



2017 Work-Based Learning Seminar Series for Educators

Educating for the Future – 2020 & Beyond

Join Like-Minded Educators:

- Engage in hands-on activities and facility tours that demonstrate the multiple career opportunities open to students graduating from high school, community college and 4-year programs. Hands-on activities include using 3D printers for precision production, experiencing state-of-the art navigation and ship handling full mission simulator, designing a prosthetic for a marine animal, and learning how performance nutrition impacts sports teams.
- Propose ways activities can be used as part of project based learning efforts beginning in early childhood.
- Learn what skill sets support success in college and in the workplace. Identify the relationship of employability skills to the MA STE Practices, MA Curriculum Frameworks, and/or MA Early Learning Guidelines for Infants and Toddlers. Share what you have learned with colleagues.

Making it Real – providing real-world experiences for students

At career & college readiness sites, participants will learn about future employment trends and higher education requirements for STEM fields. Participants will apply what they learn to the development of educational experiences that foster the development of skill sets students need to succeed in college and in the workplace. **For more information, contact Katherine Honey, SE MA STEM Network Coordinator, at khoney@comcast.net**

CAREER READINESS SITES – Register for three (3) sites to visit

NATIONAL MARINE LIFE CENTER (NMLC)

March 22, 2017 4-6:30PM

ACTIVITY Design a prosthetic for a marine animal.
TOUR NMLC is a non-profit 501(c)(3) marine animal hospital and science and education center that rehabilitates and releases stranded marine mammals and sea turtles in order to advance science and education in marine wildlife health and conservation. Tour the hospital. Learn how marine wildlife rehabilitation can support STEM education.

ACCUROUNDS

March 29, 2017 4-6:30PM

ACTIVITY Given specifications for a product, create an engineering drawing. Use a 3D printer to produce the product.
TOUR AccuRounds is a contract manufacturer that machines and assembles precision turned components for the medical, defense, aerospace, semiconductor and emerging technologies markets. Tour the facility and find out what is required of employees in order for AccuRounds to be awarded the Shingo Prize and a NTMA Safety Award. See how employees collaborate to meet customer requests for surgical tools, orthopedic implants, bone screws, firing pins as well parts for energy systems (wind and solar), robotics, and biotechnology.

MA MARITIME ACADEMY

April 6, 2017 4-6:30PM

ACTIVITY Engage in 'Got Milk?' an activity that provides an introduction to the concept of enzymes and metabolism.
TOUR Experience state-of-the art navigation and ship handling full mission simulator with enhanced graphic representation of real port approaches and harbors. Learn about celestial navigation. See the engineering lab with 2 story engines. Visit the aqua lab and learn about *aquaculture* and the impact of research on human consumption and commerce. Learn about the careers of MMA graduates – “Out of the Academy – into industry, teaching, and on the sea.”

SIEMENS INDUSTRY, INC.

April 12, 2017 4-6:30PM

ACTIVITY Find out about hands-on science and engineering activities Siemens brings to schools to inspire students to pursue science, technology, engineering and mathematics (STEM) as career paths. Work together on the “Wind Turbine – Blade Design” activity. Identify how the activity links to one or more of the MA Science, Technology, Engineering (STE) Practices.
TOUR Ingenuity for life is technology paired with purpose – a powerful mix of know-how, innovation, reliability, and responsibility. Learn how Siemens addresses a wide range of future-oriented solutions including industrial cyber security, intelligent transportation and infrastructure, sustainable energy, HealthCare IT, Digitalization, and sustainable healthcare technology. Conduct an energy audit to evaluate energy use. Identify and share ideas about how to implement energy saving solutions and how students could conduct audits in school and at home.

