



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

Spring 2022

EDSE 643 001: Instructional Strategies for Math

CRN: 23855, 3– Credits

<b>Instructor:</b> Dr. Rajiv Satsangi	<b>Meeting Dates:</b> 1/24/22 – 5/18/22
<b>Phone:</b> 703-993-1746	<b>Meeting Day(s):</b> Wednesday
<b>E-Mail:</b> <a href="mailto:rsatsang@gmu.edu">rsatsang@gmu.edu</a>	<b>Meeting Time(s):</b> 7:20 pm – 10 pm
<b>Office Hours:</b> By email appointment	<b>Meeting Location:</b> Fairfax; KH 14
<b>Office Location:</b> Finley 209	<b>Other Phone:</b> N/A

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

**Prerequisite(s):**

None

**Co-requisite(s):**

None

**Course Description**

Integrates foundational knowledge of numeracy acquisition, mathematical concepts, mathematical thinking, mathematics vocabulary, calculation, and problem-solving to plan well-sequenced and explicit math instruction for students with disabilities in the general education curriculum. Examines objectives that align with the general education curriculum Virginia Standards of Learning in mathematics at the elementary, middle, and secondary levels while still providing individualization. Field experience required.

**Advising Contact Information**

Please make sure that you are being advised on a regular basis as to your status and progress in your program. Students in Special Education and Assistive Technology programs can contact the Special Education Advising Office at 703-993-3670 or [speced@gmu.edu](mailto:speced@gmu.edu) for assistance. All other students should refer to their assigned program advisor or the Mason Care Network (703-993-2470).

## **Advising Tip**

Are you familiar with Mason career resources? Email [speced@gmu.edu](mailto:speced@gmu.edu) to be added to the Special Education employment listserv, and check out Career Services: <https://careers.gmu.edu/>.

## **Course Delivery Method**

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**

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

1. Understand curriculum development that includes a scope and sequence, lesson plans, instructional methods, and assessment based on the general education curriculum Virginia Standards of Learning in math at the elementary, middle, and secondary level.
2. Understand, distinguish, and evaluate the differences between procedural, conceptual, and declarative knowledge in order to provide explicit instruction of math to students with disabilities who are accessing the general educational curriculum.
3. Understand foundational knowledge of math including numeracy acquisition, mathematical concepts, mathematical thinking, mathematics vocabulary, calculation, and problem-solving.
4. Demonstrate the ability to identify and distinguish appropriate data-based modifications and accommodations for general or specialized instruction as needed for students with disabilities who access the general education curriculum.
5. Design and demonstrate the application of assistive and instructional technologies to support assessment, planning, and delivery of academic content to students with disabilities who access the general education curriculum.
6. Demonstrate the ability to construct and implement individual educational planning and systematic, explicit instruction for students with disabilities who access the general education curriculum including:
  - a. Essential mathematical concepts, vocabulary, and content across general and specialized curriculum
  - b. Numeracy acquisition
  - c. Problem solving
  - d. Calculation
7. Synthesize and then appraise the individual abilities, interests, learning environments, and cultural and linguistic factors in the selection, development, and adaptation of learning experiences for students with disabilities who access the general education curriculum.
8. Apply course concepts to K-12 school settings through field-based learning experiences (e.g., field experiences in K-12 classrooms, field-based case studies, field-based virtual/online learning experiences).

## **Professional Standards**

(Council for Exceptional Children [CEC] and the Interstate Teacher Assessment and Support Consortium [InTASC]). Upon completion of this course, students will have met the following professional standards: CEC Standard 3: Curricular Content Knowledge (InTASC 3, 4); CEC Standard 5: Instructional Planning and Strategies (InTASC 7, 8).

## **Required Texts**

Fennell, F., Kobett, B. M., & Wray, J. A. (2017). *The formative 5: Everyday assessment techniques for every math classroom*. Thousand Oaks, CA: Corwin.

## **Recommended Texts**

American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). <https://doi.org/10.1037/0000165-000>

## **Course Performance Evaluation**

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, VIA, hard copy).

