**George Mason University**
**College of Education and Human Development**
**Elementary Education Program**

ELED 552 002 – Mathematics Methods for the Elementary Classroom
3 Credits, Fall 2024
Thompson Hall, Room L018, Fairfax Campus
August 26, 2024 to December 18, 2024
Thursday 4:30 PM – 7:10 PM

## Faculty

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## Prerequisites/Corequisites

Admission to the elementary education licensure program.

## University Catalog Course Description

Introduces methods for teaching all children topics in arithmetic, geometry, algebra, probability, and statistics in elementary grades. Focuses on using manipulatives and technologies to explore mathematics and solve problems.

## Course Overview

In this course, we will begin an inquiry into mathematics teaching and learning that will guide you in your first teaching job and give you the tools that will enable you to continue to inquire and learn as part of your work as a teacher. Class sessions will be interactive and will include a variety of hands-on experiences with concrete and virtual manipulatives appropriate for elementary school mathematics. We will explore:

- The teaching of mathematics, investigating both *what* to teach and *how* to teach it.
- What it means to do mathematics and what it means to understand mathematics through individual, small group, and large group mathematical problem-solving.
- Ways to represent understandings of mathematical concepts, communicate reasoning about mathematical ideas and construct mathematical arguments.
- The ways children might represent mathematical concepts and look at ways to help children build connections and see relationships among mathematical ideas.
- Characteristics of a classroom environment conducive to mathematical learning by reading and discussing the importance of mathematical tasks, mathematical tools, the roles of teachers and

students, and the assessment of mathematical understanding.

In this course, we will take a stance of learning ***for, from,*** and ***in*** practice as follows:

**Learning *FOR* Practice** (Doing Mathematics): We will build our own *knowledge* of mathematics by closely investigating ideas in number sense and fraction concepts. Additionally, we will engage in several math tasks, extending our knowledge of mathematics and students' thinking, which will provide the foundation for your professional decision-making.

**Learning *FROM* Practice** (Examining Records of Practice): Records of practice—such as videotapes of lessons taught by yourself or others, students' work, and teachers' professional writing—will allow us to investigate the work of teaching mathematics and improve our own practice.

**Learning *IN* Practice** (Trying Things Out): Because teaching involves more than just having knowledge, you will be engaged in *enacting* the practices we are investigating as much as possible, so that you are developing the skills and professional decision-making that will make you a successful teacher.

**Course Delivery Method**

This class will be delivered in person on the Fairfax Campus. Individual session formats vary and may include lecture, small group/large group discussion, hands-on, interactive work, student presentations, and cooperative learning. Practical applications of theory will be explored in group activities.

**Technical Requirements**

To participate in this course, students will need to satisfy the following technical requirements:

- High-speed Internet access with standard up-to-date browsers. To get a list of Blackboard's supported browsers see: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#supported-browsers
  To get a list of supported operating systems on different devices see: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#tested-devices-and-operating-systems
- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.
- The following software plug-ins for PCs and Macs, respectively, are available for free download:
  - Adobe Acrobat Reader: https://get.adobe.com/reader/

- Windows Media Player: https://support.microsoft.com/en-us/help/14209/get-windows-media-player
- Apple QuickTime Player: www.apple.com/quicktime/download/

**Expectations**

- Course Week:
  Our course week will begin on the Monday of each week that we meet as indicated on the Class Schedule.
- Log-in Frequency:
  Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access to course materials at least 4 times per week.
- Participation:
  Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- Technical Competence:
  Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.
- Workload:
  Please be aware that this course is not self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the Class Schedule section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities, and assignments due.
- Instructor Support:
  Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.

**Learner Outcomes or Objectives**

This course is designed to enable students to do the following:

A. Know what constitutes the essential topics in mathematics of the modern early and intermediate grades school program.
B. Identify and use selected manipulatives and technology such as linking cubes, attribute blocks, geoboards, base-10 blocks, fraction circles, tangrams, calculators, and computers to teach appropriate mathematics content topics in the early and middle grades.
C. Identify and use various instructional strategies and techniques (cooperative and peer group learning, activity centers, laboratories and workshops, teacher-directed presentations, etc.) to

teach mathematical content topics appropriate for the early and intermediate grades to all children, including those from non-mainstreamed populations.

D. Identify and use alternative methods for assessing students' work in mathematics in the early and intermediate grades.
E. Solve problems in the mathematical content areas of logic, number theory, geometry, algebra, probability, and statistics appropriate for adaptation to the early and intermediate grades.
F. Know and explain the learning progression in relation to the standards-based mathematics curriculum, the key elements of the National Council of Teachers of Mathematics Principles and Standards for School Mathematics, and the key elements of the Virginia Standards of Learning for Mathematics.
G. Understand the multiple representations of mathematical concepts and procedures.
H. Understand and use the five processes—reasoning mathematically, solving problems, communicating mathematics effectively, making mathematical connections, and using mathematical representations—at different levels of complexity.
I. Explore the contributions of different cultures toward the development of mathematics, and the role of mathematics in culture and society.
J. Understand the relationship of math to science, the design process, and technology.
K. Understand, possess, and integrate the knowledge, skills, dispositions, and processes needed to support learners' achievement in an interdisciplinary manner in Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds and the Virginia Standards of Learning in English, mathematics, history and social science, science, and computer technology.

Additionally, this course supports the CEHD Core Values of collaboration, ethical leadership, research-based practice, social justice, and innovation. Statements of these goals are at http://cehd.gmu.edu/values/.

**Professional Standards**

**(**Interstate Teacher Assessment and Support Consortium (InTASC)

Upon completion of this course, students will have met the following professional standards:

| **Course Student Outcomes (above)** | **INTASC Standard (2013)** |
|---|---|
| A. Essential math | #4 Content Knowledge |
| B. Planning and Teaching using manipulatives | #7 Planning for Instruction |
| C. Instructional Strategies | #8 Instructional Strategies |

| | |
|---|---|
| D. Assessing | #6 Assessment |
| E. Problem Solving | #5 Application of Content |
| F. Learner Development and Understanding of Learning Progression | #1 Learner Development,<br>#2 Learner Differences |
| G. Multiple Representations | #4 Content Knowledge,<br>#5 Application of Content |
| H. Five Processes | #4 Content Knowledge,<br>#5 Application of Content |

**Required Text**

Van De Walle, J., Karp, K. S., & Bay-Williams, J. M. (2023). *Elementary and Middle School Mathematics: Teaching Developmentally.* (11th edition) New York: Pearson (2023:978013681803)

**Course Performance Evaluation**

All assignment details, templates, and rubrics will be available on Blackboard. Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard).

