

The Feliciano School of Business opens innovative 3D printing lab

Back to the Future

Imagine a time when students can dream up solutions to real-world problems, design products, manufacture prototypes and present them to potential investors – without leaving campus.

That time is now.

Montclair State University's first 3D printing lab opens this fall in the Feliciano School of Business building. While most of the state-of-the-art equipment, including 35 3D printers, eight scanners and corresponding software, will be housed in the new lab, all Montclair State students and faculty will have access to the technology, says Dennis Bone, director of the Feliciano Center for Entrepreneurship. Every school and college on campus will have the ability to print remotely to the lab and access to the 3D printers in their settings.

"This is a wonderful resource for the entire student body and faculty," observes Bone of 3D printing or additive manufacturing, in which three-dimensional solid objects are fabricated using a digital file. "3D printing is working its way into every industry right now. Hospitals are printing human tissue,

NASA is printing food for the space station and, of course, the technology is a huge advancement for manufacturing."

While Montclair State is not unique in implementing this rapidly advancing technology, it is one of the first universities in the area to open such an innovation center with 3D printing in its business school says Jason Frasca, entrepreneurship instructor and startup mentor.

"Our mission is to provide students with the opportunity to create rapid prototypes for their startup ideas and teams," says Frasca. "When you are trying to explain your idea, a picture is worth a thousand words, a slide deck is worth a few more, but a prototype speaks volumes and is an invaluable tool for demonstrating a concept or product."

Access to 3D printing eliminates the need for students to depend on a "middle man" or outside source to manufacture a prototype, says Bone. "It saves both precious time and seed money that can be spent on test marketing or patent research."

"When you get feedback from potential customers or investors, you can go right back to the computer [printer], input that new information and in two or three days have a new or revamped product," says Bone. "If you had to use a middle man, it could take weeks."

The Feliciano School of Business is offering a new course in 3D printing to teach students the skills they need to take full advantage of 3D technology, both on campus and in the outside world. The School also is developing a 9-credit, three-course certificate in 3D Printing and Design.

Through a partnership with the New Jersey Manufacturing Extension Program, the Center plans to host workshops with small, local manufacturers to introduce them to 3D printing.

"Part of the mission of the University is to provide value to the regional community," says Bone. "We can't think of anything more valuable than sharing and unleashing the power of this innovation lab to manufacturers across the region."

Photo: Jason Frasca inspecting a 3D prototype in the Innovation Lab

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