

STEM Institute 2017 (July 30- August 1, 2017) Poster Schedule

Sunday, July 30, 5:00-6:00 PM and Monday, July 31, 5:45-6:45 PM

Poster sessions are in the Central Dining Hall, Cafeteria

William Barnes, SUNY Canton

Faculty Intervention to Increase Biology Student Use of the Campus Tutoring Center

Presents the results of a action research study conducted in the Fall 2016 of developmental students enrolled in an introductory level biology course. The intervention consisted of faculty emphasis to students at the start of each class meeting of the value of utilizing the campus tutoring center. The study examined if there was a quantifiable correlation between this faculty intervention and an increase in the time spent by students in the campus tutoring center.

Robert Bone, myON

Come by to experience the myON STEM Literacy Solution....hands on!

How the myON Literacy Solution “builds” a bridge towards literacy for students of all ages and abilities, so, they CAN choose STEM careers. It is all about READING!

Timothy Cochrane, Alfred State College

Eat (e^t) to Capacity: What's So Natural about Natural Logarithms? When Can You Actually Use Them?

Electrical engineers use base e often. A simple example is when a capacitor charges. We'll wait until taking Calculus to derive the mathematic expression, but in this hands-on session you will see an exponential relationship at work. First, an explanation of the theory will be given in algebraic terms. Then you'll build a simple electrical circuit and measure the voltage across a charging capacitor. A plot of the result in time will show how close the actual measurements come to theory.

James Cronmiller, Monroe Community College

Student Self-Assessment: Does It Make a Difference in Success in the Classroom?

The success of students in the classroom translates to retention and completion. Early warning strategies with proper intervention would appear an intuitive method of increasing the likelihood of student success. We describe a method, Student Self-Assessment, to improve success in the classroom. 93% of the students felt the process helped them with study habits and guided them in planning future strategies. Early intervention (counseling and guidance) through the use of this instrument was proven to be effective.

Peter Duveen, WSWHE BOCES; Member, AMTNYS

The Legacy of George H. Henshaw STEAMs ahead.

19th Century civil engineer George H. Henshaw authored important papers in his field, but it was a drawing he executed in the 1850s that catapulted him to newfound fame more than a century and a half later: what is being touted in today's business management circles as the first modern organizational chart.

Timothy Fowler, Network for Youth Success

STEM and Afterschool

This poster will show the connection between afterschool aka out-of-school time and informal STEM learning. It will illustrate the opportunities for promoting youth-driven, hands-on experiences with the scientific process and/or the engineering design process, and why afterschool time is ideal for connecting community partners who want to support youth growth and development.

Continued

Chuck Goodwin, NYS Technology & Engineering Educators Association

Effectively Integrating STEM While Designing an Air Droppable Survival Shelter

The Air Droppable Survival Shelter is a pre-engineering case study that is a totally interconnected STEM Design Project. The shelter problem incorporates Research, Structural Forces, Structural Design, Ergonomics, Material Utilization, Documentation, Experimentation, Packaging, Contract Specifications, Mathematical and Physical Modeling, Prototyping, Testing and Analysis.

Jeremy Manning, Project QUERB

Project QUERB: A Shared, Remotely-operated Experimental Platform to Explore Quantum Mechanics

Project QUERB is a STEAM platform that enables students to collaborate and remotely operate sophisticated photonics equipment to perform quantum mechanics experiments. The platform also will have tools to create animations and other artwork to visualize the dynamics of subatomic particles and the experimental setup.

Maranda Miller, SUNY Maritime College

Influential Factors for URMs Degree Obtainment

The role of the US as a global innovator advances our national economy, and it requires us to increase the science, technology, engineering, and math (STEM) workforce. Despite the increase in national population, the STEM workforce maintains an employment disparity amongst underrepresented racial minorities (URMs). The increase of diversity within the STEM workforce aligns with our national increase in URMs earned STEM degrees. The goal of the poster is to provide insight on how historical laws/acts and institutional modifications encouraged URMs to fulfill a post-secondary STEM degree.

Stephanie Rugg, Alfred State

Integrating Sustainability with Chemistry Class

College chemistry students analyzed chemical processes or reactions and identified limitations with regards to their sustainability. This project involved critical thinking and engaged the students, and helped the students relate chemistry to real world applications.

Richard Partch, Clarkson University

Advanced Core-Shell Colloid Chemistries for Industrial Applications

Statements and apparatus diagrams and electron micrograph photos of a variety of products are presented with explanation what their importance is for advancing industrial technology

Shawn Zadeh, Ventovate, LLC

A Novel Next-Generation Learning Method – Workflow and Project-Focused Communication Leading to Advanced Collaboration and Assessment Automated Functions

First, it will introduce ab-initio philosophy, with a broad discussion of its application within adopted education standards (e.g. Common Core, NGSS). The method will be discussed as part workflow changes and part technology changes, with both aspects leading to a communication model for instruction and problem solving. Finally, the communication model's advantages for providing software features like automated grading and crowd-sourced help.