**Assignment Details**

- **Daily Participation, digital Interactive Notebook (dINB), and Professional Dispositions (30points)**
  *Addresses Learner Outcomes: A, B, C, D, E, F, G*
  Reading and activity reflections will be done via daily Interactive Notebook entries. During class meetings, students are expected to analyze and reflect on solution strategies, provide differentiated approaches to center activities, and actively participate in class discussions by applying class readings. This work will be collected and kept in a digital interactive notebook shared with the instructor in Google Slides. Professional dispositions are to be displayed at all times while interacting with the instructor and other students.

  Students are expected to contribute to both group and class discussions and activities online as well as genuinely listen to peers as they do the same. The instructor may also call on students to maximize classroom opportunities to hear from ALL of the students enrolled in the course. Remember, participation is more than just talking. Participation should raise the level of academic discourse, which may include asking questions and encouraging exploration,

consideration, and learning. To be active participants in class, you must complete all pre-assigned readings and tasks before the class session for which they are assigned.

It is expected that you will attend all scheduled classes outlined within the syllabus. Absence from class to observe a religious holiday, to serve jury duty, or to participate in required military service, and medical emergencies are exceptions to the above policy. If you need to be absent for any planned reason, please make arrangements at least 48 hours in advance. In addition, you are expected to be on time to class each session unless 48 hours advance notice has been provided to the instructor.

This course operates with the assumption that knowledge is socially constructed, and the most meaningful learning opportunities are those where you have the opportunity to offer and explore diverse perspectives with peers; therefore, you are expected to contribute to all class and online discussions and activities as well as genuinely listen to peers as they do the same. You are expected to be prepared for each class, which means having completed all assigned readings and tasks for that class prior to the start of class. Your participation includes the completion of all synchronous and asynchronous application activities. This includes but is not limited to

- Contributions to whole group and small group discussions
- All digital Interactive NoteBook (dINB) work

Cell phones are for emergency use only and it is expected that you will not use cell phones or computers in class for purposes beyond enhancing your learning of course content.

**Evaluation** for dINB - You will complete in-class and between-class activities in your online class notebook. Your notebook is located at the dINB tab on Blackboard. **PLEASE NOTE: If you are absent from class, you can earn half the daily points by completing all the between-session classwork.

**Daily Participation and Interactive Math Memo RUBRIC**

| | Unsatisfactory (0 pts per day) | Proficient (2 pts per day) |
|---|---|---|
| **Reading Preparation** - includes work due prior to class session in order to participate fully.<br>**Classwork (both individual and group)** - participation and collaboration during the session and group presentations.<br>**Post-Class Reflection** - reflective and interactive work done after the class session. - Dialogue with the instructor. | The student is absent from class and/or is not prepared for class (between class work is incomplete). Some or all work is missing. | The student is punctual and prepared for class (between class work is complete). The student actively participates and supports the members of the learning group and the members of the class. Work is completed professionally. |

- **Math Autobiography and Vision Statement (10 points)**

  Write a 1–2-page math autobiography and vision statement addressing the following questions:
  - What was learning math like for you in your early grades? Middle and onwards?
  - What worked and didn't work for you as a math learner?
  - How does your experience shape you as a teacher?
  - What visions of math teaching and learning do you have for your own classroom?
- **Reasoning Routine (15 points)**

  *Addresses Learner Outcomes: A, B, C, D, E, F, G*

  With a small group, you will plan, teach, and complete a reflection for a Reasoning Routine taught to your classmates during the summer course. Each Reasoning Routine will include the essential elements of and address a mathematical concept. A planning template will be provided for this, to which you will add your anticipated student responses and your expected series of questions.

  Each group is expected to: 1) prepare any materials needed for the Reasoning Routine; 2) anticipate possible student responses to the problems presented; 3) plan an expected sequence of follow-up questions and 4) reflect individually. See the rubric on Blackboard for more detail.
- **Problem-Based Lesson with Student Work Analysis (15 points)**

  *Addresses Learner Outcomes: A, C, D, E, F, G, H, I*

  This lesson will be taught by a small group and presented to your classmates as a simulated lesson. You are expected to: 1) select a VDOE rich task that includes student anchor papers and; 2) solve the problem yourself using all three representations (concrete, pictorial, abstract); 3) prepare and use a *Planning for Mathematical Discourse Chart* that includes anticipated student responses/strategies and questions to assess and advance student work; 4) Implement the rich task with your peers in our classroom; 5) Select and sequence student responses for sharing out and make connections between student solutions (include analysis of student anchor papers); 6) complete a Google Slide Deck to summarize and reflect on your lesson. See the rubric on Blackboard for more detail.
- **Learning Trajectory Assessment Project: (30 points)**

  *Addresses Learner Outcomes: A, B, C, D, F*

  To plan effective instruction, you will need to know how to assess children's knowledge of mathematical concepts. One way to assess children's thinking is a diagnostic assessment. This assignment has four parts:

  Part 1. Description of the Learning Trajectory/Progression with visual of LT concept map

  Part 2. Conducting a formative assessment with an individual or a small group with screenshots of student work; reporting on student strengths and edges of their understanding

Part 3. Description of the data from part 2, setting learning goals and proposing a set of activities that will advance the learner along the developmental learning trajectory.

Part 4. Personal reflection and presentation in class of research-based instructional plan in class

More details can be found in the assignment rubric found on the syllabus and on Blackboard.

*Note: Faculty reserve the right to add, alter, or omit any assignment as necessary during the course of the semester. You will always receive advance notice of any modifications. Bookmark this link to access the most current schedule of readings and due dates.*

**Attendance and Participation**

In accordance with the GMU Attendance Policies (University Catalog, 2023-2024), "Students are expected to attend the class periods of the courses for which they are registered. In-class participation is important not only to the individual student, but also to the class as a whole. Because class participation may be a factor in grading, instructors may use absence, tardiness, early departure, or failure to engage in online classes as de facto evidence of nonparticipation."

If you must be absent from class, inform the instructor prior to the beginning of the class session. Missed classes (or portions of classes) will result in loss of participation points. Unless there are extenuating circumstances that have been shared with the instructor, more than two missed classes will result in a failing grade and you must retake the course.

Absence from class to observe a religious holiday, to serve jury duty, or to participate in required military service are exemptions to the above policy. If you anticipate being absent for any of these reasons, please make arrangements at least 48 hours in advance.

In addition, you are expected to be on time to class each week unless 48 hours advance notice has been provided to the instructor. Your instructor will define their policy for tardiness as it relates to class participation points and absences.
Attendance in the course is mandatory. You are held accountable for all information from each class session whether you are present or not. Reasons for any absence must be reported to the instructor in writing. Attendance is tied to your participation grade. If you are not in class, you are not participating.

**Tardiness**

It is your responsibility to be on time for each class session. Reasons for any tardiness must be reported to the instructor in writing.

**Late Work**

Work is due on the announced due date. All late work will incur a penalty of 10 percent for each day late. The only exception to this is for those students with excused absences (see Attendance Policy above). Given these policies, I also acknowledge this is a fast-paced and condensed course. I care that you have opportunities to succeed. If something arises that threatens your ability to succeed in this course, communicate with me as soon as is reasonably possible.

