assignment folder will be the date of record. Partially completed or inadequate assignments loaded into the Blackboard Assignment folder will be the assignments of record for the student. Do not even think about loading a poor quality assignment on time and then asking to revise it later or trying to get me to allow a different assignment to be loaded because you loaded the wrong version.

Submitting an assignment late does not alter the due dates of the other assignments and prevents timely feedback regarding their work that may be of value in later assignments. Strive to keep up with the assignment schedule so that you will be able to have appropriate formative evaluation and feedback from your instructor across the semester. Some assignments appear in pairs. For paired assignments, your work in the first of the pairs is to serve as a model for the second assignment.

Submission by due date for final and last day of class is required for submissions to be considered for grading at all. Assignments and exams submitted after the due date for the exam will be assigned a grade of zero.

### **Tk20 Performance-Based Assessment Submission Requirement**

Every student registered for any Special Education course with a required performance-based assessment is required to submit the, *(NO ASSESSMENT REQUIRED FOR THIS COURSE)* to Tk20 through Blackboard, (regardless of whether a course is an elective, a onetime course or part of an undergraduate minor). Evaluation of the performance-based assessment by the course instructor will also be completed in Tk20 through Blackboard. Failure to submit the assessment to Tk20 (through Blackboard) will result in the course instructor reporting the course grade as Incomplete(IN). Unless the IN grade is changed upon completion of the required Tk20 submission, the IN will convert to an F nine weeks into the following semester.

### **Grading Scale**

Evaluation will be based upon a point system. The point value for each assignment is as follows:

Classroom Participation .....	10
Article Summaris (five per student, 2 pts each).....	10
Midterm Review/Exam.....	20
Project Update Presentation.....	10
Applied Project .....	40
Project Presentation .....	10
<b>TOTAL POINTS.....</b>	<b>100</b>

### **GRADING SCALE**

95-100% = A	90-94% = A-
87-89% = B+	83-86% = B
80-82% = B-	70-79% = C
< 70% = F	

## Assignments

### **Performance-based Assessment (TK20 submission required).**

None required this semester.

### **Performance-based Common Assignments (No TK20 submission required).**

#### ***Option 1: Individual Research Review Paper***

An integrative review paper must be completed. You may select to complete a traditional or integrative research review paper of a selected area in special education assessment and evaluation. Have your topic approved prior to beginning. You should also prepare materials based on the paper to present to the class.

1. Select a current topic impacting assessment and evaluation in special education.
2. Complete a literature search of Psych Info and other relevant databases to identify relevant original research articles (check for other relevant data bases).
3. Obtain and read original research articles.
4. Develop a coding system to organize your articles
5. Code, organize, analyze, and synthesize the information from the articles.
6. Write the paper using the *American Psychological Association Publication Manual* (6th edition) guidelines:

Title Page

Abstract

Introduction and Purpose

Method (literature search procedures)

Results (this is the section that will vary according to your specific articles)

Overall characteristics of the studies (number of articles, participant characteristics, disability areas, general descriptions of assessment/evaluation procedures, overall findings; and quality of studies)

Discussion – Summary and Conclusions

References

There will be numerous opportunities to discuss this project throughout the semester.

#### ***Option 2: Research Application Project***

The research application project is designed to provide experience in designing, implementing, and evaluating an assessment related research application project in special education. Be sure to have your research question and design approved before beginning since the instructor can assist you with the design components and GMU and district human subjects' approval.

This applied research project may also focus on the design, development, piloting, evaluation and refinement of an assessment or assessment tool used in research. It is recommended that following format be followed:

#### **Questions of the Research Application Project:**

Sample questions:

*How does on-going assessment impact teachers' instructional decision making in content areas for middle school students with SLD?*

*What is the reliability and validity of the Assistive Technology Attitude Scale developed for measuring teachers' attitudes toward assistive technology?*

**Background Literature:**

Provide a brief description of the background literature that indicates a need for your question.

**Design/Method of the Project:**

This section will be based upon your question. There are a variety of methodologies you could select to investigate your selected question.

**Participants:** Use the following marker variables as guidelines to describe the participants in your applied project.(may be students, in-service teachers, pre-service teachers, etc.). Report the data on:

- Participants' overall characteristics (e.g., age, gender, ethnicity, socio-economic status, etc.)
- Participants' specific characteristics (e.g., years of teaching experience, disability category, achievement scores, etc.)
- Setting (e.g., size, location, etc.)