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

It is critical for the special education program to collect data on how our students are meeting accreditation standards. Every teacher candidate/student registered for an EDSE course with a required Performance-based Assessment (PBA) is required to upload the PBA to VIA (regardless of whether a course is an elective, a one-time course or part of an undergraduate minor). A PBA is a specific assignment, presentation, or project that best demonstrates one or more CEC, InTASC or other standard connected to the course. A PBA is evaluated in two ways. The first is for a grade, based on the instructor's grading rubric. The second is for program accreditation purposes. Your instructor will provide directions as to how to upload the PBA to VIA.

For EDSE 643, the required PBA is Math Intervention Project. Please check to verify your ability to upload items to VIA before the PBA due date

## ***Assignments and/or Examinations***

### **Performance-based Assessment (VIA submission required)**

#### **Assignment 1: Math Intervention Project (50 points)**

You will select one student with a disability who accesses the general education curriculum. Using and applying assessment techniques, you will identify explicit areas of math for which the student requires an evidence-based strategy. Gather work samples that represent these areas of instructional need. Based on data and consultation with the child's teacher and your course instructor, you will select an evidence-based math strategy intervention and develop a plan for teaching. The instructor must approve your plan before you begin instruction. The teaching lesson plans, modified and adapted for your student, will highlight stages of effective strategy

instruction. You will implement plans with the selected student. Performance data will be collected throughout your lessons. You are not expected to see significant gains in this short amount of time. At the end of the project, you will craft a reflective summary on how the experience of teaching this student using the selected intervention and teaching plan. Please refer to Blackboard for the rubric and submission folder for this assignment.

### **Directions:**

1. Select one student in grades K–12 demonstrating mathematics difficulties
2. Identify one area/skill in mathematics for which the student would benefit from explicit one-on-one teaching with you as the instructor
3. Gather at least three baseline work samples targeting the area of concern. The number of questions in each work sample can vary, but each should possess at least five problems.
4. In consultation with the child’s teacher, select one evidence-based math strategy. This strategy will be taught in unison with explicit instruction (thus, explicit instruction cannot be the sole primary strategy selected here).
5. Develop a plan for teaching the student using the strategy. This will include developing one comprehensive new lesson plan modified for the student. The lesson plan must include the following:
  - a. One targeted Common Core math standard with the lesson’s objective(s)
  - b. Description of all prerequisite skills needed, essential concepts, vocabulary, and new skills to be covered
  - c. Materials needed to teach the lesson
  - d. Steps and activities to be completed during the modeling, guided, and independent practice portions of the lesson. Within this section, you will outline in detail how the specific strategy you selected will be used
  - e. Use of at least one form of assistive technology appropriate for the student
  - f. At least one formative assessment
  - g. At least one summative assessment
6. Submit your lesson plan for approval by the date listed on the course schedule
7. Implement your lesson for a minimum of five sessions, with one session completed per day. Collect at least five intervention work samples with your student (one per session). The number of questions in each work sample can vary, but should possess at least five problems.
8. A graphed depiction of your student’s performance illustrating their three baseline sessions and five intervention sessions. The graph must follow APA 7 guidelines, possess a title, and depict clearly marked x- and- y- axes.
9. Write a two-page single-spaced reflection on the effectiveness of your teaching and evidence-based math strategy. You must address the following topics within your paper using each as a level-heading:
  - a. Why was this particular student selected?
  - b. What specific areas in mathematics did they struggle in? How did you determine this?
  - c. Why was the evidence-based math strategy you selected appropriate for this student?
  - d. How did the student perform over the course of your instruction in each session?
  - e. What worked well within your lesson plan? What would you do differently next time you teach using this strategy?

10. Submit your one lesson plan (with your formative and summative assessments), three baseline work samples, five intervention work samples, one performance graph, and the two-page reflection as one document onto Blackboard. Please include them in this specific order, with each labeled accordingly at the top of a new page for each.