**AI Policy: https://stearnscenter.gmu.edu/knowledge-center/ai-text-generators/**

Mason is an Honor Code university; please see the Office for Academic Integrity for a full description of the code and the honor committee process. Three fundamental principles to follow at all times are that: (1) all work submitted be your own, as defined by the assignment; (2) when you use the work, the words, or the ideas of others, including fellow students or online sites, you give full credit through accurate citations; and (3) if you are uncertain about the ground rules on a particular assignment or exam, ask for clarification. No grade is important enough to justify academic misconduct.

Use of Generative-AI tools should be used following the fundamental principles of the Honor Code. This includes being honest about the use of these tools for submitted work and including citations when using the work of others, whether individual people or Generative-AI tools.

When explicitly stated by the instructor, Generative-AI tools are allowed on the named assignment. Students will be directed if and when a citation or statement-of-usage direction is required. Use of these tools on any assignment not specified will be considered a violation of the academic integrity policy. All academic integrity violations will be reported to the Office of Academic Integrity. Some student work may be analyzed using an originality detection tool focused on AI tools. Generative-AI detection tool use will be revealed when the assignment directions are provided to students.

There will be times in the education field that use of AI tools will be needed for you to do well at the job and there will be times where you will need to be able to do the work without support from these tools. This course aims to provide you with experience in the real-world scenarios that you may encounter once you leave the university.

**Policies for Grading**

The mathematics education courses in GMU's Elementary Education Program integrate pedagogy and mathematics content appropriate for the elementary school grades. For students to earn a grade of A in the course, they must demonstrate excellence in *both* the pedagogical knowledge and the content knowledge of the mathematics appropriate at their level of teaching. Thus, the grading in the course is structured to help evaluate student excellence in both areas. Problem sets and assessment work focuses primarily on ascertaining student excellence in handling mathematics content appropriate for the elementary grades and represents 50% of students' grades. Pedagogical knowledge is ascertained

primarily from readings, assignments, and participation in the course, and represents 50% of students' grades. Therefore, students who demonstrate excellence in both pedagogical knowledge and content knowledge receive grades of A.

At George Mason University coursework is measured in terms of quantity and quality. A credit normally represents one hour per week of lecture or recitation or not fewer than two hours per week of laboratory work throughout a semester. The number of credits is a measure of quantity. The grade is a measure of quality. The university-wide system for grading graduate courses is as follows:

| Grade | GRADING | Grade Points | Interpretation |
|---|---|---|---|
| **A** | **94-100** | **4.00** | **Represents mastery of the subject through effort beyond basic requirements** |
| **A-** | **90-93** | **3.67** | |
| **B+** | **85-89** | **3.33** | **Reflects an understanding of and the ability to apply theories and principles at a basic level** |
| **B** | **80-84** | **3.00** | |
| **C*** | **70-79** | **2.00** | **Denotes an unacceptable level of understanding and application of the basic elements of the course** |
| **F*** | **<69** | **0.00** | |

* Note: "C" is not satisfactory for a licensure course

*"F" does not meet the requirements of the School of Education.*

**Grading**

Course Assignment Weighting

| **Assignment** | **Points** |
|---|---|
| Daily participation and digital Interactive NoteBook (dINB) | 30 |
| Math Autobiography and Vision Statement | 10 |
| Reasoning Routine | 15 |
| Problem-Based Lesson with Student Work Analysis | 15 |
| Learning Trajectory Assessment Project | 30 |
| **Total** | **100** |

**Professional Dispositions**

Students are expected to exhibit professional behaviors and dispositions at all times. (See https://cehd.gmu.edu/students/polices-procedures/).

**Class Schedule**

These topics and activities are subject to change to be responsive to the pace of the course. This is a projected sequence of due dates and planned readings. **An "Always Current" schedule will be maintained on Google Drive and can be accessed through the Blackboard course site.**

| **Session # Time** | **Active Learning and Discussion Emphasis** | **Readings Due** (read in advance of class) | **Assignments Due** |
|---|---|---|---|
| Session 1<br>August 29 | • Welcome! Intro to Math Methods<br>• Knowing and Doing Mathematics<br>• How Do Children Learn Mathematics? | Chapter 2<br><br>Watch Video: Surprising Facts About Learning | Review the Blackboard site and syllabus.<br><br>Come prepared to introduce yourself to the class. |
| Session 2<br>September 5<br><br>**Asynchronous Class** | • Teaching Through Problem Solving<br>• NCTM Mathematical Teaching Practices<br>• Tasks That Promote Problem Solving<br>• Introduction to the Standards | Chapter 1<br><br>Chapter 3<br><br>Read: Transforming Math Learning | *Math Autobiography and Vision Statement due*<br><br>Daily Interactive Notebook (DiNB) |
| Session 3<br>September 12 | • Developing Early Number Concepts and Number Sense<br>• Learning Trajectories | Chapter 7<br><br>Read: Never Say Anything a Kid Can Say | Daily Interactive Notebook (DiNB) |
| Session 4<br>September 19 | • Assessments for Learning<br>• Developing Whole-Number Place-Value Concepts<br>• Sign up for Reasoning Routine | Chapter 5<br><br>Chapter 10 | Daily Interactive Notebook (DiNB) |
| Session 5<br>September 26<br><br>**Asynchronous Class** | • Developing Meanings for the Operations<br>• Developing Basic Fact Fluency/ Student Strategies | Chapter 8<br><br>Chapter 9<br><br>Kling and Bay-Williams (2014) Assessing Basic Fact Fluency | Math Reasoning Routine Activity work time<br><br>Daily Interactive Notebook (DiNB) |

| | | | |
|---|---|---|---|
| Session 6<br>October 3<br><br>**Asynchronous Class** | • Mathematical Discourse - 5 Practices<br>• Planning in the Problem-Based Classroom | Read Orchestrating Discussions (2009)<br><br>Chapter 4 | Daily Interactive Notebook (DiNB)<br><br>Math Reasoning Routine Activity work time |
| Session 7<br>October 10 | • 5 Practices: Problem-Based Lesson<br>• Teaching Math Equitably | Chapter 6 | *Math Reasoning Routine due*<br><br>Daily Interactive Notebook (DiNB) |
| Session 8<br>October 17 | • Developing Strategies for Addition and Subtraction Computation<br>• PBL: Task selection | Chapter 11<br><br>Karp, Bush, Dougherty. (2019). Avoiding the Ineffective Keyword | Daily Interactive Notebook (DiNB) |
| Session 9<br>October 24 | • Developing Strategies for Multiplication and Division Computation<br>• PBL: Partner work | Chapter 12 | Daily Interactive Notebook (DiNB) |
| Session 10<br>October 31 | • Problem-Based lessons | | Daily Interactive Notebook (DiNB)<br><br>*Problem-Based Lessons Due* |
| Session 11<br>November 7<br><br>**Asynchronous Class** | • Algebraic Thinking and Mathematical Modeling | Chapter 13 | Daily Interactive Notebook (DiNB)<br><br>LT Assessment Project work time<br><br>*LT Assessment Project Part 1* |
| Session 12<br>November 14 | • Developing Fraction Concepts and Operations | Chapter 14<br><br>Chapter 15 | Daily Interactive Notebook (DiNB) |

