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QCC Joins International Fab Lab Network

Central Mass. to benefit from free access to resources and equipment

Worcester, MA - June 10, 2015 - Quinsigamond Community College became the first community college in Massachusetts to be accepted into the Fab Lab network last month. Fab Labs are located throughout the world, and they house technical equipment that are run on interconnected, open-source software.

According to the Fab Foundation website, “Fab Labs are a global network of local labs enabling invention by providing access to tools for digital fabrication... creating opportunities to improve lives and livelihoods around the world.” The Fab Lab, as a model and philosophy for digital fabrication laboratories, was a vision born out of Neil Gershenfeld, of MIT’s Center for Bits and Atoms. The idea caught on, and now there are currently 500 Fab Labs in 30 countries around the world. Of the seven Massachusetts Fab Labs, the QCC Fab lab is the only one located outside Greater Boston.

Dean of Business, Engineering and Technology Kathy Rentsch explained, “Fab Labs provide access and tools to experiment - to take an idea and do something with it. The idea behind Fab Labs is that you don’t have to have an advanced degree to operate the equipment. It’s a community-based resource, and all tools and software are free to use.”

QCC will open its Fab Lab when the QuEST Center, their new Engineering, Science and Technology building, opens in January 2016. The QCC Fab Lab has been built into the educational specifications of the project and will be equipped with a laser cutter, a vinyl cutter, 3D printers, a 3D scanner, a precision milling machine, molding and casting equipment, and Soldering equipment. Similar equipment will be available at the Innovative Technology Acceleration Center (ITAC) at QCC Southbridge, located at 5 Optical Drive.

“Because of Fab Labs, when you embark on a project you don’t have to start from scratch,” said Dean Rentsch. “You can find someone in Russia or Peru who has done something similar. Part of the Fab Lab movement is to be open and to share.”

To be accepted into the Fab Labs network, the college had to formally agree with the Fab Labs principles as stated in their charter.

Carol King, Director of College and Career Pathways, has been involved in the Fab Lab initiative since January 2009, when she first started visiting Fab Labs around the country. At that time, there were only 18 Fab Labs. When she attended the International Fab Lab Symposium in the Netherlands in 2010, she could see that “Fab Labs were breaking down barriers between people, not only facilitating, but promoting, collaborations among scientists, artists, engineers, and others. Bringing people together from diverse backgrounds provided creative opportunities to improve upon ideas and inventions while simultaneously educating one another and bettering their communities.”

Damian Kieran, Assistant Professor of Manufacturing Technology, said, “Fab Labs represent the essence of community colleges. They are open to the public, they encourage collaboration, and they help prepare users for the modern workforce.” This past semester, Professor Kieran spearheaded a capstone project for students in his Manufacturing Processes II course that embraced the Fab Labs philosophy.

Students used 3D printing and vacuum moldings, SolidWorks and MasterCam, as well as machining coin dyes to design and create prototypes for six different images representing QCC molded into chocolate bars. They then used the equipment to analyze results. Software was used to drive the project schedule, record tactics, track milestones and results, troubleshoot, and record expenses and financial projections. Students researched the origin of chocolate, and examined its viscosity and melting process to ensure precise and high quality final products. Graphic design students were brought in to design chocolate bar wrappers.

“Everything we’re trying to accomplish here is driven by encouraging creativity, initiating new ideas, and getting people across programs to work together, because that’s what the real world is like,” said Dean Rentsch.

Quinsigamond Community College offers programming in three inter-related clusters within their School for Business, Engineering & Technology: Management & Business, Computing Technology, and Engineering & Engineering Technology. Courses may be taken at the main campus in Worcester or at their campuses in Southbridge and Marlborough, and many are offered online. For more information about QCC and its STEM related programs, visit www.QCC.edu.

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Quinsigamond Community College celebrates 50 years of serving the community with high quality, affordable higher education in Worcester County. As a regional leader in education and workforce development, QCC serves the diverse educational needs of Central Massachusetts by providing affordable, accessible, and high quality programming leading to transfer, career, and lifelong learning.