The goal of teacher education programs at the University of Maryland is to prepare knowledgeable, skillful, and reflective teachers for classrooms of diverse learners, through courses and field experiences that emphasize research-based principles and practices. EDCI 651 is designed to help prepare mathematics education majors to teach mathematics courses at the middle and high school levels.

Major Course Foci
1) to provide current and prospective teachers exposure to and practice in the enactment of high leverage teaching practices for teaching;
2) to engage current and prospective teachers in discussions and activities related to mathematical, institutional, and social issues that shape grades 7-12 mathematics education;
3) to provide current and prospective teachers a space to reflect on their internship or residency experiences; and
4) to help current and prospective mathematics teachers further develop the pedagogical and mathematical knowledge necessary for effective secondary teaching.

Overview of Class Sessions
Class sessions typically are divided into three or four components. One concerns discussions relevant to the development of “high leverage teaching practices” for (mathematics) instruction, planning, and assessment and/or (related) conversations about teaching mathematics content. In a second component, course participants and instructors enact such practices as presenting a mathematical explanation, teaching a mathematical procedure with meaning, teaching with a problem, teaching for conceptual understanding, and facilitating student discourse of mathematics. A third component features discussions of equity and other issues of contemporary importance to mathematics teaching raised in assigned readings and videos. As part of the above, course meetings involve some doing of mathematics. The following is a week-by-week synopsis of class activities and assignments:

Week 1, September 4: Course Introduction and Big Ideas of Algebra
The first meeting features introductions and an overview of course expectations, assignments, and grading. Course participants introduce themselves by presenting a book cover that tells the story of their imagined first year in the classroom. Following this, we delve into teaching algebra, identifying the “big ideas of school algebra” and considering what kind of informal and formal algebraic reasoning mathematics teachers should promote in Algebra I (and Algebra II)
We vet approaches to teaching students about the algebraic topic of variables and algebraic expressions. We also critically examine a “TIMSS” videotaped lesson in which eighth grade students are introduced to algebraic expressions. As part of this, we discuss the role of academic language in learning algebra (mathematics). We end by meeting in small groups to discuss lesson plans that course participants have brought to class and how these might be improved. Time permitting, we discuss the importance and difficulty of providing lesson closure.

**High Leverage Practice(s):** (1) Providing closure on a lesson or task, and (2) Using language that is accurate yet accessible to students.

**Equity Issue:** What to do with algebra students who lack arithmetic skills?

**Readings and Videos to complete for the September 4th Meeting:**
- EDCI 651 Course Syllabus

**Assignment Due for Week 1:** (1) Front cover of your “First Year as a Math Teacher” book and (2) Plans for 2 lessons from one current class you are observing, co-teaching, or teaching.

**Week 2, Sept. 11: Planning to Give a Presentation or Explanation about Mathematics**
The focus of the second and third meetings is on teacher explanations and presentations of mathematical ideas. The question under consideration is “How can secondary mathematics teachers be more effective, engaging, and efficient when they deliver new information or explain mathematical content to students?” As part of this, two course participants will co-present an explanation about secondary mathematics content. We consider our discussion of algebra, discussing how attend to promote students’ algebraic reasoning in the context of introducing variables and simple linear equations. We will discuss the major course assignment, the “practice Teaching Performance Assessment” or “practice-TPA” for short. As in Week 1, we meet in small groups to discuss lesson plans that course participants have brought to class.

**High Leverage Practice(s):** (1) Giving a presentation or explanation about content; (2) Using students’ ideas and building on students’ prior knowledge; and (3) Providing closure on a Lesson or Task.

**Equity Issue:** School sorting and its effects on teaching, learning, and students – What are the advantages and disadvantages of tracking?

**Readings and Videos for September 19th Meeting:**
- Teaching Channel: Distributive Property in Algebra I: [https://www.teachingchannel.org/videos/teaching-the-distributive-property](https://www.teachingchannel.org/videos/teaching-the-distributive-property)
- Choose One:
  - Teacher Performance Assessment Handbook for Middle School Mathematics, Introduction and Task 1 Description and Rubrics, (pp. 1-12, 26-28).
- Read the Lesson Plans and Planning Commentary (Task 1) from a Sample Middle School or High School Teacher Performance Assessment posted on ELMS/Blackboard.