| | | | |
|---|---|---|---|
| | | | |
| Session 13<br>November 21 | • Developing Fraction Concepts and Operations<br>• Developing Decimal and Percent Concepts and Decimal Operations | Chapter 16 | Daily Interactive Notebook (DiNB)<br>*LT Assessment Project Part 2* |
| THANKSGIVING BREAK | | | |
| Session 14<br>December 5 | • Ratios, Proportions, and Proportional Reasoning<br>• Developing Measurement Concepts and Geometric Thinking<br>• Developing Concepts of Data and Statistics | Chapter 17: select pages<br>Chapter 18: select pages<br>Chapter 19: select pages<br>Chapter 20: select pages | Daily Interactive Notebook (DiNB)<br>Problem-Based Lesson Rehearsal<br>*LT Assessment Project Part 3* |
| Session 15<br>December 12 | Course Reflection<br>Summing It Up | | Daily Interactive Notebook (DiNB)<br>LT Project due<br>Share Symposium |

**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: http://cehd.gmu.edu/values/.

## GMU Policies And Resources For Students

### Policies

- Students must adhere to the guidelines of the Mason Honor Code (see https://catalog.gmu.edu/policies/honor-code-system/).

- Students must follow the university policy for Responsible Use of Computing (see https://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 https://ds.gmu.edu).
- Students must silence all sound-emitting devices during class unless otherwise authorized by the instructor.

**Field Accommodations**

- If you believe you need ADA accommodations during your field placement and/or internship experience, please contact Mason's Disability Services office (DS). Specific accommodations for fieldwork and internships may be different than academic accommodations; however, like academic accommodations, they are not retroactive. Connecting with DS is a student-initiated interactive process. DS will collaborate with the department and possibly the placement site to provide reasonable accommodations that are individualized and based on documentation, functional limitations, and a collaborative assessment of needs. For more information, please refer to the Disability Services website: https://ds.gmu.edu/field-placement/.

**Campus Resources**

University Libraries https://library.gmu.edu

Questions or concerns regarding use of Blackboard should be directed to 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 "Responsible 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 information on student support resources on campus, see https://ctfe.gmu.edu/teaching/student-support-resources-on-campus

For additional information on the College of Education and Human Development, please visit our website http://cehd.gmu.edu/.

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 https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students

**Emergency Procedures**

You are encouraged to sign up for emergency alerts by visiting the website https://alert.gmu.edu. There are emergency posters in each classroom explaining what to do in the event of crises. Crisis in Education App at: https://itunes.apple.com/us/app/in-case-of-crisis-education/id476578079?mt=8

**Course Materials and Student Privacy**

- All course materials posted to Blackboard or other course sites are private; by federal law, any materials that identify specific students (via their name, voice, or image) must not be shared with anyone not enrolled in this class.
- Video recordings of class meetings that include audio or visual information from other students are private and must not be shared.
- Live video conference meetings (e.g. Collaborate or Zoom) that include audio or visual information from other students must be viewed privately and not shared with others in your household.
- Some/all of your CEHD synchronous class meetings may be recorded by your instructor to provide necessary information for students in this class. Recordings will be stored on Blackboard (or another secure site) and will only be accessible to students taking this course during this semester.

**Assessment Rubrics**

**Mathematics Autobiography (10 points)**

| | |
|---|---|
| Addresses the following questions with clarity: What was learning math like for you in your early grades? Middle and onwards? | 3 points |
| Addresses the following questions with clarity: What worked and didn't work for you as a math learner? How does your experience shape you as a teacher? | 3 points |
| Addresses the following question with clarity: What visions of math teaching and learning do you have for your own classroom? | 4 points |
| Total Points | 10 |

**Reasoning Routine (15 points)**

| | |
|---|---|
| Part A Plan: Design a slide of the Reasoning Routine with brief launch and summary of the routine; identify the goal of the routine and the Virginia SOL addressed in the routine; pinpoint anticipated student responses along the learning progression; include questions for making math visible, encouraging justification and reflection, and orienting students to other ideas or extending on other's ideas. | 5 points |
| Part B Teach: Implement the routine, facilitate discourse, make connections between students' contributions | 5 points |
| Part C Reflect: After enacting the routine, reflect on how the lesson supports math learning and equitable teaching practices for student learning. | 5 points |
| Total Points | 15 |

**Problem-Based Lesson with Student Work Analysis (15 points)**
VDOE task site and Google Slide template

| | |
|---|---|
| Part A: Plan: Unpack the VDOE rich task by completing the Google Slide template. Anticipate student responses to the rich task with consideration for those that may solve this problem concretely, using representations, or abstractly. | 5 points |
| Part B: Teach: Create and use a *Planning for Mathematical Discourse Chart* for your task**.** Determine how you will select, sequence, and connect student work. | 5 points |
| Part C: After facilitating the task, reflect on how the lesson supports equitable teaching practices for student learning. | 5 points |
| Total Points | 15 |

**Learning Trajectory Assessment Project (30 points)**

**SCORING GUIDELINES**

- **3 (Exemplary Standard):** Candidates receive a score of 3 if they perform at an exemplary level. There is evidence that candidates have done additional research, identified additional resources, and/or demonstrated exceptional understanding and application of the standard.
- **2 (Meets Standard):** This score reflects that candidates have met the standard at the level expected at this point in their program. Candidates who receive a 2 have successfully met the standard.
- **1 (Approaches Standard):** Candidates receive this score when their understanding and effort does not meet the target but shows basic understanding of the content being assessed.