**College Wide Common Assessment  
(VIA submission required)**

N/A

***Field Experience Requirement***

A field experience is a part of this course. A field experience includes a variety of early and ongoing field-based opportunities in which candidates may observe, assist, and/or teach. Field experiences may occur in off-campus settings, such as schools (CAEP, 2016). Below are REQUIRED PROCEDURES FOR ALL STUDENTS ENROLLED IN THIS COURSE.

1. Complete the online EDSE Field Experience form. This online form will be sent to your GMU email from EDSEfld@gmu.edu on the first day of the semester. Click on the link and complete the form as soon as possible. ALL students should complete the required form, as this information is required by the state. Please direct any questions about the form to Dr. Kristen O'Brien at EDSEfld@gmu.edu.

- If you are a full-time contracted school system employee and will complete the field experience at your worksite with administrator and instructor approval, you will be asked to specify the school at which you will be completing the field experience.
- If you request a field experience placement, you will receive information via your GMU email about your assigned internship placement from the Clinical Practice Specialist in the College's TEACHERtrack Office. Check your GMU email regularly for important information regarding your field experience. Follow all instructions for the necessary Human Resource (HR) paperwork required to access the assigned field experience placement. Note that you may NOT arrange your own field experience placement.

2. View the EDSE Field Experience Introduction presentation. On the first week of classes and prior to representing George Mason in off-campus settings, your instructor will show a video presentation or provide a link to the presentation, which includes important information about the registration process for EDSE field experiences and tips for a successful field experience. After the presentation, sign the document provided by your instructor to indicate that you have watched the presentation and are aware of the EDSE field experience professionalism expectations.

3. Complete the GMU Experiential Learning Agreement packet (ELP). Mason requires all students completing off-campus field experiences in schools or other agencies to complete this packet. Once you have received your field experience placement, complete and submit this packet to the provided link.

4. Document your field experience hours. Your instructor may provide you with access to field experience documentation forms to use in documenting the hours and activities completed in your field experience placement. Your instructor will provide more directions on how to use and submit the documentation form.

5. Complete the field experience end-of-semester survey. Towards the end of the semester, you will receive an email from EDSEfld@gmu.edu with a link to an online survey. This brief survey asks you to report about important features of your field experience placement.

### ***Other Assignments***

#### **Assignment 2: Consumer Apps Evaluation Paper (30 Points)**

Students will select one digital app or program available online for download to teach mathematics standards in K-12 education. Students will select one child/adult to use this app with and document their experience solving age-appropriate mathematics problems for 15–20 minutes. Afterwards, students will write a two-page single-spaced paper reviewing this app and child/adults' performance. Reflections should focus on addressing the following topics with each as a level-heading:

- a. Feasibility for small and whole group instruction in inclusionary classrooms
- b. Benefits and foreseeable challenges for teachers
- c. Benefits and foreseeable challenges for students with disabilities
- d. The child/adults' opinion and experiences using the app
- e. Four explicit references with accompanying citations to concepts covered within the course lectures, handouts, and/or readings.

#### **Assignment 3: Lecture Handouts and Attendance (20 Points)**

Students are to complete the assigned handouts for every unit covered during class sessions. Handouts will be graded based on the thoroughness of your response to each question/prompt. In addition, points earned from class activities during a time of absence cannot be made up. Attendance (and subsequent participation) includes asking questions and engaging in discussion.

Points for class attendance and participation are positively impacted by:

1. Attending class and being “present”
2. Completing and handing in all class handouts
3. Participating in class discussions/activities
4. Thoughtfully contributing to class discussions
5. Listening to the ideas of other peers
6. Demonstrating an enthusiasm for learning.

Participation points are negatively affected by being late to class, demonstrating a disinterest in the material/discussions (e.g., reflection activities, small group activities, discussions, etc.), and/or absences. Points are also deducted for a lack of digital etiquette during class sessions.

NOTE: All assignments should reflect graduate-level spelling, syntax, and grammar, as well as APA style guidelines. If you experience difficulties with the writing process, you will be required to document your work with the GMU Writing Center during this course.