**Assignment for Week 2:** (1) Respond to reading prompts posted on course ELMS (Blackboard) website, (2) Bring a second set of 2 lesson plans to class, and (3) Interview either your cooperating teacher or mentor about daily and long-term lesson planning and bring bulleted “write-up” to class.
Week 3, Sept. 18: Presenting or Explaining Mathematics Content to a Whole Class
In the third meeting, we continue our consideration of effective teacher communication. We discuss the use of examples in teacher presentations – the features of good examples (e.g., connecting to prior knowledge) how many are necessary. As in Week 2, two course participants will co-present an explanation about secondary mathematics. We then shift to a consideration of how to keep a lesson moving and, related, when and how to make lesson transitions. We next converse about the role of notes and notetaking in the mathematics classroom. We situate notetaking in the context of what is valued in grading schemes how these relate to status issues in the classroom. A mathematical focus is on the algebraic ideas of patterns and describing relationships between dependent and independent variables. We meet in small groups to discuss lesson plans that course participants have brought to class.

**High Leverage Practices:** (1) Giving a presentation or explanation about content; (2) Choosing strategic examples and tasks; (3) Keeping a written record while teaching; and (4) Using language that is accurate yet accessible to students.

**Equity Issue:** Reward systems, mathematical “competence,” and status issues.

**Video and Readings for Week 3:**
- Teaching Channel: Giving Efficient Directions: Sometimes Less is More
- David Suh 8min teaching 20 item Presentation Skills 20101018
  - [http://www.youtube.com/watch?v=xuskzyxtro8&feature=relmfu](http://www.youtube.com/watch?v=xuskzyxtro8&feature=relmfu)
- (Optional). Foss, R. (2003). Linear Equations: High School Algebra I. *Mathematics Teacher, 96*(9), 654-656. (This article is about use of flip charts to organize notes.)

**Assignment for Week 3:**
1. Respond to reading prompts posted on course ELMS (Blackboard) website;
2. Bring the third set of 2 lesson plans from one course include a copy of what students were to take down as notes; and
3. Observe “best teacher” in your current school give a presentation or explanation and write up bullet points that capture strengths, concerns, and criticisms.

Week 4, Sept 25: Planning to Teach Procedures with Meaning
In the fourth session we consider how to plan lessons that help students learn mathematical procedures in meaningful ways. We will discuss a video in which teachers teach procedures while making meaningful connections. Two course participants will also enact a lesson component in which they do just that. We then explore how computational technology – graphing calculators in particular – can help students understand and apply procedures. We then shift to a discussion of the importance of using multiple representations (e.g., graphs, symbols, tables) to promote reasoning in algebra with a particular focus on functions as a unifying theme in the algebra curriculum. Shifting gears, we spend some course time discussing grading – what to (and not to) collect and grade – and how to prepare for the first parent-teacher conference. We address the question of what to think about parents who do not show up to parent-teacher conferences or respond positively (if at all) to teacher communication. In small groups, we
discuss potential practice-TPA topics and examine the pacing guides or planning calendars for Oct-Nov to select good topics for the practice-TPA.

**High Leverage Practices:** (1) Deploying and connecting representations of content; (2) Structuring coherent lessons that provide varied opportunities to engage with content; and (3) Describing student performance, growth, behavior, etc.

**Equity Issue:** What should teachers think and do about parents who fail to show up to parent-teacher conferences?

**Videos and Readings for Week 4:**
- Teaching Channel: Mixture Problems with Math.
  - [https://www.teachingchannel.org/videos/algebra-mixture-problems](https://www.teachingchannel.org/videos/algebra-mixture-problems)
- Teaching Procedures Rubric.

**Assignment for Week 4:** (1) Respond to reading prompts posted on course ELMS (Blackboard) website; (2) Bring district planning calendars or pacing guides from your “practice-TPA” course; and (3) a list of two or more potential practice-TPA topics with a brief rationale for this choice.

**Week 5, October 2: Teaching Procedures with Meaning**
In our fifth meeting we begin by criticizing or defending the role of homework in teaching, learning, and grading mathematics. We then continue the related discussion of how to teach mathematical procedures (and definitions) in more meaningful ways than is typically done in U.S. classrooms. As part of this, we discuss a video in which an experienced teacher does just this in part by toggling back and forth between small group and whole class conversations. We extend this conversation in more grade-specific direction by breaking into two groups that will either discuss teaching basic probability for meaning or teaching important high school level “procedures” (i.e., completing the square, trig formulas) in meaningful ways. Finally, working in pairs, course participants will examine each others’ lesson plans using the TPA Task 1 rubrics.

