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

Spring 2022
EDSE 643 665: Instructional Strategies for Math
CRN: 24205, 3– Credits

Instructor: Dr. Catherine Creighton Martin	**Meeting Dates:** 1/11/22 – 3/8/22
Phone/Text: 703-314-6105	**Meeting Day(s):** Tuesday
E-Mail: cmarti82@gmu.edu	**Meeting Time(s):** 4:30 pm – 9 pm
Office Hours: By email appointment	**Meeting Location:** N/A; Off-campus
Office Location: Virtual Zoom room # https://gmu.zoom.us/j/2861668416	**Other Phone: 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 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 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 and Canvas

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 a student demonstrating mathematics difficulties in the classroom
2) Identify explicit areas of math for which the student requires an evidence-based strategy
3) Gather baseline work samples that represent these areas of instructional need
4) In consultation with the child's teacher, select one evidence-based math strategy
5) Develop a plan for teaching the student using the strategy.

This will include at least two lesson plans modified for the student and steps for effective instruction. Each lesson plan must include the following:

- Targeted Common Core math standard and lesson objectives
- Essential concepts, vocabulary, and skills to be covered
- Materials needed to teach the lesson
- 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
- strategy you selected will be used for teaching.
- Using at least one form of assistive technology appropriate for the student
- One formative assessment
- One summative assessment*

6) Submit your lesson plans for approval by your instructor
7) Implement your lesson plans with the student for at least 2–4 weeks and collect performance data throughout on each session
8) Write a two-page single-spaced reflection on the effectiveness of your teaching plan and the chosen intervention. This will include addressing the following topics:
    - Why was this particular student selected?
    - What types of assessment was used to identify their struggles?
    - Why the evidence-based intervention you selected was appropriate for this student?
    - What worked well within your lesson plans?
    - What you would do differently next time you teach using this strategy?

9) Submit baseline work samples, lessons plans and assessments, intervention performance data, and your reflection as one document onto Blackboard.

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 THS 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: Session 1 Homework *(10 Points).*

IRIS Module: MTSS/RTI in Mathematics

Answer questions 1 & 2 (5 points per question). Upload to Blackboard.

Assignment 3: Unit Plan with Sequenced Lessons & Self-Monitoring Checklist *(30 Points)*

For this Session 2 assignment, you will create a math unit with sequenced lessons. You will create a self-monitoring checklist for your students based on a math unit you plan to teach. Steps are clearly identified in the asynchronous module in session 2 and noted below.

Steps:

- Identify an essential grade SOL
- Identify essential related prerequisite skills
- Sequence lessons and task analyze complex skills.
- Create a self-monitoring checklist for students that includes growth mindset language.

Rubric:

Criteria	**Effective**	**Not Effective, *yet***
Essential grade SOL (1 Point)	The essential grade level SOL is identified.	An essential grade level SOL is not identified.
Essential prerequisite skills (9 Points)	Essential prerequisite skills are identified.	Essential prerequisite skills are not identified.
Sequenced Lessons (10 Points)	Lessons are sequenced and complex skills are task analyzed to enhance comprehension.	Lessons are not sequenced, and complex skills are not task analyzed to enhance comprehension.
Self-Monitoring Checklist (10 Points)	Self-monitoring checklist includes essential grade level and prerequisite skills and self-rating checklist with growth mindset language.	Self-monitoring checklist does not include essential grade level and prerequisite skills or a self-rating checklist with growth mindset language.

Assignment #4

Activity: Teach Students about the Brain and Learning: Explore Resources and Select (Assignment – Upload URL) – 5 points

From the list of videos or other self-selected video, what is a way you will introduce growth mindset, brain growth, and the neuroscience of learning to your students?