**Materials:** Carefully describe all of the materials that were used in your project. Attach copies of the precise materials used in all conditions, including any teacher materials and student materials. This also includes describing fidelity of implementation materials.

**Testing materials:** Carefully describe all of the testing materials that were developed and/or used. Include copies of any surveys, interview protocols, observation protocols, and/or pre/posttests. Remember these measures will be used to describe whether or not your methods were "EFFECTIVE." You may want to develop and validate a criterion-referenced test of participant's knowledge (pretest/posttest), attitude measures (e.g., I incorporate technology in my classroom instruction. 1 2 3 4 5), as well as include a measure of observable data (e.g., audio or videotape participants).

**Procedure:** Carefully describe in a step by step fashion what you did. Use subheadings if you have multiple conditions (for example; daily assessments of students' performance to guide the instructional decision making).

**Testing procedures:** Describe how the measures were administered. For example, identify whether there was group versus individual implementation.

**Scoring procedures:** Describe how the measures were scored. For example, if tests consisted of multiple choice items, scoring is usually straight forward, however, if short answer items were used, then what was the scoring criteria? Did you have multiple raters completing an observational tool of a 1<sup>st</sup> year special education teacher in the classroom? Describe reliability of scoring and observations.



Data Sources: Provide a listing of all of the sources of data you obtained. We will use this list to help determine the appropriate data analyses procedures.

Results: Describe results all of the dependent variables. You can present individual scores (use the same ID#s used in the demographic data sheets) and then compute a column average (we will learn several statistical tests that you will be able to use for calculating reliability of your instrument and analyzing your data).

Discussion: Provide a discussion of your findings. The first few sentences can provide summary accounts of the findings. For example, method A clearly facilitates an intervention completed with high fidelity, as every teacher's student in method A received 10 points higher on the unit test. Or the instrument has proven to be a reliable and valid mechanism for measuring teachers' attitudes.

Provide some insights as to why you might have obtained the findings. Provide a summary paragraph describing what you learned from the application project and how you could implement projects like this in your teaching to determine which methods work best with your students.

### **Other Assignments.**

#### **Class Participation (10 points)**

Because of the importance of lecture and discussion to the total learning experience, students are encouraged to both attend and participate in class regularly. Attendance, punctuality, preparation, and active contribution to small and large group efforts are essential. These elements will reflect the professional attitude implied in the course goals and will account for 15% of the course grade. Students who must miss a class must notify the instructor (preferably in advance) and are responsible for completing all assignments and readings for the next class.

#### **Article Summaries (five per student, 2 points each, total: 10 points)**

I will show you how to do this in class.

#### **Midterm Review/Exam (20 points)**

A take home exam will be distributed. The exam will consist of content from the assigned readings and the discussions in class.

#### **Project Update Presentation (10 points)**

In mid-semester (week 8), students will prepare to present an overview of what has been done to date using relevant audio visual materials. Students will explain clearly what they have done so far to develop their final applied project, what questions remain, and what issues or barriers they have encountered. Information gathered from an individual with relevant information on the topic will be included (faculty member, staff member, other resource).