**High Leverage Practices:** (1) Using students’ ideas and building on prior knowledge; (2) Leading a discussion (whole class); and (3) Managing multiple solutions/ideas.

**Equity Issue:** How might homework favor some students? What can we do to support more students to be successful with homework?

**Readings and Video for Week 5:**
- Homework Rubric
- **Middle School Reading:**
- **High School Readings:**
- Alfie Kohn on Homework on CBS
  - [http://www.cbsnews.com/video/watch/?id=1985450n](http://www.cbsnews.com/video/watch/?id=1985450n)

**Assignment for Week 5:** (1) Respond to reading prompts posted on course ELMS (Blackboard) website; (2) Bring fourth set of 2 lesson plans complete with the homework assignments; and (3) conduct a short interview with cooperating teacher about the role of homework in their instruction.

**Assignment for Week 6:** (1) Respond to reading prompts posted on course ELMS (Blackboard) website; and (2) Settle on your practice-TPA topic and bring one-page overview of the first practice-TPA lesson (note that this planned lesson should include at least one Before-During-After cycle).

**Week 6, October 9: Planning to Teach with a Problem**
In Week 6, we begin our consideration of “problem-based” instruction. After spending some time behind the philosophy of the approach, we examine the features of a “good” mathematics problem for middle or high school level students. In this session, we also focus on the “Before” component of the “Before-During-After” (BDA) model of problem-based lessons. We examine a problem-based approach to teaching functions and to promote algebraic reasoning. We meet in small groups to discuss assigned middle or high school videos about problem solving and whether course participants might be able to do something similar in their settings. We end with the vetting of participants’ draft first lesson plan from their practice-TPA assignment.

**High Leverage Practices:** (1) Structuring coherent lessons that provide varied opportunities to engage with content; (2) Choosing strategic examples and tasks; (3) Launching a task, problem, or activity; and (4) Being explicit about what it means to do good work.

**Equity Issue:** How might problem-based approaches help or hinder teachers achieve more equitable (and differentiation) classrooms?

**Assigned Readings and Video:**
- Teaching with Problems Rubric.
- **High School Video.** Annenberg Teaching Math: A Video Library 9-12, #7, The Ferris Wheel Problem:
- **Middle School Video.** Annenberg Teaching Math: A Video Library 5-8, #6 Building Rafts with Rods:

**Assignment for Week 7:** (1) Respond to reading prompts posted on course ELMS (Blackboard) website; and (2) Settle on your practice-TPA topic and bring one-page overview of the first practice-TPA lesson (note that this planned lesson should include at least one Before-During-After cycle).

**Week 7, October 16. Groupwork Revisited and Gearing Up for the Practice-TPA**
In our seventh meeting, we spend revisit the design and implementation of collaborative groupwork. We discuss how teachers can facilitate good collaborative work and how to simultaneously hold groups and individual students accountable for learning and collaboration. We explore how teachers can use groupwork as a forum to build positive working relationships with students. As part of this, we consider some of the features of “inclusive” or “culturally relevant.” mathematics classrooms. In the second half of this meeting, course participants work
in small groups to solidify their practice-TPA plans and to gear up for their implementation in the weeks that follow our eighth meeting on October 23rd.

**High Leverage Practices:** (1) Selecting, analyzing, and modifying tasks/problems/activities from published or pre-existing curriculum materials; (2) Scaffolding—helping without doing the work; (3) Working with individuals/small groups while attending to the whole class; and (4) Teaching students how to interact with peers around academic content.

**Equity Issue:** Norms and reward systems—competitive/collaborative—and how these favor different groups of students.

**Assigned Readings**
- Teaching Channel – Algebra Team: Strategies for Groupwork
  - [https://www.teachingchannel.org/videos/teaching-with-group-work?id=1](https://www.teachingchannel.org/videos/teaching-with-group-work?id=1)
- **NCTM Reading.** Sign up for a 30-day trial membership for the National Council of Teachers of Mathematics (www.nctm.org) and find at least one article that is relevant to the topic you chose for the practice-TPA. You are encouraged to look at the *Teaching Mathematics in the Middle School* or *Mathematics Teacher* journals. You might also look at the *NCTM Focal Points*. Other options are to consult the course instructors about Teachers Guides from NSF-funded textbooks that are relevant to potential practice-TPA topic choices.