### ***Assignment Summary***

Course grades are calculated by summing the points earned on assignments and dividing by the total possible points. Grades are designed to indicate your success in completing assignments, not the level of effort you put into them.

Math Intervention Project (VIA)	50 points
Consumer Apps Evaluation Paper	30 points
Lecture Handouts and Attendance	20 points
<b>Total</b>	<b>100 Points</b>

### **Course Policies and Expectations**

#### **Attendance/Participation**

Students are expected to (a) attend all classes during the course, (b) arrive on time, (c) stay for the duration of the class time, and (d) complete all assignments. Attendance, timeliness, and professionally relevant- active participation are expected. Attendance and professional participation at all sessions is very important because many of the activities in class are planned in such a way that they cannot necessarily be recreated outside of the class session. Be aware that any points earned for participation in class activities during a time of absence will not be earned and cannot be made up. One absence will result in 0 percentage points deducted from your overall grade. Two absences will result in a loss of 11 percentage points. Three or more absences will result in a loss of 21 percentage points. Repeated tardiness and/or leaving early will result in a loss of 3 percentage points per incidence. If you have perfect attendance throughout the semester, you will receive 1 extra credit point. Please notify me in advance by email if you will not be able to attend class.

#### ***Participation***

You are expected to be present, prepared, and exhibit professional dispositions for each class session. Activities resulting in points toward your final grade will be completed during class sessions. Quality of product and completion of the activity within class will impact points earned. Points missed due to absences during class activities cannot be made up.

Quality participation includes:

- (a) Arriving on time, including coming back from break(s),
- (b) Staying in the classroom/activity area for the duration of the class time,
- (c) Participating in all class activities (face-to-face and outside of class, including by electronic means)
- (d) Having on hand all materials required for the class session as per course assignments

and the syllabus

### ***Late Work***

All assignments are due on the dates indicated (at the beginning of class). Consult with me in advance if there is a problem. In fairness to students who make the effort to submit papers on time, 5 points per day will be deducted from your assignment grade for late papers unless I have agreed to an extension (may be granted one time only for one assignment only). A maximum extension of one calendar week may be granted. Please retain a copy of your assignments in addition to the ones you submit.

### ***Other Requirements***

This is a 3-credit graduate level course. Traditionally, 3-credit courses across a 15-week semester require an average of 45 hours of in-class time and approximately 90 hours of independent reading and assignment completion. Be prepared to put in that amount of time into this class and plan your schedule accordingly.

Some assignments require you to synthesize material from the course and outside sources into coherent statements of your ideas. In such cases, your writing should be databased– meaning that you must support statements and ideas with evidence from these sources, giving these sources credit. The standard format for writing in the field of education is outlined in the *Publication Manual of the American Psychological Association, 6<sup>th</sup> edition* ([www.apastyle.org](http://www.apastyle.org)). Specifically, the final version of your Instructional Program should be written in APA style, including a cover page, running head, pagination, headings (as needed), citations (as needed), and reference pages. The citation for this manual is included in the section entitled “Recommended Texts”. For an online resource, see [www.apastyle.org](http://www.apastyle.org).

It is expected that you know how to paraphrase and cite information appropriately to meet both APA guidelines and to avoid plagiarism. This website provides some useful information on how to avoid plagiarism in your writing: <http://www.plagiarism.org/>

### **Communication**

The most efficient way to contact me is through email. I check email daily Monday-Friday from 9:00am-9:00pm. If your email reaches me during this period of time, I will respond immediately. Otherwise, I will respond within 24 hours during the week. Keep in mind that I teach from 6:00-10:30pm. On weekends, I check my Mason account on Sunday evenings and will respond to all emails received then. Do not email me an hour before an assignment is due and expect a response. If you would prefer to meet with me either before or after class (or at another time during the day), please do not hesitate to contact me.