- Khan Academy Growing your mind (3:04 minutes)
- Stanford University professor Jo Boaler shares a student friendly video to help teachers influence students' beliefs about math, learning and mistakes. BoalerBoostingMessagesforStudents (8:36 minutes)
- Khan Academy and Stanford University collaborated to create lesson plans to explicitly teach growth mindset, incorporating multiple quick videos Khan Academy & Stanford University Lesson Plans .
- RSA Animate-Carol Dweck: How to Help Every Child Fulfil Their Potential - A Cognitive Whiteboard Animation (10 minutes)
- Class Dojo and Stanford University PERTS Research Center created a 5-video series with activities and discussion prompts:
- Class Dojo PERTS Mindset Video 1 (2:38 minutes)
- Class Dojo PERTS Mindset Video 2 (2:58 minutes)
- Class Dojo PERTS Mindset Video 3 (2:32 minutes)
- Class Dojo PERTS Mindset Video 4 (2:51 minutes)
- Class Dojo PERTS Mindset Video 5 (3:34 minutes)
- Sesame Street and the Power of Yet video (3:31 minutes)
- Sesame Street Bruno Mars Don't Give UP (1:57 minutes)

Assignment 5: Asynchronous Session 4 Activities (35 points total)
Access the session: National Center on Intensive Intervention - Module 5

Learning Objective:

- In part 1, you will understand how students to help students develop fluency in mathematics.
- In part 2, you will understand problem solving strategies that build conceptual understanding.
- In part 3, you will learn ways to motivate students.

Please upload all assignments with Blackboard.

Assignments	Points
Introduction Video (3:32 minutes)	
Part 1 Video: *How do you build fact fluency within intensive intervention?* (55:09 minutes)	
Module 5 Part 1 Activity # 1 - Make Remarks on Flashcard Routine Watch Activity #1 video to complete activity	5
Module 5 Part 1 Activity # 2 - Determine Which Facts to Use for Incremental Rehearsal	5
Module 5 Part 1 Activity # 3 - Design a Taped Problems or Cover Copy Compare Sheet	5
Part 2 Video: *How do you incorporate effective problem-solving strategies within intensive intervention?* (1:03:06)	

Module 5 Part 2 Activity # 4 - Determine Why Using Key Words May Be Problematic	5
Module 5 Part 2 Activity # 5 - Identify Problem Types for Additive Problems	5
Module 5 Part 2 Activity # 6 - Identify Problem Types for Multiplicative Problems	5
Part 3 Video: *How do you incorporate a motivational component within intensive intervention?* (7:20 minutes)	
Module 5 Part 3 Activity # 7 - Analyze Motivation Component of an Intensive Intervention	5

Assignment 6 VDOE Evidence Based Specially Designed Instruction in Mathematics Resource Document (15 points)

Review the **VDOE Evidence Based Specially Designed Instruction in Mathematics Resource Document**

- Select one strategy you would like to implement with your students
  - Write a three-paragraph statement that includes the following elements:
    - Paragraph 1: Describe the strategy (5 points)
    - Paragraph 2: Who the strategy is intended and why you selected the strategy (share its benefits) (5 points)
    - Paragraph 3: ***Brief*** summary of how you would teach the strategy and monitor students' progress. (5 points)

Assignment 7 IRIS Center Self-Regulated Learning Strategies, Using Learning Strategies to Enhance Student Learning (10 points)

Directions: Please complete the IRIS Center Module (takes approximately 1 hour). At the end of the module, answer Question #3 at the end of the Module.

- To access the IRIS Module, Click: SRSD IRIS Center Module
- Answer Question # 3 **(Noted at the end of the module and copied below)**
  - **List the six research-validated stages of SRSD. What aspects of each would you emphasize as the most important?**
- Upload **answer to Question #3 to Canvas.**

Assignment Summary

Session 1	Assignment #2 - Homework IRIS Module: MTSS/RTI in Mathematics Answer questions 1 & 2. Upload to Blackboard. 5 points per question.	10 points
Session 2 Self-Paced	Assignment #3: Unit Planned with Sequenced Lessons & Self-Monitoring Checklist	30 points