**Additional Reading for Masters Students**

**Assignment for Week 7.** (1) Respond to reading prompts posted on course ELMS (Blackboard) website; (2) Come to class prepared to give a brief presentation of the journal article (see above) chapter, or reform-oriented Teachers Guide (see instructors) you selected and how this might inform your practice-TPA instruction; and (3) bring developed plan for the first practice-TPA lesson and an overview of the other lessons in your sequence.

**Week 8, October 23: Teaching with a Problem and Formative Assessment**
We discuss the implementation of problem-based instruction in the secondary mathematics classroom focusing on the “During” and “After” components of the BDA lesson/activity model. We think about what to do when things go wrong (e.g., when students get stuck, when students resist problem-based approaches) with the approach. We begin our consideration of formative assessment and, in particular, the use of open-middled problems to find out what students know and can do. We also discuss how to provide meaningful feedback to students about their work on such problems and on other assignments. We explore the design of rubrics to assess individual student and group performance when working on open-middled problems. In small groups, course participants will discuss their assessment plans that will be embedded in their practice-TPA lessons. We also discuss the Task 3 requirements and Task 3 entries from sample TPA portfolios. We evaluate these plans using the TPA planning rubrics.

**High Leverage Practices:** (1) Determining purposes of assessment; (2) Designing or selecting
(sets of) items, tasks, or problems that are appropriate to the purpose and target of assessment; and (3) Mapping student productions against criteria/categories.

**Equity Issue:** Problem-based instruction a forum to build strong teacher-student relationships.

**Readings and Video:**
- Choose One:
  - Teacher Performance Assessment Handbook for Middle School Mathematics, Task 3 Description and Rubrics, (pp. 17-19 & 31-33).
- Sample Middle School or High School TPA Task 3 (Assessing Student Learning) entry posted on ELMS/Blackboard.
- Assessment Rubric.

**Assignment for Week 8:** (1) Respond to reading prompts posted on course ELMS (Blackboard) website; and (2) Bring finalized plans for the 3 to 5 lesson sequence from the practice-TPA which (email these plans to instructors and partner by 5 PM, Sunday, October 21).

**Week 9, October 30: Planning to Teach a Concept**
In the ninth course session, we shift our attention to teaching mathematics for conceptual understanding. We begin by (re)considering the distinction between teaching for procedural (or instrumental) understanding and teaching for conceptual (or relational) understanding in mathematics classrooms. We consider the developing “conceptual” lesson plans for linear (MS) and exponential (HS) functions. Course participants should bring laptops to this class session as we will explore the use of spreadsheets as a tool for dynamic activities and teacher presentations that promote (algebraic) reasoning and help students build conceptual knowledge. In small groups we discuss the Task 2 requirements and Task 2 entries from sample TPA portfolios. We evaluate these plans using the TPA planning rubrics. We then examine the pacing guides or planning calendars for Oct-Nov to select good topics for the practice-TPA.

**High Leverage Practices:** (1) Using students’ ideas; building on prior knowledge; (2) Using tools skillfully (e.g. texts, videos, manipulatives, computer environments/programs, maps).

**Reading:**
- Concepts Rubric
- **High School Readings:**
- **Middle School Reading:**
- Choose One:
• Teacher Performance Assessment Handbook for Middle School Mathematics, Task 2 Description and Rubrics, (pp. 14-16, 29 & 30).

• Read the Task 2: Instructing and Engaging Students in Learning from a Sample Middle School or High School Teacher Performance Assessment posted on ELMS/Blackboard.

Readings for Master's Students

Assignment Due: (1) Respond to reading prompts posted on course ELMS (Blackboard) website; and (2) Bring assessments for your practice-TPA or from your current teaching.

**Week 10, November 6: Teaching a Concept Continued**

In the tenth meeting, we continue our discussions about how teachers can promote conceptual mathematical thinking and/or student reasoning. We shift our attention to geometry, thinking about how to help students understand area, surface area, and volume. We will also discuss teaching algebra and other mathematics to students with learning (and behavioral) disabilities. We return to the idea of effective teacher demonstrations and the related ideas of lesson transition and keeping lessons moving.

