



**MOLLOY
UNIVERSITY**

Course Title: *Strategies for Innovative, Effective, Inclusive Secondary Math Instruction*

Course Number: EDU 5900:

Section:

Dates: November 4-15, 2024

Instructor: Melanie Anderson

Email: MAnderson1@molloy.edu

Course Description: *Strategies for Innovative, Effective, Inclusive Secondary Math Instruction*- This course will help participants transform their math instruction and meet the needs of all learners. The course will explore the practices of traditional math instruction and detail research-based, innovative ways to create thinking classrooms. Students will put theory into practice with concrete tools and strategies to differentiate instruction, create an inclusive and equitable math classroom, and will learn strategies for engaging students to bring curiosity to each math task. Participants will learn specific, research-based strategies for how to improve whole-class, small group, and independent instruction in ways that will have a tremendous impact on student engagement and learning. This course will include the pedagogy and research of Dr. Peter Liljedahl's book *Building Thinking Classrooms in Mathematics*. Participants will leave with a toolkit of strategies and practices to implement in their classrooms. Best practices will be explored for how to meet the needs of special education students in the general education settings, as well as how to effectively prepare students for high-stakes testing including Regents exams. This course will also address strategies for managing math anxiety. This course is appropriate for all secondary math educators.

Required Reading: *Building Thinking Classrooms in Mathematics, Grades K-12: 14 Teaching Practices for Enhancing Learning* by [Peter Liljedahl](#) [Amazon Link](#)
[Audible Link](#)

Overall Course Objectives:

1. Participants will understand and explore effective and ineffective parts of traditional teaching of mathematics and begin to unravel best practices in secondary classrooms.
2. Participants will learn specific strategies to help students manage anxiety experienced around math and testing.
3. Participants will learn the components of a 'thinking classroom' and how to implement it in an inclusive and equitable way to benefit a variety of students including neurodiverse students, English Language Learners, and students with an IEP.
4. Participants will explore how the strategies in a 'thinking classroom' can be used to prepare students for assessments including district, State, and Regents exams.

****This syllabus is an outline and assignments and links will be updated prior to the first day of class. ****

Format

This course will be offered online through Canvas, the Molloy College online course system. You will need to become familiar with Canvas.

- Log in using your Molloy email username and password.
- Click the “Courses” tab (top left-hand side of the page) and select *Strategies for Innovative, Effective, Inclusive Secondary Math Instruction*- from the drop-down menu.
- Log in before the course to ensure that your account has been set up properly.
- Take the Canvas Student Tour or visit the Canvas Student Quickstart page.
 - Canvas Support is accessed through the “Help” feature in the lower left-hand corner of Canvas. You can either call Canvas at (844) 408-6455 or use the online chat feature. Both services are available 24/7. Technology Support Services is located in Kellenberg 022 and can be reached via phone at 516-323-4800, email at helpdesk@molloy.edu, or Twitter at @molloyTSS. The Information Commons is located on the second floor of Public Square and can be reached via phone at 516-323-4817 or email at slewis2@molloy.edu. Check their website for hours: <http://molloy.edu/tss>.

Dates and Times to Remember

While an online course gives you the flexibility to complete the work when it is most convenient for you, please remember you must submit your work by the dates and times listed in the “Assignment/Due Date” section. It is suggested that you read the Required Reading prior to the start of the class.

Grading

Students are expected to participate by responding to all discussion prompts and to the instructor and classmates with thoughtful, professional responses. You are encouraged to share resources and ask questions. Any assignments submitted after the allotted due date and time will have a point deducted for each day it is incomplete.

60% of the grade is based upon completed, professional, on-time assignments.

40% of the grade is based upon daily posting and responding to prompts with thoughtful, professional discussions. Participants are expected to post and respond at least once per day.

Communication Procedures and Contact Hours

I look forward to working with you and guiding you through this course. If you have any questions or concerns, please email me at MAAnderson1@molloy.edu. I will respond within 24 hours. Please note the #1 in my email address.

