It’s been a l-o-o-o-o-ng winter with all of the snow, freezing rain, school delays, and closures! Who besides me just can’t wait until the temperature gets above 60 degrees?! Through it all the STEM Magnet Program has been enjoying the warmth of interesting classes, fun activities, and strong comraderies. It is hard to believe that we have only seven weeks left with our seniors who will soon be off to new STEM adventures in college. In this issue of the STEM Magnet-ic News, you will find information on how to find money to pay for college through STEM scholarships along with what the students did over the winter break, upcoming dates to be aware of, and an overview of another wonderful local industry that supports our STEM efforts. Stay warm and see you in the spring!  

-- Dr. Kim Bolig

STEM Student News

Stay up-to-date with information on what the STEM Magnet students are doing along with upcoming events and deadlines.

STEM Scholarships

As seniors are starting to answer the question of where to go to college, the next question that pops up is, “How do we pay for it?” Fortunately for those interested in going for a major in science, technology, engineering, and math there are many scholarships out there to help pay those college bills. Here are a sample of scholarships available to seniors to apply for in the upcoming months before the college bills are due.

Featured Employers

The STEM Magnet program is very fortunate to have leaders in the industry partner with it to provide real world experience and guidance. This edition’s feature employer is Sekisui-Kydex LLC in Bloomsburg, PA.
Student News

It’s the beginning of March and students in the STEM Magnet Program have already put in half of the Spring 2015 semester. Looking back over the past winter months, there has been so much that they have accomplished. Here is a synopsis of what has been happening:

Fall 2015 Semester Finals: Challenging is the word that can be used to describe last semester’s finals … and not necessarily the tests, themselves. The winter weather decided it would be a good time to start showing its face and finals had to be rescheduled several times due to school closings. The good part, though, is that almost all of the students did well during the fall semester. Way to go!

Winter Break 2015: This year’s Winter Break program for the juniors included several speakers including Dr. Atom Sarkar, a neurosurgeon from Geisinger Medical Center, Dr. Michael Shepard from the Department of Environmental, Geographical and Geological Sciences, Mary Howe from the Ziegler Institute of Professional Development, and Dr. Frank D’Angelo from the College of Education. Students participated in workshops, wrote resumes, and worked on critical thinking presentations. Those in the Engineering Track were also able to go out on externships/job shadowing for three days with local industries. (The Health Science track will be looking forward to doing the same at the end of the Spring semester.) Seniors had the opportunity to take a course or participate in an Independent Study during the same break period.

Spring 2015 Semester: Juniors are currently taking math courses (Pre-Calculus, Calculus, or Statistics), Intro to Engineering, Medical Ethics, Physics, or Java II. Seniors have opted to take either Statistics, Chemistry, Java II, or Calculus I along with continuing to finish the Calculus II course.

PA Governor’s STEM Competition: Five students from the STEM Magnet Program participated in the first Governor’s PA STEM Competition at the CSIU in Milton, PA. They were Stephen Eylerly, Sebastian Shaffer, Megan Sumner, Noah Wood, and Clair Woodward. While only taking third place in the competition, their idea for a combination eraser/stylus was greeted with interest by the judges with one even suggesting the potential for patenting.

Surgery Live! On Friday, March 13, 2015, juniors in the Health Science track will have the opportunity to observe “Surgery Live!” The experience is offered through the Whitaker Science Center in cooperation with the Hershey Medical Center. Through the support of Highmark Blue Shield, students enter the operating rooms through interactive high definition video conferencing technology and get to see and hear the surgical teams in real time while also having the opportunity to ask questions throughout the surgical procedure. Surgery Live! Is one of only four similar programs at science centers in the U.S.

STEM Magnet 2015-16 Deadline: Know of a sophomore who is interested in a STEM career and would be a great addition to our next year’s cohort? Make sure to let him or her know that the deadline to apply is Wednesday, April 15, 2015. Applications, teacher recommendations, and financial aid applications are available online at www.bloomu.edu/stem.

Senior Graduation Reception: Our final program for the spring semester will occur on Thursday, May 16, 2015 when we celebrate our first graduating class from the STEM Magnet program with a graduation reception. The reception will be held in the McCormick Center for Human Services vestibule at 6:00 p.m. Invitations to all seniors and their families will be sent out in the beginning of April.

FROM OUR STUDENTS ….

During the Winter Break Program, I went with two other students on an externship with Autoneum North America that is located in Bloomsburg. Autoneum is the globally leading automobile supplier in acoustic and thermal management for vehicles; however, at the Bloomsburg location, they primarily produce carpeting for vehicles. While we were there, we met with all the engineers and lab technicians to learn how carpet is made. They demonstrated to us how they design the carpeting by using 3D models to show what it will look like in a car. We got to see what each individual does in his or her job and how each job links to the final product. The most interesting part for me was the numerous lab tests that are performed on each product in order to meet government requirements. I also found it fascinating when they showed how they take fabric and put it into a machine that spreads it out and makes it smooth.

— Tanner Roney, Columbia Montour Vo-Tech
STEM Scholarships

Have you already said yes to the college of your choice? Still in the decision-making process? It does not matter where you are in the process, eventually all college students and their families will be facing the same situation … paying for college! While it is great if your Great-Aunt Martha left you a well-funded endowment to pay for your college education, most college students do not have that luxury and turn to scholarships and loans to pay for the next four years. Before you make any decisions on using loans to pay for your college education, make sure to check out the scholarships (in other words, FREE money) that are available to you. Because there is a real need for employees in the STEM field, you will find there are a plethora of scholarships available to you … you just need to find them and apply by their deadlines. To help with the first part, here are some suggestions:

Online Resource Sites to Find Scholarships:

Fastweb: Leading online resource in finding scholarships. Offers targeted scholarships, college search, financial aid information, and career advice.