**High Leverage Practices:** (1) Using students’ ideas; building on prior knowledge; (2) Using tools skillfully (e.g. texts, videos, manipulatives, computer environments/programs, maps).

**Equity Issue:** Inclusion and teaching mathematics to students with disabilities.

**Assigned Readings.**

• Teaching Channel (2 Videos) Mr. McCloud: Discovering Surface Area of a Cylinder and Chris McCloud's Lesson and Chris McCloud's Lesson: Expert Analysis


• Middle School Teachers Choose One.

• High School Teachers

**Assignment for Week 10:** (1) Respond to reading prompts posted on course ELMS (Blackboard) website; (2) Send practice-TPA planning commentary to partner for feedback prior to class (CC instructors) and bring a print copy to class; and (3) provide written feedback on your partners’ plans and bring a copy of this feedback to class.
Week 11, November 13: International Mathematics Education
In this session we explore international issues in teaching mathematics. We discuss findings from the Trends in International Mathematics and Science Study (TIMSS). We consider instruction and teacher professional development in Japan and Germany.

High-Leverage Practices: (1) Leading a discussion (whole class); (2) Managing multiple solutions/ideas; and (3) Keeping a written record while teaching.

Equity Issue: International mathematics education and tracking.

Readings and Videos for Week 11:

Assignment for Week Nov 13: Respond to reading prompts posted on course ELMS (Blackboard) website.

Week 12, November 20: Facilitating Mathematical Discourse
We delve deeper into considerations of the teachers’ role in the promotion of student discourse (and reasoning) about mathematics, focusing on the promotion of student-to-student discourse in small groups. We also consider how to teach students who are learning English as a Second Language. We take a brief look at the use of concrete manipulatives in algebra and geometry.

High Leverage Practices: (1) Working with individuals/small groups while attending to the whole class; (2) Scaffolding—helping without doing the work; (3) Eliciting, supporting, and following-up on student contributions; and (4) Developing key questions and probes.

Equity Issue: Meeting the needs of ELL students in the mathematics classroom.

Readings and Videos for Week 12
- Teaching Channel – Think Pair Share; Students Collaborate to Solve Compound Inequalities, and Peer Teaching.
  - https://www.teachingchannel.org/videos/think-pair-share-lesson-idea
  - https://www.teachingchannel.org/videos/middle-school-lesson-idea?fd=1
  - https://www.teachingchannel.org/videos/student-peer-teaching?fd=1
- Discourse Rubric

Assignment for Week 12: (1) Respond to reading prompts posted on course ELMS (Blackboard) website.

Week 13, November 27: Facilitating Classroom Discourse Continued
In the thirteenth meeting, we continue our focus on the facilitation of classroom discourse, thinking about how to foster whole class discussions in which students’ ideas are front and center by selecting good tasks and planning/asking good questions. We consider the use of student (and teacher) mistakes or misconceptions as opportunities for fruitful whole class discussions. We also continue our consideration of teaching geometry (and measurement) in middle and high school mathematics. This course will feature a brief introduction to the Geometer’s Sketchpad and Geogebra softwares.

High Leverage Practices: (1) Leading a discussion (whole class); (2) Eliciting, supporting, and
following-up on student contributions; (3) Managing multiple solutions/ideas; and (4) Reflecting on what happened in lessons (what took too long, what went well or wasn’t essential, etc.).

**Equity Issue:** Non-dominant cultures and the cultures of reform/traditional mathematics classrooms.

**Readings and Videos for Week 13:**

- Teaching Channel – Divergent Questioning in 8th Grade Class:
  - [https://www.teachingchannel.org/videos/professional-development-teacher-evaluation](https://www.teachingchannel.org/videos/professional-development-teacher-evaluation)

**Assignment for Week 13:** (1) Respond to reading prompts posted on course ELMS (Blackboard) website; and (2) List of questions from a videotape or audiotape of your instruction and a brief analysis of these questions.

**Week 14, December 4: Final Class and Student Presentations**

In Week 14, we solve one final math problem together and celebrate your accomplishments in this class and in your teaching context. We then broke into small groups and share videos of one another teaching (i.e., the videos from the practice-TPA).

**Assignment Due:** (1) Final Practice-TPA Portfolio: Teaching Context, 3- Lesson Plans, Planning Commentary, Video, Instructional Commentary and (2) Presentation.