Learning Objectives	Assignments/Assessments	Due Date
<p>LO 1. Participants will understand and explore effective and ineffective parts of traditional teaching of mathematics and begin to unravel best practices in secondary classrooms.</p> <p>LO2. Participants will learn specific strategies to help students manage anxiety experienced around math and testing.</p> <p>LO 3. Participants will learn the components of a ‘thinking classroom’ and how to implement it in an inclusive and equitable way to benefit all populations of learners including neurodiverse students, English Language Learners, and students with an IEP.</p> <p>LO 4. Participants will explore how the strategies in a ‘thinking classroom’ can be used to prepare students for assessments including district, State, and Regents exams.</p>	<p><input type="checkbox"/> Final Project- By the end of this course, you will submit a ‘thinking classroom’ lesson plan. (Click Final Assignment for full description).</p> <p><input type="checkbox"/> Assignment 1 Introduce yourself in our Canvas platform. Address the following:</p> <ol style="list-style-type: none"> 1. Are you currently teaching math? If so, what grade/content? 2. Explain how you generally teach a math lesson. What format do you use (direct instruction, groups etc.) How much time do you have to teach? 3. Do you notice your students struggle with math anxiety? If so, how does it manifest in your classroom? 4. What are you hoping to learn from this course? <p><input type="checkbox"/> Watch the “Getting to Know Your Professor” video. Click Here</p> <p><input type="checkbox"/> Watch the annotated slides, “What research tells us about instructional norms in math education. Click here.</p> <p><input type="checkbox"/> Assignment #2 Reflection on the Introduction Of “<i>Building Thinking Classrooms in Mathematics, Grades K-12: 14 Teaching Practices for Enhancing Learning</i>” by Peter Liljedahl in Canvas. What stands out most to you? What ‘studenting’ behaviors do you observe in your class? Do you think ‘institutional norms’ detract from or enhance student learning? Explain.</p>	<p>Final Project Due Friday, November 15th, 2024 9:00 PM EST</p> <p>Assignment #1 Due November 4, 2024 by 9:00 PM EST</p> <p>Assignment #2 Due November 5, 2024 9:00PM EST</p>

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Assignments/Assessments

Assignment #3

Reflect and Respond in our Canvas platform on the following prompts:

1. *Do your math students exhibit math anxiety?*
2. *How does it manifest in your classroom? How do you know that your students are anxious about math? (lateness, absenteeism, behavior issues, etc)*
3. *Do you implement any strategies in your classroom to help your students manage stress/anxiety? If so, what do you do and are they effective?*
4. *Do you have any anxiety around math?*

Resource: Strategies to help Students Manage Stress Related to Math: [Click Here](#)

- Read Chapters 2, 3, 6 in *"Building Thinking Classrooms in Mathematics, Grades K-12: 14 Teaching Practices for Enhancing Learning"* by [Peter Liljedahl](#)
- Watch the annotated slides, "Establishing a Thinking Classroom" [Click Here](#)
- Watch the annotated slides, "Where to Give Tasks in a Thinking Classroom" [Click Here](#)
- Watch/Read "When and Where to Give Tasks: [Click Here](#)
- 'Forming Collaborative Groups' Resource: [Click Here](#)
- 'Non-Permanent Vertical Surfaces Resource': [Click](#)

Due Date

Reflect/Respond Post Due November 6, 2024 by 9:00 PM EST

Assignment 3 Due November 8, 2024 by 9:00 EST Assignment: Create an outline for your final project lesson plan, specifically detailing how you will deliver tasks, create random groups, where you can/will have students work, and how you can start with an exercise to address math anxiety. Submit this to me on the Lesson Plan

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Here

- 'Forming Visibly Random Groups Resource': Click Here
- 'Seeing a Thinking Classroom in Action' Click Here
- Final Project Lesson Plan Template: Click Here

Assignment 4- What kind of math tasks to use to promote a thinking classroom:

- Resource: Non-Curricular Thinking Tasks: Click Here
- Curricular Thinking Tasks: Click Here
- Resource: Tasks in Action: Click Here
- Using Math tasks to prepare for testing: Click Here

Respond Reflect in our Canvas platform after reviewing the Assignment 4 Resources:

Prompt:

- Reflect on your thoughts so far about the components of a thinking classroom.
- What are your thoughts on random grouping, non-permanent vertical surfaces, and the strategies presented for delivering tasks?
- Have you tried any components with your own students

template via Google Doc. I will make suggestions/ comments on the document.

Due November 11, 2024 by 9:00 PM EST

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so far?

- What task are you thinking of using for your final lesson project? (It can be from the suggested tasks or one you find or create.)

Assignment #5

- Questioning Strategies in a Thinking Classroom
Resource: [Click Here](#)
- Watch Annotated Slides: Questioning Strategies:
[Click Here](#)
- Video: Questioning Strategies
- Video: Knowledge Mobility

- Closing The Lesson:
- Watch annotated Slides:
[Click Here](#)
- Video: Consolidation: [Click Here](#)
- Video Meaningful Note-Making: [Click Here](#)

Assignment #6

- Resource:** When things go sideways in a thinking classroom: managing 'off task' behaviors" [Click Here](#)
- Targeted strategies to meet neurodiverse learners. [Click Here](#)
- Final Post in Canvas.

**Assignment #5
Due 11/12/24 by 9:00 PM EST
Continue working on your final project lesson plan. Submit to me Draft #2 in Google Doc. Include questioning strategies, how you will consolidate your lesson, and how you will utilize Meaningful Note-Making.**

**Assignment #6
Final Post/Reflection in Canvas Due by 9:00 PM EST**

Final Project due to be submitted via Google Doc by 11/15/24 9:00 EST