- **0 (Does Not Meet Standard):** Candidates who do not submit work, and/or who submit work that is clearly below the expectations for a candidate at this point in their program.

| **Learning Trajectory Assessment Project** | | | | |
|---|---|---|---|---|
| **Performance** | **Does Not Meet Standard (0)** | **Approaches Standard (1)** | **Meets Standard (2)** | **Exemplary Standard (3)** |
| **Part 1. Description of the Learning Progression** | | | | |
| **1a. Research on Description of the learning progression. Summarize the research around the learning progression around the topic chosen.**<br><br>**InTASC 1 &2; VDOE 1;** | The candidate does not describe the learning progression using multiple resources (text, Learning progression documents and other research). | The candidate describes briefly the learning progression without any references. | The candidate describes the learning progression only using one resource (text, Learning progression documents and other research). | The candidate describes in depth the learning progression using multiple resources (text, Learning progression documents and other research). |
| **1b. Research on Description of common teaching and learning strategies. What are some of the common teaching strategies and the ways in which students develop the skills and understandings?**<br><br>**InTASC 2; VDOE 4** | The candidate does not describe the common teaching and learning strategies for the specific concept varying the strategies based on learning trajectory. | The candidate describes briefly the common teaching and learning strategies for the specific concept varying the strategies based on learning trajectory. | The candidate describes the common teaching and learning strategies for the specific concept varying the strategies based on learning trajectory but only uses one resource. | The candidate describes in depth common teaching and learning strategies for the specific concept varying the strategies based on learning trajectory using multiple resources (text, Learning progression documents and other research).<br><br>Provides specific examples. |
| **1c. Research on Description of Student conceptions and misconceptions. Specific references are made common conceptions and misconceptions one might attend to based on the research on the learner development using the text and progression document**<br><br>**InTASC Standard #6 Assessment.** | The candidate does not describe the common student conceptions and misconceptions for the specific concept based on the learning trajectory. | The candidate briefly describes the common student conceptions and misconceptions for the specific concept. | The candidate describes the common student conceptions and misconceptions for the specific concept based on learning trajectory using only one resource. | The candidate describes in depth common student conceptions and misconceptions for the specific concept based on learning trajectory using multiple resources (text, Learning progression documents and other research).<br><br>Provides specific examples. |
| **Part 2. Assessment Data from Tasks and Questions with Learning Progression Considered** | | | | |
| **2a. Assessment tasks with multiple representations. Uses multiple and appropriate types of <u>assessment tasks that uses multiple representations</u> including pictorial, numeric, verbal , and hands-on manipulatives to assess student thinking and identify each learner's needs** | The candidate does not address learner educational needs or inappropriately uses assessment data to create a statement of educational need. | The candidate locates assessments that are not well aligned to the math concept. | The candidate reports on assessment data through designed tasks aligned to the math concept but does not consider multiple representations. | The candidate effectively integrates results from the assessment tasks from multiple sources to create a thorough and appropriate report aligned to the learning progression. The assessment tasks uses multiple representations including pictorial, numeric, |

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| **(InTASC Standard #6 Assessment)** | | | | verbal, and hands-on manipulatives to assess student thinking and identify the learner's needs |
| **2b. Purposeful questions. Designs assessment with tasks aligned with <u>prepared questions</u> that gathers information about student's interest, background and cultural information as well as specific questions linked to the tasks that probes thinking, and makes math visible.** | The candidate does not describe an assessment plan that evaluates all learning objectives or describes a plan with any questions. | The candidate describes an assessment plan that evaluates all learning objectives but does not include questions that delve into the child or concept. | The candidate describes an assessment plan that evaluates all learning objectives and includes questions linked to the tasks that probes thinking and makes math visible but does not gather info about the whole child. | The candidate describes an assessment plan that evaluates all learning objectives and prepares a variety of questions to gather information about student's interests, background and cultural information as well as specific questions linked to the tasks that probes thinking and makes math visible. |
| **2c. Geared up and geared down with rationale on conceptual development. Considers learner differences and has <u>at least three (3) differentiated tasks geared up and down with one technology</u> app-and to develop differentiated learning experiences.**<br><br>**(INTASC Standard #2: Learning Differences)** | The candidate does not identify either adaptations or accommodations to support learner achievement of learning objectives. | The candidate identifies either adaptations or accommodations that do not fully align with identified needs. | The candidate identifies and describes appropriate adaptations or accommodations that support learner achievement of learning objectives/goals, including technology. | The candidate thoroughly describes multiple, appropriate adaptations or accommodations that clearly support learner achievement of learning objectives/goals, including technology. |
| **Part 3 Learning goals and Instructional Activities** | | | | |
| **3a. Set Learning Goal (aka: target, benchmark, expectation) based on Developmental path along which children develop to reach that goal**<br><br>**The candidate individually and collaboratively selects and creates learning objectives that are appropriate for curriculum goals and content standards, and are relevant to learners. The candidate identifies objectives for instruction based on formative and summative assessment data, prior learner knowledge, and learner interest.**<br><br>**InTASC 7; VDOE 2** | The candidate identifies learning objectives that are either incomplete because related outcomes are not identified or the objectives are not directly related to learner educational needs. | The candidate identifies learning objectives without relevance to the learner educational needs. | The candidate identifies learning objectives with related outcomes relevant to individual learner needs. | The candidate identifies distinct learning objectives with related outcomes relevant to individual learner needs. These learning outcomes allow for different and individualized learning pathways that can be accessed fluidly during instruction.<br><br>Includes rationales for the selection of those objectives and how they support the achievement in advancing student along the learning progression |

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| **3b. INSTRUCTIONAL STRATEGIES AND ADAPTATIONS-Set of activities matched to each of the levels of thinking in that path that help children develop the next higher level of thinking. The candidate plans how to achieve each learner's learning goals, choosing appropriate strategies and accommodations, resources, and materials to differentiate instruction for individuals and groups of learners.**<br><br>**InTASC 4**<br><br>**Standard #4: Content Knowledge.** | The candidate does not identify instructional strategies or identifies instructional strategies that are not related to the learning objectives or learning needs. | The candidate identifies instructional strategies that are inappropriate for meeting the learning objectives or learning needs. | The candidate identifies evidence-based instructional strategies that are aligned to the learning objectives and learning needs. | The candidate identifies evidence-based instructional strategies that are aligned to specific learning objectives and learning needs.<br><br>The candidate provides evidence of the effectiveness of these selected learning strategies through data analysis of the assessment. |
| **3c. Developmental path along which children develop to reach that goal The candidate connects concepts and uses different perspectives and digital resources to engage learners in critical thinking, creativity, and collaborative problem solving.**<br><br>**InTASC 5; VDOE 2;** | Candidate does not connect concepts, address different perspectives or use digital resources to engage learners in higher-level learning. | Candidate connect concepts, addresses different perspectives or uses digital resources to engage learners but at a basic level of learning and recall. | Candidate connects concepts, addresses different perspectives and uses digital resources to engage learners in higher-level learning in using at least one of these higher–order skills: critical thinking, creativity, and collaborative problem-solving. | Candidate creates multi-disciplinary opportunities and a range of multiple perspectives to engage learners in critical thinking, creativity, and collaborative problem-solving. |
| **Part 4. REFLECTION and Presentation** | | | | |
| **The candidate uses ongoing analysis and reflection to improve planning and practice** | There was no evidence that the candidate used ongoing analysis and/or reflection to improve planning and practice. | The candidate uses marginal analysis and reflection strategies to improve planning and practice. | The candidate uses ongoing analysis and reflection to improve planning and practice | The candidate effectively uses ongoing analysis and deep reflection to improve planning and practice. Candidates reflect and share on learning about the student's learning trajectory. |