**ASSIGNMENTS & COURSE GRADES**

**Practice-Teacher Performance Assessment (TPA) Portfolio Assignment (30 Points)**

This is the major course assignment. It is a practiced-based assignment in which you plan, teach, assess, videotape, and reflect on a sequence of 3-5 lessons in late-October through mid-November. This assignment is designed to prepare you for the action TPA assessment in the spring. As important, it also requires you to enact ideas you are learning in your methods (and other) courses. During the course, you will read the relevant parts of the TPA handbook for either the secondary or middle school mathematics. You will complete Tasks 1-3 of the four tasks as outlined in these handbooks. The write-up and video for the practice-TPA portfolio is due Week 13 of the course. You should submit these on a CD, DVD, or on a flash drive. In Week 14 course participants will present a 15-minute presentation of their practice-TPA which includes a brief overview of the lesson plans featured in Task 1, a 5-minute highlight from the videotaped lesson used for Task 2, and of the assessment analyzed in Task 3. Your final practice-TPA should demonstrate your ability to design lessons that “develop students’ mathematical knowledge and should include a balanced approach to teaching procedural fluency, conceptual understanding, and mathematical reasoning.” It should also demonstrate how you facilitate students’ developing understanding of mathematical concepts, procedures, and reasoning. You must be able to demonstrate these competencies to score well on this project. The instructors will grade the practice-TPA using the rubrics provided in the TPA handbooks.

**In-Class Participation (39 Points)**

In-class participation (and attendance) figures heavily in your final grade. Your participation is vital to optimizing this course for yourself and your classmates. As this class is not intended to be a lecture class, but because informed student input and ideas are vital to our learning, class
meetings will rely heavily upon discussion of the assigned readings. Your participation grade will be based on your active and informed contribution to each class discussion. This includes actively engaging the class with interesting questions and ideas. You are responsible to bring a few discussion questions related to our topic for the week (from readings and your classroom experiences) to each class meeting. Regular attendance and arriving to class on time is also very important in this course as it is in your teaching/fieldwork assignment. Indicators of strong participation include engaging actively in discussion, asking questions, sharing ideas and examples, completing readings, working actively in small groups, attending class regularly, arriving and leaving at appropriate times.

**Out-of-Class (ELMS/Blackboard) Assignments (26 Points)**

Out-of-class assignments include write-ups of responses to readings, observations of other teachers, and reflections on school mathematics, your students and yourself. Weekly assignments often ask you to write paragraph-long responses to the assigned readings or videos. As part of this, you will also be asked to bring lesson plans and summaries of observations or interviews to class.

**Mini-Lesson Teaching Assignment (5 Points)**

Working in pairs, course participants will teach one mini-lesson or part of a lesson to their classmates during class sessions. For example, in the Week 4, two course participants will teach a mini-lesson designed to “teach a mathematical procedure with meaning.” Mini-lessons should last about 20 minutes. Different mini-lessons focus on different “high leverage practices” or approaches to teaching mathematics and hence different mini-lessons require different types of preparation and instructional skills.

**GRADING**

Specific assessment criteria will be handed out for the major assignments. Please note the following overall grading scheme:

- **A:** 100%-94%  
- **A-:** 93%-90%  
- **B+:** 89%-87%  
- **B:** 86%-84%  
- **B-:** 83%-80%  
- **C+:** 79%-77%  
- **C:** 76%-74%  
- **C-:** 73%-70%  
- **D:** 69%-60%  
- **F:** 59%-0%

**POLICIES**

**Excused Absences:**

You may be excused from class due to illness, religious observances, or compelling circumstances beyond your control. If you know that you will need to miss a class, it is your responsibility to e-mail me ahead of time. In such cases, we will arrange an opportunity to make up work.

**Religious Observances:**

You will not be penalized in any way for participation in religious observances. However, it is your responsibility as a student to notify me of the projected absence in writing within two weeks of the start of the semester. In such cases, we will arrange an opportunity to make up work that is missed due to such absences.

**Accommodations:**
If you are a student with a disability, please let me know as soon as possible so that we can make the appropriate academic accommodations in consultation with Disability Support Services (301-314-7682).

**Academic Integrity:**
The University of Maryland’s Academic Integrity Code prohibits students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents, and forging signatures.