Cappex: College decision headquarters that helps with college search, college reviews, and finding scholarships.

Scholarships.com: Search for scholarships, grants, loans, colleges and much more.

Individual STEM Scholarships:

PA State System of Higher Education Foundation Inc: Various scholarship programs that supports students attending any of the 14 PASSHE universities. Over the past three years, $1 million has been awarded in total scholarships.

Society of Women Engineers— for women who pursue a career in engineering, engineering technology and computer science. $1,000—$20,000 each. Deadline May 15.

Society of Hispanic Professional Engineers Scholarships: More than $2 million in scholarships for Hispanic college students pursuing degrees in science, technology, engineering and math. Applications must be postmarked by May 1st.

American Nuclear Society Incoming Freshman Scholarship: Awarded to graduating high school seniors who have enrolled, full-time, in college courses and are pursuing a degree in nuclear engineering or have the intent to pursue a degree in nuclear engineering. Deadline is April 1.

Go College: Offers suggestions for scholarships in a variety of health sciences fields including nursing, biomedical studies, pharmaceutical science, dental medicine, public health, and physical therapy. Deadlines vary.

Cognizant Making the Future Scholarship Program: $5,000 scholarships for students pursuing careers in a STEM field. Must be eligible to enroll or be currently enrolled at a two- or four-year accredited college or university. Deadline is March 31.

Early Planning for Juniors for 2016:

Bloomsburg University scholarships: A list of the scholarships that are awarded for those students who are attending Bloomsburg University. Please note that the deadline to apply is February 6.

AACE International Competitive Scholarships: $2,000 - $8,000 academic scholarships to full-time students pursuing a related degree in engineering, construction management, building construction, computer sciences, business, quantity surveying, information technology, etc. Deadline is February 15.

Society of Women Engineers Lehigh Valley Section: award to women graduating from area high schools in more than 20 counties in PA and enro.
Featured Employer:

[Image of SEKISUI-KYDEX LLC]

SEKISUI Polymer Innovations, LLC (formerly, KYDEX, LLC) has two locations in Bloomsburg, Pennsylvania and a third location in Holland, Michigan.

The 300 employees of SEKISUI Polymer Innovations are known by their customers to be innovative, customer-centric, and forward leaning when it comes to new markets, products, processes, and technology. Management is focused on employee development including manufacturing apprenticeship programs, continuing education, community outreach, and multi-generational teamwork.

Our educated, talented, and passionate employees understand the opportunities a global market represents. We embrace diversity, different cultures, and progressive thinking. Over 60 percent of our leadership team are women. There are over eight countries represented by our employees including Japan, Russia, Australia, China, India, England, and New Zealand who fill critical roles in our company that span R&D, sales and marketing, finance, business strategy, and manufacturing technology.

What we do

We serve customers based in 34 countries across a diverse spectrum of major industries including aviation, transportation, agriculture and heavy equipment, and industrial equipment housings, among others. We invent and manufacture cutting-edge, proprietary thermoplastic products which are specified into demanding applications such as aircraft interior components, medical imaging machines, mass transit interiors, and retail store fixtures. Unlike traditional materials, SEKISUI SPI products can be recycled back into the industrial recycling stream.

Manufacturing is a noble endeavor. We are honored to take seriously the responsibility we have to our people, clients, products, planet, and future manufacturing professionals. We are driven to improve how and what we manufacture in the U.S., creating great careers for great people, as we export our products around the world and bring the world back in.

Our history

SEKISUI SPI began manufacturing in Bloomsburg, PA in 1990. We are fortunate to be owned by SEKISUI Chemical Co., a Japanese company listed on the first section of the Tokyo Stock Exchange with a strong and storied legacy of contributing to societies worldwide, with over $11 billion dollars of annual revenue. We are part of a global powerhouse that employs over 22,000 people on six continents.

In 1962, SEKISUI Chemical Co. was the first Japanese manufacturer to establish operations in North America – prior to Toyota or Honda and before Sony came to our shores.

Two years before KYDEX® sheet was invented, SEKISUI Plastics Corporation made history by opening their first plant in the United States in 1963. In Hazleton, Pennsylvania, just 25 miles from our factory, our owners took their first step towards the global expansion of technology and leadership that we benefit from today.

The future

Over the next two decades, the global middle class is forecasted to expand by three billion people, developing exclusively from emerging markets in Asia and Africa. With customers and market development in more than thirty countries, SPI is poised to support this burgeoning middle class with products that are safer, cleaner, more sustainable, and recyclable. With our position and disposition, we embrace our commitment to improving people’s lives and the environment around the world while maintaining sustainable growth as a company.

FROM OUR STUDENTS …

My externship was with UGI Utilities, a natural gas and electric utility committed to delivering reliable, safe and affordable energy to 660,000 customers in 45 counties in Pennsylvania and one in Maryland. I met with the engineer located in Bloomsburg who took me out on a variety of sites to look at the machinery that they use in their industry. I learned how the communications department takes orders for different gas types and how they lay out models and measurements to meet these needs. My favorite part of the experience was going out to a future site to see everything that goes into the planning for this.

— Dan Arnabar, Danville Area