## Great Resources At Your Fingertips:

As you work on your assignments, the intent is that you also deepen your math knowledge for teaching and learn about important resources for teaching and learning such as:

- Van de Walle et al. text as a resource
- VDOE Curriculum Framework document (standards unpacked with essential knowledge and skills)
- VDOE Math Instructional Plans (suggested instructional plans for each standard)
- VDOE Bridging Standards Site https://www.mathstrength.org/
- VDOE Vertical Articulation Tool
- Clements and Sarama Learning Trajectories website: https://www.learningtrajectories.org/

## Helpful Websites:

- University of Washington Number Talks and other Instructional Activities with videos and lesson plans: tedd.org
- National Council of Teachers of Mathematics – Illuminations: illuminations.nctm.org
- Jo Boaler's blog and resources: joboaler.com
- Another Jo Boaler/Stanford University website w/K-12 math resources: https://www.youcubed.org/
- Estimation 180 (Andrew Stadel's site – elementary and MS focused): estimation180.com
- Fawn Nguyen's website (MS Math focused): https://www.fawnnguyen.com/
- Dan Meyer's website (more HS focused): blog.mrmeyer.com and his "3-Act" math lessons (MS and HS focused, linked to CCSS): www.livebinders.com/play/play_or_edit?id=330579
- Math Tasks/Resources/Manipulatives
- University of Washington Number Talks website: https://tedd.org/
- National Council of Teachers of Mathematics – Illuminations: https://illuminations.nctm.org/
- Estimation 180 (Andrew Stadel's site – elementary and MS focused): https://estimation180.com/
- Graham Fletcher "3-Act" math lessons (ES focused): https://gfletchy.com/
- Michael Pershan's blog, elementary school teacher: Math Mistakes blog

**CCSS Helpful Websites:**

- CCSS Progressions Documents: http://ime.math.arizona.edu/progressions/
- Lots of lesson plans and videos organized by Standard: insidemathematics.org
- CCSS aligned tasks: illustrativemathematics.org
- CCSS aligned tasks and assessments: map.mathshell.org/
- Learning and Teaching with Learning Trajectories https://learningtrajectories.org/
- Progressions Videos https://gfletchy.com/progression-videos/

# NCTM Process Standards Virginia Standards for Learning (for students)

### Mathematical Process Goals for Students

The content of the mathematics standards is intended to support the following five process goals for students: becoming mathematical problem solvers, communicating mathematically, reasoning mathematically, making mathematical connections, and using mathematical representations to model and interpret practical situations. Practical situations include real-world problems and problems that model real-world situations.

## Mathematical Problem Solving

Students will apply mathematical concepts and skills and the relationships among them to solve problem situations of varying complexities. Students also will recognize and create problems from real-world data and situations within and outside mathematics and then apply appropriate strategies to determine acceptable solutions. To accomplish this goal, students will need to develop a repertoire of skills and strategies for solving a variety of problem types. A major goal of the mathematics program is to help students apply mathematics concepts and skills to become mathematical problem solvers.

## Mathematical Communication

Students will communicate thinking and reasoning using the language of mathematics, including specialized vocabulary and symbolic notation, to express mathematical ideas with precision. Representing, discussing, justifying, conjecturing, reading, writing, presenting, and listening to mathematics will help students to clarify their thinking and deepen their understanding of the mathematics being studied. Mathematical communication becomes visible where learning involves participation in mathematical discussions.

## Mathematical Reasoning

Students will recognize reasoning and proof as fundamental aspects of mathematics. Students will learn and apply inductive and deductive reasoning skills to make, test, and evaluate mathematical statements and to justify steps in mathematical procedures. Students will use logical reasoning to analyze an argument and to determine whether conclusions are valid. In addition, students will use number sense to apply proportional and spatial reasoning and to reason from a variety of representations.

## Mathematical Connections

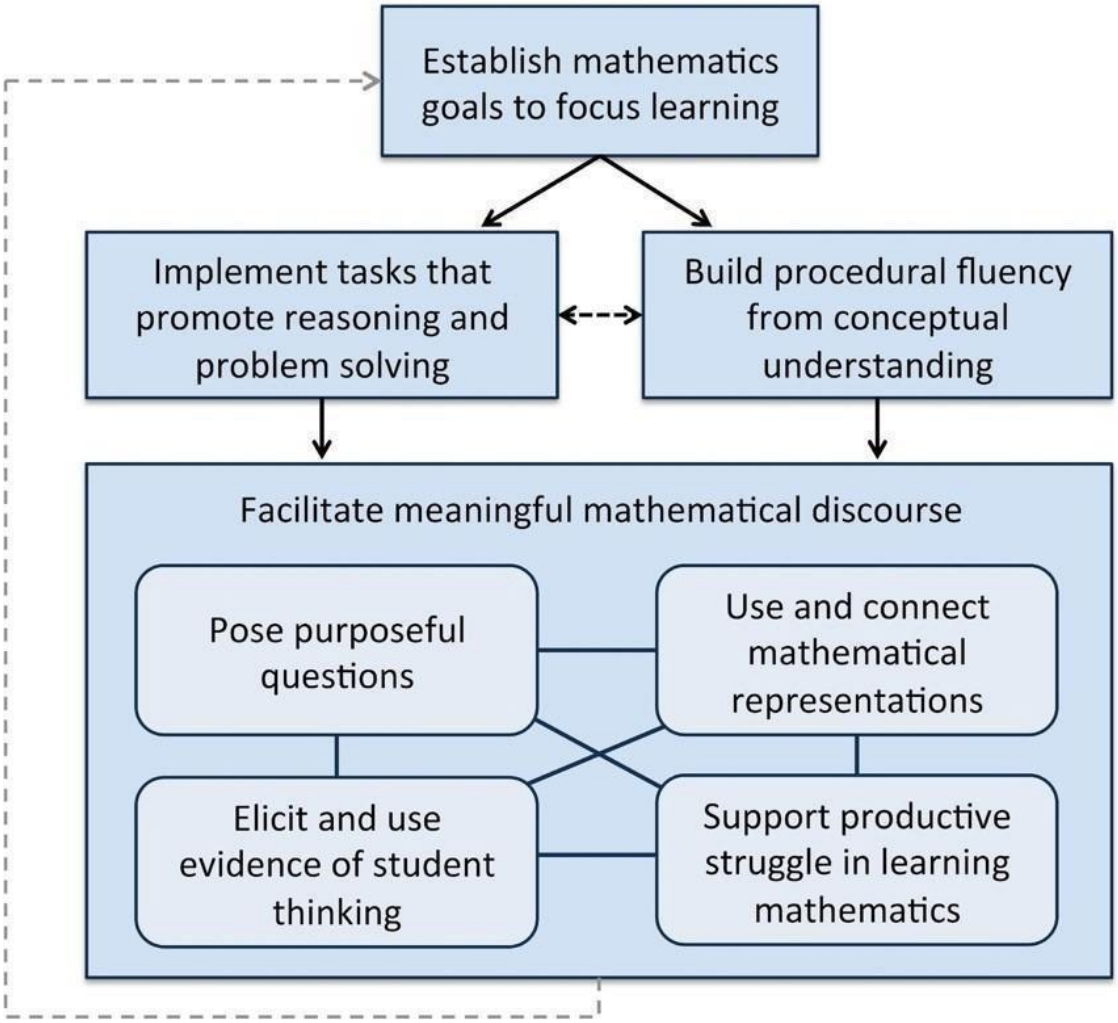
Students will build upon prior knowledge to relate concepts and procedures from different topics within mathematics and see mathematics as an integrated field of study. Through the practical application of content and process skills, students will make connections among different areas of mathematics and between mathematics and other disciplines, and to real-world contexts. Science and mathematics teachers and curriculum writers are encouraged to develop mathematics and science curricula that support, apply, and reinforce each other.

