



2023

NEMATYC

Saturday, April 29, 2023

A COMMUNITY OF IDEAS

Conference Schedule

8 a.m. - 9 a.m.	● Breakfast and Registration	Café East
9 a.m. - 9:15 a.m.	● Opening Remarks	Café East
9:25 a.m. - 10:10 a.m.	● Breakout Sessions #1	
	● Students: Their Devices & Well-Being.....	NA 209
	● Algebraic Word Problems: Equality of Thought	NA 211
	● NEMATYC Faculty Math League	NA 217
	● Discourse in the Mathematics Classroom: Small Steps to Addressing Equity	NA 202
10:15 a.m. - 11 a.m.	● Breakout Sessions #2	
	● A Test Recovery Boot-camp in Foundational Numeracy & Algebra	NA 209
	● Incorporating Technology in Calculus and Differential Equations Courses.....	NA 211
	● Transforming Dev Math with Corequisite Courses.....	NA 217
	● Active Learning Strategies: How to Overcome Implementation Problem - <i>Sharing Session</i>	NA 202
11:05 a.m. - 11:50 a.m.	● Breakout Sessions #3	
	● Competency-Based Learning: Fostering a Mastery Mindset	NA 209
	● Achieve for Math and Stats	NA 211
	● Fostering Equity, Student Success & Affordability by using Personalized Learning Platforms in Math Courses.....	NA 217
	● TBD.....	NA 202
12 p.m. - 12:30 p.m.	● Dedicated Exhibit Time	Café East
12:30 p.m. - 2 p.m.	● Lunch, Awards, and Keynote Address.....	Café East
2:15 p.m. - 3 p.m.	● Breakout Sessions #4	
	● Vertical Learning - <i>Sharing Session</i>	NA 209
	● Lesson Plans for Introductory Statistics: Ideas for Varied Modalities.....	NA 211
	● New Initiatives in Math Tutoring at Quinsigamond Community College - <i>Sharing Session</i>	NA 217
3:10 p.m. - 4:10 p.m.	● NEMATYC Annual Business Meeting	NA 209

Sharing Sessions are sessions where we can come together to share ideas as well as classroom activities or assessments on a particular theme. For example, if attending a statistics project sharing session, please come with a project you have done in the past with your statistics students.

Breakout Sessions #1 9:25 a.m. - 10:10 a.m.

Students: Their Devices & Well-Being • NA 209

Magdalena Luca, Mass College of Pharmacy

This presentation has two parts: first, I will share ideas about a project in statistics that focuses on designing, collecting, and analyzing data on the amount of time students spend on their devices, how they use them, and their association with students' well-being. Given the impact of hand-held devices and the Covid pandemic on students' mental health, such a project is both statistically challenging and personally beneficial and insightful for our students. Second, I would like to engage all participants in a discussion about post-Covid challenges in teaching mathematics and how colleagues address mental health issues in the classroom, hoping that we can all benefit from this exchange of ideas.

Algebraic Word Problems: Equality of Thought • NA 211

Geillan Aly, CUNY Research Foundation

In this session, you will learn ways to help students work through word problems in textbooks. We will specifically conduct an in-depth analysis of the standard "solve word problems" procedures presented in math textbooks which do not provide guidance on the most difficult part of solving word problems, namely writing the equation. You will learn a method, "equality of thought", which students can use to write their equations. This method helps reinforce the notion that the equal sign is a relational (not operational) symbol. Activities using "equality of thought" will be shared which support collaborative work and discourse among students.

NEMATYC Faculty Math League • NA 217

Philomena D'Alessandro, Quinsigamond Community College, NEMATYC Executive Committee

Do you enjoy a challenge? If so, come work on fun math puzzles in this interactive session that will put your problem-solving skills to the test. Past AMATYC Math League Competition problems will be featured, along with other surprises, as well!

Discourse in the Mathematics Classroom: Small Steps to Addressing Equity • NA 202

Aliza Miller and Linda Dart-Kathios, Middlesex Community College

This talk will be a discussion of our paper in MathAMATYC Educator, Winter 2023. "When students do not see themselves reflected in their faculty, other methods of highlighting diversity in the classroom are necessary. We contend that one way to do this is by bringing to life the diversity of the people who have contributed and continue to make contributions to the field of mathematics and STEM more broadly.

Breakout Sessions # 2 10:15 a.m. - 11 a.m.

A Test Recovery Boot-camp in Foundational Numeracy & Algebra • NA 209

Anthony Tavares, Sheridan College

For many students starting a college program, the foundations in mathematics skills are not at the required level. This often leads to a poor outcome in their first major evaluation and can be difficult to succeed in the course with a desirable grade. For these reasons, we have implemented a boot-camp that takes place during our college's reading week, that is organized by peer-tutors from our Library and Learning services. We find that students who are successful in the boot-camp, often recover a portion of their first test grade and have improved academic outcomes in the algebra course. The presentation will highlight our boot-camp's modular design and the steps to improve student resiliency and success in our course. This study also emphasized the need to provide a mathematics foundational course prior to program start for students in need.