Session 2 Self-Paced	Assignment #4: Activity: Teach Students about the Brain and Learning: Explore Resources and Select (Assignment – Upload URL) – 5 points	5 points
Session 2 Self-Paced	Discussion Board Posts (Participation Points) Discussion Post #1 -The Power of Yet & Article What are your thoughts about Katrina Schwartz's article, "Not a Math Person": How to Remove Obstacles to Learning Math (Links to an external site.) and Carol Dweck's TedTalk, The Power of Yet ? How does it affect the way you think about teaching math? Discussion Post #2 Creating a Mistake Friendly Learning Environment How do you plan to create a mistake friendly environment at the beginning of class or other times? Discussion Post #3 Self-Regulation and Self-Monitoring Checklist What ways do you plan to integrate a self-monitoring checklist with goals and reflection into your classroom practices? How will you find time to meet with students individually? Discussion Post #4: Pandemic Practices to Collaborate and Collaborate with Parents Discussion Post	2 points 2 points 5 points 1 point
Session 3	Explicit Instruction Lesson Plan In- Class Activity	10 points
Session 4 National Center on Intensive Intervention - Module 5	Assignment #5– Module 5 Activities (35 points total) *Upload assignments to Blackboard* Module 5 Part 1 Activity # 1 - Make Remarks on Flashcard Routine Module 5 Part 1 Activity # 2 - Determine Which Facts to Use for Incremental Rehearsal Module 5 Part 1 Activity # 3 - Design a Taped Problems or Cover Copy Compare Sheet Module 5 Part 2 Activity # 4 - Determine Why Using Key Words May Be Problematic Module 5 Part 2 Activity # 5 - Identify Problem Types for Additive Problems Module 5 Part 2 Activity # 6 - Identify Problem Types for Multiplicative Problems	5 points 5 points 5 points 5 points 5 points 5 points

	Module 5 Part 3 Activity # 7 - Analyze Motivation Component of an Intensive Intervention	5 points
Session 5	In-Class Whole Number Activity	10 points
Session 6	In Class – Fraction Activities	15 points
Session 8	Asynchronous Class Assignments **Assignment 6** VDOE Evidence Based Specially Designed Instruction in Mathematics Resource Document (15 points) Review the VDOE Evidence Based Specially Designed Instruction in Mathematics Resource Document Select one strategy you would like to implement with your students. Write a three-paragraph statement that includes the following elements: • Paragraph 1: Describe the strategy (5 points) • Paragraph 2: Who the strategy is intended and why you selected the strategy (share its benefits) (5 points) • Paragraph 3: *Brief* summary of how you would teach the strategy and monitor students' progress. (5 points) Assignment 7 IRIS Center Self-Regulated Learning Strategies, Using Learning Strategies to Enhance Student Learning (10 points) Directions: Please complete the IRIS Center Module (takes approximately 1 hour). At the end of the module, answer Question #3 at the end of the Module. To access the IRIS Module, Click: SRSD IRIS Center Module Answer Question # 3 (Noted at the end of the module and below) *List the six research-validated stages of SRSD. What aspects of each would you emphasize as the most important?*	15 points 10 points
PBA	**Assignment #1 Math Intervention Project**	50 points
Assign-ments	Total Points:	200 points

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 points deducted from your overall grade.

Two absences will result in a loss of 11 points. Three or more absences will result in a loss of 21 points. Repeated tardiness and/or leaving early will result in a loss of 3 points per incidence.

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. Session 2 is an asynchronous session that requires you to access a separate Canvas Module. Please be sure to participate in asynchronous class discussion posts. 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 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.

NOTE: It is impossible to participate fully in this class while texting, tweeting, working on documents, etc. Please be fully present in class.

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. 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, 6th edition (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.

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/

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). 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/) and Honor Code and 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/polices-procedures/).