## Mathematical Representations

Students will represent and describe mathematical ideas, generalizations, and relationships using a variety of methods. Students will understand that representations of mathematical ideas are an essential part of learning, doing, and communicating mathematics. Students should make connections among different representations – physical, visual, symbolic, verbal, and contextual – and recognize that representation is both a process and a product.

**National Council of Teachers of Mathematics - 8 Teaching Practices (for teachers)**

*See Appendix B, page 635 of textbook*



## Mathematics Teaching Practices: Supporting Equitable Mathematics Teaching

| **EQUITABLE TEACHING PRACTICES**<br>VDOE SOL Institutes, 2018 | |
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| Mathematics Teaching Practices (NCTM) | Equitable Teaching |
| 1. **Establish mathematics goals to focus learning.** Effective teaching of mathematics establishes clear goals for the mathematics that students are learning, situates goals within learning progressions, and uses the goals to guide instructional decisions. | ● Establish learning progressions that build students' mathematical understanding, increase their confidence, and support their mathematical identities as doers of mathematics.<br>● Establish high expectations to ensure that each and every student has the opportunity to meet the mathematical goals.<br>● Establish classroom norms for participation that position each and every student as a competent mathematics thinker.<br>● Establish classroom environments that promote learning mathematics as just, equitable, and inclusive. |
| 2. **Implement tasks that promote reasoning and problem solving.** Effective teaching of mathematics engages students in solving and discussing tasks that promote mathematical reasoning and problem solving and allow multiple entry points and varied solution strategies. | ● Engage students in tasks that provide multiple pathways for success and that require reasoning, problem solving, and modeling, thus enhancing each student's mathematical identity and sense of agency.<br>● Engage students in tasks that are culturally relevant.<br>● Engage students in tasks that allow them to draw on their funds of knowledge (i.e., the resources that students bring to the classroom, including their home, cultural, and language experiences). |
| 3. **Build procedural fluency from conceptual understanding.** Effective teaching of mathematics builds fluency with procedures on a foundation of conceptual understanding so that students, over time, become skillful in using procedures flexibly as they solve contextual and mathematical problems. | ● Connect conceptual understanding with procedural fluency to help students make sense of mathematics and develop a positive disposition toward mathematics.<br>● Connect conceptual understanding with procedural fluency to reduce mathematical anxiety and position students as mathematical knowers and doers.<br>● Connect conceptual understanding with procedural fluency to provide students with a wider range of options for entering a task and building mathematical meaning. |
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## EQUITABLE TEACHING PRACTICES

VDOE SOL Institutes, 2018

| Mathematics Teaching Practices (NCTM) | Equitable Teaching |
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| 4. **Facilitate meaningful mathematical discourse.** Effective teaching of mathematics facilitates discourse among students to build shared understanding of mathematical ideas by analyzing and comparing student approaches and arguments. | ● Use discourse to elicit students' ideas and strategies and create space for students to interact with peers to value multiple contributions and diminish hierarchical status among students (i.e., perceptions of differences in smartness and ability to participate).<br>● Use discourse to attend to ways in which students position one another as capable or not capable of doing mathematics.<br>● Make discourse an expected and natural part of mathematical thinking and reasoning, providing students with the space and confidence to ask questions that enhance their own mathematical learning.<br>● Use discourse as a means to disrupt structures and language that marginalize students. |
| 5. **Pose purposeful questions.** Effective teaching of mathematics uses purposeful questions to assess and advance students' reasoning and sense making about important mathematical ideas and relationships. | ● Pose purposeful questions, then listen to, and understand students' thinking to signal to students that their thinking is valued and makes sense.<br>● Pose purposeful questions to assign competence to students. Verbally mark students' ideas as interesting or identify an important aspect of students' strategies to position them as competent.<br>● Be mindful of the fact that the questions that a teacher asks a student and how the teacher follows up on the student's response can support the student's development of a positive mathematical identity and sense of agency as a thinker and doer of mathematics. |
| 6. **Use and connect mathematical representations.** Effective teaching of mathematics engages students in making connections among mathematical representations to deepen understanding of mathematical concepts and procedures and to use as tools for problem solving. | ● Use multiple representations so that students draw on multiple resources of knowledge to position them as competent.<br>● Use multiple representations to draw on knowledge and experiences related to the resources that students bring to mathematics (culture, contexts, and experiences).<br>● Use multiple representations to promote the creation and discussion of unique mathematical representations to position students as mathematically competent. |
| | |

## EQUITABLE TEACHING PRACTICES

VDOE SOL Institutes, 2018

| Mathematics Teaching Practices (NCTM) | Equitable Teaching |
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| 7. **Elicit and use evidence of student thinking.** Effective teaching of mathematics uses evidence of student thinking to assess progress toward mathematical understanding and to adjust instruction continually in ways that support and extend learning. | ● Elicit student thinking and make use of it during a lesson to send positive messages about students' mathematical identities.<br>● Make student thinking public, and then choose to elevate a student to a more prominent position in the discussion by identifying his or her idea as worth exploring, to cultivate a positive mathematical identity.<br>● Promote a classroom culture in which mistakes and errors are viewed as important reasoning opportunities, to encourage a wider range of students to engage in mathematical discussions with their peers and the teacher. |
| 8. **Support productive struggle in learning mathematics.** Effective teaching of mathematics consistently provides students, individually and collectively, with opportunities and supports to engage in productive struggle as they grapple with mathematical ideas and relationships. | ● Allow time for students to engage with mathematical ideas to support perseverance and identity development.<br>● Hold high expectations, while offering just enough support and scaffolding to facilitate student progress on challenging work, to communicate caring and confidence in students. |

## Equity-Based Practices for Teaching Mathematics

***Going deep with mathematics.***
Developing a deep understanding of mathematics is a major goal of equity-based mathematics teaching practices (Aguirre 2009; Gutstein 2006). Lessons include high cognitive demand tasks that support and strengthen student development of the strands of mathematical proficiency, including conceptual understanding, procedural fluency, and problem solving and reasoning (National Governors Association Center for Best Practices and Council of Chief State School Officers 2010; National Research Council 2001a; Stein et al. 2000).

