25ᵗʰ Annual WisMATYC Conference

Saturday, September 29, 2018 – UW Washington County, West Bend

To register, email WisMATYC Membership Chair Kevin Ritzman at ritzman@fvtc.edu.

REGISTRATION/ REFRESHMENTS **8:00 – 9:00**	Your $30 registration fee includes conference fee, lunch and snacks, and WisMATYC membership. You can pay by **cash or check** at the registration table. *Coffee, juice, and bagels will be available, so come early to catch up with your colleagues from around the state!*		
SESSION 1 **9:00 – 9:50**	**Contextualize to Learn: Preparing Faculty Toward Math Contextualization for Student Success** Bethany Sansing-Helton Room 228	**Encourage Student Growth and Exploration** Jackie Moncure, Hawkes Learning Room 246	
SESSION 2 **10:00 – 10:50**	**Number Talks in Calculus** Keith Nabb Room 228	**Co-requisite Courses: The Newest Thing in Math Programs** Kelly Kohlmetz Room 246	
MEETING **11:00 – 11:50**	**WisMATYC Business Meeting, WisMATYC Election, AMATYC Updates** Room 228		
LUNCH **12:00 – 1:00**	Lunch will consist of Panera sandwiches (turkey, sierra turkey, ham & Swiss, Mediterranean veggie), with green salad, chips, cookies, lemonade, and iced tea Outside Room 228		
SESSION 3 **1:00 – 1:25**	**A New Approach to an Old Calculus** Sarah Bannen and Valerie Maciejewski Room 246	**Contextualization, Schematic Scaffolding, and Story Telling** Mike LaFratta Room 228	**Mastery Learning with OER and Knewton's Alta** David Kurzawa, Knewton Alta Room 257
SESSION 4 **1:30 – 1:55**	**Teaching Quantitative Reasoning Using a Project Approach** Synde Kraus Room 246	**Basic Mathematics of Machine Learning** Alex Lavrentiev Room 228	
SESSION 5 **2:00 – 2:50**	**Discussion and group work in math? AND online? Seriously??!?** Kelly Kohlmetz Room 228	**Closing the Gap: Increasing Persistence and Success in STEM at Oakton CC** Dorota Zak Room 246	
CLOSING **3:00 +**	**Conference Closing, Snack, Raffle Drawings, and Socializing** followed by AMATYC MKE 2019 planning Room 228		

SESSION DESCRIPTIONS

(9:00) Contextualize to Learn: Preparing Faculty Toward Math Contextualization for Student Success

Bethany Sansing-Helton, Madison Area Technical College

The Contextualize to Learn (C2L) project is an NSF-funded research project led by Dr. Xueli Wang at the University of Wisconsin-Madison. The project focuses on faculty professional development around creation of contextualized math curriculum. It is being done as a collaboration between Madison College and Milwaukee Area Technical College. A brief overview of the project and results from the first year of implementation will be shared.

(9:00) Encourage Student Growth and Exploration

Jackie Moncure, Hawkes Learning

Align math courses with degree pathways for both STEM and non-STEM majors to streamline the track to graduation. These integrated courses enhance curriculum-level math with applicable review skills to shorten the prerequisite sequence without compromising competency. NEW developmental math titles will also be shared.

(10:00) Number Talks in Calculus

Keith Nabb, UW River Falls

Number Talks promote efficiency and flexibility in mathematical thinking at the elementary level (Parrish, 2011, 2014). They also blend computational fluency and conceptual understanding, while simultaneously engaging students. In a recent section of Calculus II, the Number/Math Talk idea was applied to Integration. This session will share examples of student-led Math Talks and insights gained from implementation.

(10:00) Co-requisite courses: The newest thing in math programs

Kelly Kohlmetz, UW Milwaukee

So, you've been considering offering co-requisite courses. What next??? This presentation will share lessons learned in the creation and implementation of co-requisite courses in Math Literacy and Algebra, including data from the Math Lit co-req offered in Spring 2018. Come learn about what things you may want to consider in this process.

(1:00) A New Approach to an Old Calculus

Sara Bannen and Valerie Maciejewski, Madison Area Technical College

With a primary focus on building students' confidence, we have reordered the topics in Calculus 1. The course schedule falls more in line with the historical development of Calculus and takes students from procedure into theory as opposed to the other way around, incorporating continual integrated review.

(1:00) Contextualization, Schematic Scaffolding, Story Telling

Mike LaFratta, Milwaukee Area Technical College

Demonstration and examples of how to use contextualization, schematic scaffolding, and storytelling infused in teaching several math concepts

(1:00) Mastery Learning with OER and Knewton's Alta
David Kurzawa, Knewton Alta
Integrating the highest-quality open educational resources, Knewton's adaptive technology, Alta, addresses key challenges and delivers a variety of benefits to users. Alta improves learning outcomes with a focus on concept mastery so students are more likely to retain, recall and successfully apply knowledge in future coursework. Using Knewton's in-house Data Science team, the effectiveness of Knewton's instructional and assessment content is measured daily and iterated/revised in response to those data, eliminating the need for "new editions". Because of the use of OER materials, all this is done while dramatically lowering the cost of course materials for students. Attendees will be given a close look at the platform to experience the student adaptive learning process.

(1:30) Teaching Quantitative Reasoning Using a Project Approach
Synde Kraus, UW Green Bay – Sheboygan Campus
I have redesigned my Quantitative Literacy Course to make it project based instead of lecture based. I now use Hawkes "Viewing Life Mathematically" software to help students learn and review the basic concepts needed to do the projects. There are six projects that students do throughout the semester, each project puts the students into a different career and students are asked to solve an open-ended project related to that career. Students need to make assumptions and collect information in order to complete the projects. For example, students take the role of planner for an excavating company. Given a lot size and the footprint of the home they come up with a plan for using the dirt from the foundation or basement to grade the yard in preparations to build a home. Another project has them take on the role of financial planner for a classmate. They need to develop a financial plan that allows their client to pay off their student loans, save for retirement and pay off a mortgage.

(1:30) Basic Mathematics of Deep Learning
Alex Lavrentiev, UW Fox Valley
Machine Learning methods known as Deep Learning are becoming increasingly popular. Some of the well-known applications of Deep Learning are image recognition, automatic speech recognition and recommendation systems. I will go over the mathematics of Neural Networks and Deep Learning using a basic example of an image recognition problem, the problem of identifying handwritten digits.

(2:00) Discussion and group work in math? AND online? Seriously??!?
Kelly Kohlmetz, UW Milwaukee
What might discussion and group work look like in the online format – and does it even work??? This presentation will share lessons learned in the creation and implementation of completely online versions of courses in the Math Literacy Pathway. Come learn about things you can do to encourage discussion and group work online.

(2:00) Closing the Gap: Increasing Persistence and Success in STEM at Oakton Community College
Dorota Zak, Oakton Community College (IL), AMATYC Equity Committee Chair
Minority students and women are still underrepresented in the higher math courses. The presenter will introduce the efforts of the Gap Committee at Oakton Community College towards making math education more equitable. The second portion of the presentation will be devoted to discussion of the work of other colleges and introduce the work of the newly formed Equity Committee at AMATYC.