***Written Language:*** Students at the graduate level are expected to compose with accuracy (grammar, spelling, other mechanics, form, structure, etc.) and at a conceptual level commensurate with advanced degree study. APA Style is the standard format for any written work in the College of Education and Human Development. If you are unfamiliar with APA format, it would benefit you to purchase the current edition of the *Publication Manual of the American Psychological Association*. You are required to use APA guidelines for all course



assignments as noted in the assignment descriptions. This website links to APA format guidelines: <http://apastyle.apa.org> .

**Oral Language:** Use “person-first language” in class discussions and written assignments (and, ideally, in professional practice). In accordance with terminology choices in the disability community, strive to replace the term “Mental Retardation” with “Intellectual Disabilities” in oral and written communication and to avoid language labels by stating, for example, a “student with disabilities” (SWD) rather than a “disabled student”. Please refer to guidelines for non handicapping language in APA Journals, including information available at:

<http://www.apa.org/pi/disability/resources/policy/resolution-ada.pdf> and

<http://supp.apa.org/style/pubman-ch03.15.pdf> .

### **Inclement Weather**

If classes are cancelled at George Mason University, a message will be posted on the class Blackboard site and all class members will receive an email. Because such cancellations are often at the last minute, it may be difficult to get this message prior to leaving for class. If in doubt, dial the University phone number (703-993-1000) or visit the university website ([www.gmu.edu](http://www.gmu.edu)). I will email you regarding weather as soon as it is announced. *Please note, the cancellation of classes due to inclement weather is determined by the decision of the instructing university only. If the instructing university is open and operational, then you are expected to attend class.*

### **Grading**

95-100% = **A**

90-94% = **A-**

80-89% = **B**

70-79% = **C**

< 70% = **F**

**\*Note:** The George Mason University Honor Code will be strictly enforced. See [Academic Integrity Site \(https://oai.gmu.edu/\)](https://oai.gmu.edu/) and [Honor Code and System \(https://catalog.gmu.edu/policies/honor-code-system/\)](https://catalog.gmu.edu/policies/honor-code-system/). Students are responsible for reading and understanding the Code. “To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.” Work submitted must be your own new, original work for this course or with proper citations.

### **Professional Dispositions**

Students are expected to exhibit professional behaviors and dispositions at all times. See [Policies and Procedures \(https://cehd.gmu.edu/students/policies-procedures/\)](https://cehd.gmu.edu/students/policies-procedures/).

## Class Schedule

\*Note: Faculty reserves the right to alter the schedule as necessary, with notification to students.

Week	Topics	Readings Due	Assignments Due
1/26	<ul style="list-style-type: none"> <li>• Course Overview</li> <li>• Syllabus Review</li> <li>• Historical Perspective</li> <li>• Constructs &amp; Definitions</li> </ul>	<ul style="list-style-type: none"> <li>• Course Syllabus</li> </ul>	
2/2	<ul style="list-style-type: none"> <li>• Developing whole number sense: mathematics in primary grades</li> <li>• Assessment Observation</li> </ul>	<ul style="list-style-type: none"> <li>• Hott et al. (2014)</li> <li>• Fennell et al. (2017): Chapter 1</li> </ul>	
2/9	<ul style="list-style-type: none"> <li>• Asynchronous Session: Complete Unit Handout(s)</li> </ul>		
2/16	<ul style="list-style-type: none"> <li>• Teaching the rational number system</li> <li>• Evidence-based practices to teach procedural skills</li> <li>• Assessment Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Gonsalves &amp; Krawec (2014)</li> <li>• Fennell et al. (2017): Chapter 2</li> </ul>	
2/23	<ul style="list-style-type: none"> <li>• Evidence-based practices to teach conceptual skills</li> <li>• Assessment– Show Me</li> </ul>	<ul style="list-style-type: none"> <li>• Agrawal &amp; Morin (2016)</li> <li>• Fennell et al. (2017): Chapter 3</li> </ul>	<ul style="list-style-type: none"> <li>• Consumer Apps Evaluation Paper</li> </ul>
3/2	<ul style="list-style-type: none"> <li>• Asynchronous Session: Complete Unit Handout(s)</li> </ul>		
3/9	<ul style="list-style-type: none"> <li>• Problem representation</li> <li>• Evidence-based practices to teach declarative knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Krawec (2014)</li> </ul>	
3/23	<ul style="list-style-type: none"> <li>• Teaching mathematics in secondary grades</li> <li>• Assessment Hinge Questions</li> </ul>	<ul style="list-style-type: none"> <li>• Fennell et al. (2017): Chapter 4</li> </ul>	<ul style="list-style-type: none"> <li>• MIP Lesson Plan</li> </ul>
3/30	<ul style="list-style-type: none"> <li>• Asynchronous Session: Complete Unit Handout(s)</li> </ul>		
4/6	<ul style="list-style-type: none"> <li>• Teaching functional mathematics skills to students with moderate-severe disabilities</li> <li>• Assessment Exit Tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Acar &amp; Diken (2012)</li> <li>• Fennell et al. (2017): Chapter 5</li> </ul>	