Incorporating Technology in Calculus and Differential Equations Courses • NA 211

Maria F. Arambel, Middlesex Community College, Jonah Bonner, Shane Moore and Salvatore Russo, Middlesex Community College students

Let us share with you a couple of projects used in our Calculus and Differential Equations courses that incorporate apps, websites, and MATLAB. The use of these free resources can be a great assessment tool as well as an opportunity to increase peer-collaboration and spark interest in learning basic programming skills. The projects start with a basic rubric but can evolve in a very different way according to the interests of each student or group. Bring your laptop or smart – phone to join in this exploration.

Transforming Dev Math with Corequisite Courses • NA 217

Ulises Poyser, Quinsigamond Community College

With QCC data that show the majority of developmental math students never reach/complete a college-level math course within their first 3 years, especially if they start at Basic Math, QCC is embarking down the corequisite path. Some targeted objectives from Basic Math, Beginning Algebra, and Intermediate Algebra are now included as remediation toward student success in our QR/Stats college-level course. These corequisite courses also include embedded peer tutors and student success skills such as Growth Mindset, math note-taking and study skills, etc. Come find out more about QCC's new dev math course structure and please share what your college is doing regarding corequisite courses.

Active Learning Strategies: How to Overcome Implementation Problems - Sharing Session • NA 202

Elena Heineke, Quincy College/Bridgewater State University

An active learning strategy is any activity in class (face-to-face, online or off-class) that involves the student actively participating in the learning process. Many instructors would like to use such strategies, but the implementation of these strategies is very difficult in practice. The presentation involves a dialogue with the participants. Let's discuss together how to overcome the existing difficulties.

Breakout Sessions #3..... 11:05 a.m. - 11:50 a.m.

Competency-Based Learning: Fostering a Mastery Mindset • NA 209

Robert Kahrs, Hawkes Learning

Discover how a mastery-based, 3-step approach to learning fosters genuine competency by removing learning aids, adapting to individual proficiencies, and providing immediate, corrective remediation. Consider a competency-based learning strategy to set goals for students and give them the flexibility and resources to succeed. **Win one of three \$25 gift cards!**

Achieve for Math and Stats • NA 211

Katie Finochiaro and Jennifer Meade, Macmillan Learning

This presentation will provide a look into Macmillan's courseware for math and stats, Achieve. Achieve is a full course solution containing pre-class, in-class, and post-class resources such as adaptive quizzes, Desmos powered graphing exercises, in-class activities, homework, and more.

Fostering Equity, Student Success & Affordability by using Personalized Learning Platforms in Math Courses • NA 217

Courtney Cozzy, McGraw Hill

Rachel Nichols, Community College of Rhode Island

Learn how ALEKS can support remediation of students, improve classroom instruction, and address educational outcome gaps among various student groups in math courses.

TBD • NA 202

Pearson Education

Keynote Session 12:30 p.m. - 2 p.m.

Mentoring for Equity • Café East

Abbe Herzig, Albany University

In this talk I will talk about what it means to create an academic culture that is inclusive and supports all its members to thrive. I will summarize the scientific evidence from social science research about what it means to belong in mathematics and the importance of recognizing and supporting individual identities. Through interactive exercises, we will conceptualize mentoring as a web of interpersonal relationships among mentors and mentees, how those relationships are built, and what they can do for both mentors and mentees of various identities and career stages.

Breakout Sessions #4..... 2:15 p.m. - 3 p.m.

Vertical Learning - Sharing Session • NA 209

Chauntelle Eckhaus, Norwich University

A sharing session to discuss vertical learning, as presented by AMATYC 2022 keynote speaker, Peter Liljedahl. For those who did not attend, vertical learning is the application of the first three of fourteen teaching practices in his book, Building Thinking Classrooms in Mathematics.

Lesson Plans for Introductory Statistics: Ideas for Varied Modalities • NA 211

Dena Feldman, Roxbury Community College

When planning classroom activities, it is well acknowledged that instructors navigate different student learning styles and modalities; among them, lecture-style classes can appeal to visual and auditory learners, and the use of manipulatives — dice, playing cards, etc. — can support kinesthetic learners in statistics classrooms. However, the cost of purchased manipulatives can be prohibitive and the time to design interactive lessons can be limited.

In this workshop-style session, lesson plans (using everyday household materials) will be presented, in such topics as descriptive statistics (mean, standard deviation, etc.), hypothesis testing, confidence intervals, chi-square distributions, and connecting probabilities to areas under density curves. Workshop attendees will have the opportunity to reflect on and/or develop their own lessons (with or without manipulatives), as well as give and receive colleague feedback. Attendees will also receive access to presented lesson plans after the workshop."

New Initiatives in Math Tutoring at Quinsigamond Community College - Sharing Session • NA 217

Martha Upton, Quinsigamond Community College

In March 2020, the QCC Math Center shifted our six-day-per-week, on-campus tutoring to fully remote tutoring, with the same number of hours and service coverage. The experience provided us with insight and prepared us for many new initiatives. We now offer both in-person and remote tutoring seven-days-per-week, embedded tutoring for corequisite courses, as well in-person group tutoring for Statistics, remote math tutoring for nursing students at our Healthcare campus, and more.