## Schedule

### Tenative Course Schedule EDSE 846 001 Spring, 2016

Mtg	Date	Topic	Preparation
1	01/20	<p>Course overview Assessment, evaluation, and accountability in special education. The role of assessment and evaluation in new initiatives: RTI, EBPs, PBSs, UDL, etc.</p> <p><b>Exploring IES-Measurement Goal Activity</b></p>	
2	01/27	Understanding Scales and their Development I	<p>Devellis (2012) pp 1-72 Lane, et al., (2013) Ysseldyke (2001)</p>
3	02/03	<p>Scale Development Test development in special education research: Construct validity</p> <p>Choosing assessment and instrumentation for a research study: Existing instruments vs. newly developed instruments</p> <p><b>Finding Instruments Activity</b> Discussion of issues in current special education assessment and evaluation policies and research</p>	<p>Devellis (2012 (73-114) Bordelon &amp; Bandury (2005) Lee, et al., (2012)</p> <p>Horner et al. (2004) Balboni &amp; Cubelli - in Scruggs &amp; Mastropieri (2011)</p>
4	02/10	<p>Exploratory and confirmatory factor analysis Reliability and validity of the research instrument</p> <p><b>SPSS Activity</b></p>	<p>Devellis (2012) pp. 115-158</p> <p>Swanson &amp; Orosco - in Scruggs &amp; Mastropieri (2011) Cress, et al. (2012) Eaves, Rabren, &amp; Hall (2012)</p>
5	02/17	<p>Overview of Item Response Theory (IRT) Standardized assessment and instrumentation in special education research (e.g., DIBELS) Appropriateness to diverse learners</p>	<p>Devellis (2012) pp. 159-183 VanDerHeyden - in Scruggs &amp; Mastropieri (2011) Steinbrecher, et al., (2014)</p> <p><b>Short Presentation</b></p>
6	02/24	<p>Response to Intervention (RTI) Curriculum-based measures in special education research</p>	<p>Tindal &amp; Nese - in Scruggs &amp; Mastropieri (2011) Seethaler &amp; Fuchs (2011) Espin et al., (2013)</p>

7	03/02	Evidence-Based Practices (EBPs) Functional and behavioral assessment for Positive Behavior Supports (PBSs) in special education research	Bradshaw, Mitchell, & Leaf (2010) Cook & Cook (2011) <b>Mid-term/Review Exam</b>
	03/09	No class, Mason Spring Break	
8	03/16	Assessment of complex environments: Evaluating technology in UDL Transition assessments	Basham, et al. (2010) Kortering, McClannon, & Braziel (2008) Wehmeyer - in Scruggs & Mastropieri (2011) <b>Project Update Presentation</b>
9	03/23	Validating observational measures Fidelity of implementation (RTI, EBPs, PBSs, UDL) Procedural reliability Social Validity <b>Observation Activity</b>	Gresham, et al. (2000) O'Donnell (2008) Jones & Brownell (2013)
10	03/30	Implementation issues: RTI, EBPs, PBSs, UDL Reliability and validity of new initiatives <b>Online Discussion</b>	Fuchs & Fuchs (2008) O'Connor & Sanchez - in Scruggs & Mastropieri (2011)
11	04/06	Research on evaluation methods for educational programs and curricula <b>Program Review Activity</b>	Posavec & Carey (2006) Noell et al., (2005)
12	04/13	NO class: CEC Meeting, St. Louis	
13	04/20	Use of technology for assessment and evaluation in special education research <b>Collecting Data Activity</b>	Agrawal, Allen-Bronaugh, & Mastropieri - in Scruggs & Mastropieri (2011) Seemelroth & Johnson (2013)
14	04/27	Issues and future directions in special education assessment research <b>Online Discussion</b>	McMaster, Ritchey, & Lembke - in Scruggs & Mastropieri (2011)
15	05/04	<b>Final Project Presentations of Applied Project</b>	<b>Final Presentations</b>

\* Additional readings may be provided by the instructor for some topics.

**Appendix: Applied Project Rubric**

	<b>Does Not Meet Expectations 1</b>	<b>Meets Expectations 2</b>	<b>Exceeds Expectations 3</b>
<b><i>Option 1: Individual Research Review</i></b>	Contains one or more significant problems. Overall, acceptable but with one or more significant problems. Contains some useful information, but may have substantial problems with evaluation, reporting of results; writing style, or review of relevant literature. Paper with substantial problems in important areas such as writing, evaluation of research, overall thoughtfulness. Paper contains little to no information of value to special education research and practice.	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.	Appropriate topic; thorough and thoughtful review of previous research; good literature search procedures; good coding instrument, conventions, and coding procedures description; good description of data analysis procedures including sample output; good overall characteristics of the data set; logical interpretation of the data and results; good synthesis of the data in the discussion and summary section. Good writing style, free of mechanical or stylistic errors, appropriate use of APA format throughout.
<b><i>Paper Option 2: Research Application Project</i></b>	Contains one or more significant problems. Contains some useful information, but may have substantial problems with evaluation, writing style, or implementation of project. Paper with substantial problems in important areas such as writing,	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.	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

	implementation of intervention, evaluation of results, overall thoughtfulness. Contains little or no information of value to special education practice.		findings. Good writing style, free of mechanical or stylistic errors, appropriate use of APA format throughout.
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