Week	Topics	Readings Due	Assignments Due
4/13	<ul style="list-style-type: none"> <li>• Low-and high-tech assistive technology &amp; UDL</li> </ul>	<ul style="list-style-type: none"> <li>• Satsangi &amp; Miller (2017)</li> <li>• Ives (2007)</li> <li>• Zabala, Bowser, &amp; Korsten (2004)</li> </ul>	
4/20	<ul style="list-style-type: none"> <li>• Asynchronous Session: Complete Unit Handout(s)</li> </ul>		
4/27	<ul style="list-style-type: none"> <li>• Low-and high-tech assistive technology &amp; UDL</li> <li>• Formative Assessments Review</li> </ul>	<ul style="list-style-type: none"> <li>• Fennell et al. (2017): Chapter 6</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture Handouts</li> </ul>
5/4	<ul style="list-style-type: none"> <li>• Mathematics Intervention Project Group Analysis</li> <li>• Course reflections &amp; wrap-up</li> <li>• Course evaluations</li> </ul>	<ul style="list-style-type: none"> <li>• TBD</li> </ul>	<ul style="list-style-type: none"> <li>• Math Intervention Project</li> </ul>

### Core Values Commitment

The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles: See [Core Values](http://cehd.gmu.edu/values/) (<http://cehd.gmu.edu/values/>).

### GMU Policies and Resources for Students

#### *Policies*

- Students must adhere to the guidelines of the Mason Honor Code. See [Honor Code and System](https://catalog.gmu.edu/policies/honor-code-system/) (<https://catalog.gmu.edu/policies/honor-code-system/>).
- Students must follow the university policy for Responsible Use of Computing. See [Responsible Use of Computing](http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/) (<http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>).
- Students are responsible for the content of university communications sent to their Mason 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 with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor. See [Disability Services](https://ds.gmu.edu/) (<https://ds.gmu.edu/>).

- Students must silence all sound emitting devices during class unless otherwise authorized by the instructor.

### ***Campus Resources***

- Support for submission of assignments to VIA should be directed to [viahelp@gmu.edu](mailto:viahelp@gmu.edu) or <https://cehd.gmu.edu/aero/assessments>.
- Questions or concerns regarding use of Blackboard should be directed to [Blackboard Instructional Technology Support for Students](https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/) (<https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/>).

### **Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking:**

As a faculty member, I am designated as a “Non-confidential Employee” and must report all disclosures of sexual assault, interpersonal violence, and stalking to Mason’s Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason’s confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance from Mason’s Title IX Coordinator by calling 703-993-8730, or emailing [titleix@gmu.edu](mailto:titleix@gmu.edu).