***Leveraging multiple mathematical competencies.***
Recognizing and positioning students' various mathematical backgrounds and competencies is a key equity-based practice (Featherstone et al. 2011; Horn 2012; Turner et al. 2012) All students have different mathematical strengths that can serve as resources for learning and teaching mathematics.

***Affirming mathematics learners' identities.***
A positive, productive mathematics learner identity contributes to the mathematical learning of a child (Berry 2008; Boaler 2002; Martin 2000, 2009; Stinson 2008). Instruction that values multiple mathematical contributions, provides mul6ple entry points and promotes student participation in various ways (teams, groups, and so on) can aid the development of a student's mathematical learning identity.

***Challenging spaces of marginality.***
Traditionally, mathematics learning has been an independent and isolating experience with a focus on lecture and seatwork. Further, students who do not perform well in this traditional classroom setting are often marginalized, ignored, or positioned as "dumb" (Boaler 2002; Jackson 2009). Practices that embrace student competencies, diminish status, and value multiple mathematical contributions as essential to cultivate (Aguirre et al. 2012; Featherstone et al. 2011; Horn 2012).

***Drawing on multiple resources of knowledge***.
Equity-based teaching depends on the capacity to recognize and intentionally tap students' knowledge and experiences-mathematical, cultural, linguistic, peer, family, and community-as resources for mathematics teaching and learning. Drawing on this knowledge and experience includes helping students bridge everyday experiences to learn mathematics, capitalizing on linguistic resources to support mathematics learning, recognizing family or community mathematical practices to support mathematics learning, and finding ways to help students learn and use mathematics to solve authentic problems that affect their lives (Aguirre 2009; Aguirre et al. 2012; Civil 2007; Brenner and Moschkovich 2002; Gutiérrez 2002; Gutstein 2006; Moschkovich 1999; Simic-Mueller, Turner, and Varley 2009; Staats 2009; Turner et al. 2012; Turner and Strawhun 2007).

# Common Policies Affecting All Courses at George Mason University

**Updated August 2024**

These four policies affect students in all courses at George Mason University. This Course Policy Addendum must be made available to students in all courses (see Catalog Policy AP.2.5).

**Additional policies** affecting this course, and additional resources or guidance regarding these policies, may be provided to students by the instructor.

## Academic Standards

Academic Standards exist to promote authentic scholarship, support the institution's goal of maintaining high standards of academic excellence, and encourage continued ethical behavior of faculty and students to cultivate an educational community which values integrity and produces graduates who carry this commitment forward into professional practice.

As members of the George Mason University community, we are committed to fostering an environment of trust, respect, and scholarly excellence. Our academic standards are the foundation of this commitment, guiding our behavior and interactions within this academic community. The practices for implementing these standards adapt to modern practices, disciplinary contexts, and technological advancements. Our standards are embodied in our courses, policies, and scholarship, and are upheld in the following principles:

- **Honesty:** Providing accurate information in all academic endeavors, including communications, assignments, and examinations.
- **Acknowledgement:** Giving proper credit for all contributions to one's work. This involves the use of accurate citations and references for any ideas, words, or materials created by others in the style appropriate to the discipline. It also includes acknowledging shared authorship in group projects, co-authored pieces, and project reports.
- **Uniqueness of Work:** Ensuring that all submitted work is the result of one's own effort and is original, including free from self-plagiarism. This principle extends to written assignments, code, presentations, exams, and all other forms of academic work.

Violations of these standards—including but not limited to plagiarism, fabrication, and cheating—are taken seriously and will be addressed in accordance with university policies. The process for reporting, investigating, and adjudicating violations is outlined in the university's procedures. Consequences of violations may include academic sanctions, disciplinary actions, and other measures necessary to uphold the integrity of our academic community.

The principles outlined in these academic standards reflect our collective commitment to upholding the highest standards of honesty, acknowledgement, and uniqueness of work. By adhering to these principles, we ensure the continued excellence and integrity of George Mason University's academic community.

**Student responsibility:** Students are responsible for understanding how these general expectations regarding academic standards apply to each course, assignment, or exam they participate in; students should ask their instructor for clarification on any aspect that is not clear to them.

## Accommodations for Students with Disabilities

Disability Services at George Mason University is committed to upholding the letter and spirit of the laws that ensure equal treatment of people with disabilities. Under the administration of University Life, Disability Services implements and coordinates reasonable accommodations and disability-related services that afford equal access to university programs and activities. Students can begin the registration process with Disability Services at any time during their enrollment at George Mason University. If you are seeking accommodations, please visit https://ds.gmu.edu/ for detailed information about the Disability Services registration process. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: ods@gmu.edu. Phone: (703) 993-2474.

**Student responsibility**: Students are responsible for registering with Disability Services and communicating about their approved accommodations with their instructor *in advance* of any relevant class meeting, assignment, or exam.

## FERPA and Use of GMU Email Addresses for Course Communication

The Family Educational Rights and Privacy Act (FERPA) governs the disclosure of education records for eligible students and is an essential aspect of any course. **Students must use their GMU email account** to receive important University information, including communications related to this class. Instructors will not respond to messages sent from or send messages regarding course content to a non-GMU email address.

**Student responsibility**: Students are responsible for checking their GMU email regularly for course-related information, and/or ensuring that GMU email messages are forwarded to an account they do check.

## Title IX Resources and Required Reporting

As a part of George Mason University's commitment to providing a safe and non-discriminatory learning, living, and working environment for all members of the University community, the University does not discriminate on the basis of sex or gender in any of its education or employment programs and activities. Accordingly, **all non-confidential employees, including your faculty member, have a legal requirement to report to the Title IX Coordinator, all relevant details obtained directly or indirectly about any incident of Prohibited Conduct** (such as sexual harassment, sexual assault, gender-based stalking, dating/domestic violence). Upon notifying the Title IX Coordinator of possible Prohibited Conduct, the Title IX Coordinator will assess the report and determine if outreach is required. If outreach is required, the individual the report is about (the "Complainant") will receive a communication, likely in the form of an email, offering that person the option to meet with a representative of the Title IX office.

For more information about non-confidential employees, resources, and Prohibited Conduct, please see University Policy 1202: Sexual and Gender-Based Misconduct and Other Forms of Interpersonal Violence. Questions regarding Title IX can be directed to the Title IX Coordinator via email to TitleIX@gmu.edu, by phone at 703-993-8730, or in person on the Fairfax campus in Aquia 373.

**Student opportunity**: If you prefer to speak to someone ***confidentially***, please contact one of Mason's confidential employees in Student Support and Advocacy (SSAC), Counseling and Psychological Services (CAPS), Student Health Services (SHS), and/or the Office of the University Ombudsperson.