NORTH EASTON MACHINE

April 20, 2017 9:30AM-12PM

- ACTIVITY** Engage in an activity that demonstrates lean manufacturing practices. Discuss how the activity could be applied in the classroom and the link to one or more of the MA Science, Technology, Engineering (STE) Practices.
- TOUR** Tour North Easton Machine, an advanced manufacturer, with the management team and learn about CNC (computer numeric controlled) equipment and the manufacturing process, which produces custom machine parts for a wide variety of industries including medical device, aerospace, electronics, and defense. Join the quality department in an inspection demonstration. Receive Precision Machined Products Association (PMPA) Education Foundation USB pens loaded with industry data and lesson plan options.

HALL AT PATRIOT PLACE PRESENTED BY RAYTHEON

May 24, 2017 4-6:30PM

- ACTIVITY** Learn about educational modules that engage students in activities with real-world applications including math, engineering, communications, marketing, team building, biometric technology and more.
- TOUR** Find how performance nutrition impacts sports teams. Tour the facility and see the relationship between how jobs at Patriot Place and STEM majors including: Agriculture & Natural Resources · Architecture · Computer & Information Science · Engineering & Engineering Technology/Technicians · Health Professions & Clinical Science · Mathematics & Statistics · Mechanic/Repair Technician · Physical Sciences · Precision Manufacturing

COLLEGE READINESS SITES - Register for one (1) Site to Visit.

The following will be presented at each college readiness site with each site highlighting programs specific to the institution.

- STEM Starter Academy – learn how this program at 15 Massachusetts community colleges supports the graduation of students from associate or certificate Science, Technology, Engineering, and Math (STEM) programs leading to job placements, and/or transfer to bachelor degree STEM programs
- Admissions requirements for STEM programs and Statewide MassTransfer Program. Find out how students can earn college credit while in high school and how students can save money by completing associate's degree requirements within a community college environment and then transferring to a 4 year college or institution and/or enter a career. Find out about program-to-program transfer articulation agreements with over 100 colleges which guarantee admission and credit transfer for students graduating from community college.

BRISTOL COMMUNITY COLLEGE - ATTLEBORO CAMPUS

June 1, 2017 4-6:30PM

Presentations illustrate that once the associate's degree requirements are fulfilled within a community college environment with generally smaller classes and lower tuitions, the student can continue at a 4 year college or institution and/or enter a career. Presenters include William Florentino, Chief Marketing and Development Officer, Sturdy Memorial Foundation, Inc., Rodney Clark, Dean BCC-Attleboro Campus, Michael Sipala, Associate Professor of Biology Coordinator General Studies - Health & Life Sciences Program, Adrienne Foster Associate Professor of Biology, Patricia Dent, Dean Health Sciences, and representatives of admissions and MA Transfer.

BRIDGEWATER STATE UNIVERSITY

April 10, 2017 4-6:30PM

Learn about the 36 majors and 66 minors offered. Hear from faculty and students about the research facilities and advanced technology available to students. Tour the Science and Mathematics Center and see the instrumentation that allows students to conduct sophisticated research. Tour the BSU Trading Room at the Ricciardi College of Business where business students research corporations, create hypothetical investment portfolios, and track their investments with simulation software that uses actual market data and prices. Business students take financial, accounting and management theories learned in the classroom and apply them in a real-world investment setting. Presenters include Dr. Elmore Alexander, Dean, Ricciardi College of Business, Dr. Kristen Porter Utley, Dean Science and Mathematics and Dr. Jennie Aizenman, Director, Center for the Advancement of STEM Education (CASE).

MASSASOIT COMMUNITY COLLEGE – BROCKTON CAMPUS

May 25, 2017 4-6:30PM

Students will present their research projects, and visitors will have a chance to view lab spaces and equipment. Faculty and staff will be available to discuss the many resources available to students, including STEM Scholars, STEM Starter Academy, and research internships. Presenters include Doug Brown, Dean of Science and Mathematics and Michael Bankson, STEM Project Coordinator.

For more information, contact Katherine Honey, SE MA STEM Network Coordinator at khoney@comcast.net.