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

Session	Topic	Readings and Assignments	Assignments Due
Session 1 Synchronous	NCTM Standards Characteristics of Students with Math Disabilities	IRIS Module: MTSS/RTI in Mathematics	

1/11/2022	Research based strategies and HLPs Explicit Instruction (HLP #16) Positive and Corrective Feedback (HLP # 8 & 22) Five Components of Mathematics Proficiency	Answer questions 1 & 2. Upload to Blackboard.	
Session 2 Asynchronous Participate in discussion board posts within module on Canvas. Complete Assignment #2 and upload within module on Canvas **1/18/2022**	To join, select: **Accelerate Learning in Math. Unit Planning, Sequencing Lessons** HLP #7 – Establish a Consistent, Organized Respectful Learning Environment, Growth Mindset Meta-cognition: Self-Monitoring of Academic Performance Engaging Parents and Caregivers as Partners **Assessment Observation**	Read Fennell et al. (2017) Chapter 1	**Due:** Assignment #2 IRIS Module
Session 3 Synchronous 1/25/2022	Lesson Planning HLP #1 Collaborate with professionals to increase student success Flexible Grouping HLP #17 Mathematical Vocabulary & Discourse	Rogers & Weiss (2019)	**Due:** Assignment #4 Discussion Posts

	Specially Designed Instruction Evidence Based Practices for students with disabilities Meta-cognitive Strategies **Assessment Interviews**		
Session 4 Asynchronous 2/1/2022	To join, select: Intensive Interventions in Mathematics – National Center on Intensive Interventions. Module 5 **Fact Fluency, problem solving, and motivation** Schema Based Instruction Complete Session 4 activities (Assignment #5)	Fennell et al. (2017) Chapter 2 Agrawal & Morin (2016)	**Due:** Session 3 Activity **Due:** Assignment #3 Self-Monitoring Checklist Math Intervention Project idea
Session 5 2/8/2022 Synchronous	**Number Sense Developing** **Whole Number Operations** EBPs for Number Sense & Whole Number Operations Concrete-Representational-Abstract (CRA) Method Assessment Show Me	Fennell et al. (2017) Chapter 3 Riccomini, Stocker, & Morano (2017)	**Due:** Assignment #5 Session 4 Activities
Session 6 Synchronous 2/15/2022	Rational Number Concepts & Computation EBPs for rational numbers Metacognitive Strategies	Fennell et al. (2017) Chapter 4 Rodrigues, Dyson, Hansen, & Jordan (2016)	

	EquatIO Assessment Hinge Questions		
Session 7 Synchronous 2/22/2022	Geometry & Measurement Technologies: Graspable Math GeoGebra Geometry Geoboard – Math Learning Center Assessment Exit Tasks	Fennell et al. (2017) Chapter 5 Liu, Bryant, Kiru & Nozari (2021)	**Due:** Session 6 Activities
Session 8 Asynchronous 3/01/2022 Assignment #6 and Assignment #7 are uploaded in the module's Canvas	To Join Session 8, Select Metacognitive Strategy Instruction Algebraic Concepts HLP #17 Cognitive & Meta-cognitive Strategies Metacognitive Strategies in Mathematics SRSD in Mathematics Mathshare HLP # 21 Teach students to maintain and generalize new learning across time and settings SRSD strategies across the curriculum	Rogers et al. (2020) Cuenca-Carlino, Freeman-Green, Stephenson, & Hauth (2016)	
Session 9 In person or Synchronous 3/8/2022	Low & high-tech assistive technology & UDL IEP goals in mathematics Formative Assessment Review	Fennell et al. (2017) Chapter 6 Satsangi & Miller (2017)	**Due:** Assignment **Due:** Math Intervention Project

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/).

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/).

- 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/).

- 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/).

- 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 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/).

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.

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/).

Appendix

Assessment Rubric(s)

Assignment 1: Math Intervention Project Rubric (VIA)

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?	Includes the child's grade level, age, gender, race, academic ability level, and 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 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 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 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 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.	
Has the student selected one	One form of assistive technology is selected and clearly described	One form of assistive technology is selected. A thorough	One form of assistive technology is	Criteria not present.	

form of assistive technology?	in terms of how it will be used to teach the chosen standard/concept.	explanation of how it will be used to teach the chosen standard/concept is not fully provided.	selected. It may be inappropriate for teaching the chosen standard/concept.		
Does the lesson demonstrate all of the stages of the strategy in use?	The teacher 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.	
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.	