**For additional information on the College of Education and Human Development, please visit our website [College of Education and Human Development](http://cehd.gmu.edu/) (<http://cehd.gmu.edu/>).**

### **Appendix**

#### **Assessment Rubric(s)**

### Math Intervention Project (50 Points)

Criteria	Meets Req. (5)	Approaches Req. (4 / 3 / 2)	Needs Improvement (1)	Incomplete (0)	Weight
Has the student provided information about the child being taught and baseline work samples representing areas of instructional need?	Includes the child's grade level, age, gender, race, academic ability level; and data on the child's level of understanding about the mathematics concept as well as performance in other academic, social, or behavioral areas.	Includes partial information regarding the child's grade level, age, gender, race, academic ability level; and data on the child's level of understanding about the mathematics concept as well as performance in other academic, social, or behavioral areas.	More than two of the required descriptive items about the child are missing.	Criteria not present.	
Has the student selected one age-appropriate K-12 mathematics standard to teach?	One age-appropriate mathematical concept is selected and aligned to a CCSS and/or Virginia SOL for grades K-12. The standard is clearly described in terms of the concepts that will be taught.	One age-appropriate mathematical concept is selected and aligned to a CCSS and/or Virginia SOL for grades K-12. The standard is not fully described in terms of the concepts that will be taught.	One or more mathematics concepts are selected. They may not be age-appropriate or aligned to a CCSS and/or Virginia SOL for grades K-12.	Criteria not present.	
Has the student selected one specific mathematics evidence-based practice?	One evidence-based practice is selected and clearly described in terms of how it will be used to teach the chosen standard/concept.	One evidence-based practice is selected. A thorough explanation of how it will be used to teach the chosen standard/concept is not fully provided.	One strategy is selected. It may not be an evidence-based practice or may be inappropriate for teaching the chosen standard/concept.	Criteria not present.	

<b>Criteria</b>	<b>Meets Req. (5)</b>	<b>Approaches Req. (4 / 3 / 2)</b>	<b>Needs Improvement (1)</b>	<b>Incomplete (0)</b>	<b>Weight</b>
Has the student selected one form of assistive technology?	One form of assistive technology is selected and clearly described in terms of how it will be used to teach the chosen standard/concept.	One form of assistive technology is selected. A thorough explanation of how it will be used to teach the chosen standard/concept is not fully provided.	One form of assistive technology is selected. It may be inappropriate for teaching the chosen standard/concept.	Criteria not present.	
Has the student created one distinct lesson plan that demonstrates all of the stages of the strategy in use?	The student demonstrates all of the stages of the strategy during instruction. The child is progressed through each stage only after they have demonstrated mastery or understanding of the previous stage.	The teacher demonstrates all of the stages of the strategy during instruction. It is unclear whether the child demonstrated mastery or understanding of each stage.	The teacher does not demonstrate all of the stages of the strategy during instruction or does so incorrectly.	Criteria not present.	
Does the lesson incorporate tiered informal and formal assessments?	The student used a variety of informal and formal assessments throughout the lesson. Higher-level questions were used to encourage deeper thinking and responses from the child to probe for understanding.	The student used a variety of informal and formal assessments throughout the lesson. Questions were used to encourage some analysis and responses from the child to probe for understanding.	The lesson used only informal or only formal assessments. No questions were used to encourage analysis and responses from the child.	Criteria not present.	

Criteria	Meets Req. (5)	Approaches Req. (4 / 3 / 2)	Needs Improvement (1)	Incomplete (0)	Weight
Is there an appropriate reflection and evaluation of the assessment process?	A detailed analysis/ reflection from the student is provided after the lesson has concluded. The reflection includes a thorough discussion on strategies for teachers to scaffold this lesson for learners of varying abilities moving forward.	An analysis/ reflection from the student is provided after the lesson has concluded. The reflection includes some discussion on strategies for teachers to scaffold this lesson for learners of varying abilities moving forward.	Limited analysis/ reflection from the student is provided after the lesson. No discussion on strategies for teachers to scaffold this lesson is provided.	Criteria not present.	
<b>Total =</b>					
Scale: A = 5 – 4.5 A– = 4.49 – 3.5 B = 3.49 – 2.5 C = 2.49 – 2.0 F = 1.99 – 0					