In this class, this also applies to using lesson plans you have found and turning them in as your own. If you find materials that will help you put your unit plan together, you will need to cite or, if necessary, ask for permission and then adapt them to fit your purposes. When in doubt, you should consult with course instructors. Please write the following signed statement on each major assignment:

*I pledge on my honor that I have not given or received any unauthorized assistance on this assignment.*

**School Closures:**
In case of an emergency that closes the University such as inclement weather, you will be expected to submit assignments via email on the due dates specified herein.

**Course Evaluation:**
At the mid-point of the course I will provide you with an opportunity to provide feedback about the course that I will use to improve the course while in progress. At the end of the semester you will also have the opportunity to evaluate the course formally. Your participation in the evaluation of courses through CourseEvalUM is a responsibility you hold as a student member of our academic community. Your feedback is confidential and important to the improvement of teaching and learning at the University as well as to the tenure and promotion process. CourseEvalUM will be open for you to complete your evaluations in the final weeks of the semester. Please go directly to the website (www.courseevalum.umd.edu) to complete your evaluations. By completing all of your evaluations each semester, you will have the privilege of accessing online, at Testudo, the evaluation reports for the thousands of courses for which 70% or more students submitted their evaluations.

**Final Desire for the Course**

Finally, I hope the shared experience of the internship/residency develops in you a sense of community as a cohort. You are the mathematics teachers of the future. With time, you will be the experienced teachers who will be mentor teachers, department chairs, leaders of the profession, and more. In our class, I think it is important that you are supportive of one another, share discoveries and concerns, take risks and feel safe doing so, are helpfully critical of each others' ideas, and so on. It also is important for you all to stay connected in your first years of teaching. The relationships that you develop with members of your cohort (and instructors and cooperating teachers) could stand you in good stead over the years.

**Alignment to Professional Standards**
EDCI 651 is aligned to the standards of the College of Education Conceptual Framework, professional organizations, and the Common Core Standards for Mathematics. The following professional standards are addressed in EDCI 651:

**The University of Maryland College of Education Conceptual Framework Standards**
- **Knowledge Standards:** (1) Subject Matter, (2) Pedagogy, (3) Learners, (4) Educational Goals & Assessment, (5) Social & Cultural Contexts, and (6) Technology.
- **Emerging Commitments Standards:** (1) Equity & Diversity, (4) Reflection, (5) Innovation & Creativity, (6) Responsible & Ethical Action, and (7) Specialist Competence.

**Interstate Teacher Assessment and Support Consortium Standards**
- Primary Course Foci
  - Standard 3 – Learning Environment
  - Standard 5 – Application of Content
  - Standard 6 – Assessment
  - Standard 7 – Planning for Instruction
  - Standard 8 – Instructional Strategies
- Secondary Course Foci
  - Standard 2 – Learning Differences
  - Standard 4 – Content Knowledge
  - Standard 9 – Professional Learning and Practice

**Common Core Standards for Mathematical Practice**
- Make sense of mathematical problems and persevere in solving them
- Reason abstractly and quantitatively
- Construct viable arguments and critique the reasoning of others
- Attend to precision
- Look for and use structure
- Look for and express regularity in repeated reasoning

**Common Core Mathematics Content Standards**
- **Geometry:** Grade 6. Solve real-world and mathematical problems involving area, surface area, and volume.
- **Geometry Grade 8.** Understand congruence and similarity using physical models, transparencies, or geometry software.
- **Expressions and Equations:** Grade 6: Reason about and solve one-variable equations and inequalities.
- **Expressions and Equations:** Grade 7: Solve real-life and mathematical problems using numerical and algebraic expressions and equations.
- **Expressions and Equations:** Grade 8: Understand the connections between proportional relationships, lines, and linear equations.
- **Functions:**
  - Grade 8: Use functions to model relationships between quantities.
  - High School: Interpret functions that arise in applications in terms of the context
  - High School: Analyze functions using different representations
o High School: Build a function that models a relationship between two quantities
o High School: Interpret expressions for functions in terms of the situation they model

- High School Algebra: Reasoning with Equations and Inequalities.
  o Understand solving equations as a process of reasoning and explain the reasoning.
  o Solve equations and inequalities in one variable.
  o Represent and solve equations and inequalities graphically.

Maryland Teacher Technology Standards
- Standard II – Communication
- Standard V – Integrating Technology Into Curriculum and Instruction
- Standard VII – Professional Growth