

APPLICATION STORY



3D Printing Encourages Commitment and Creativity Among NEIT Students

"Dimension helps our students tap the creative juices required for product design and brings a new level of enthusiasm to the design process."

— Bruce Feodoroff
Chairman/Associate Professor,
New England Institute of Technology

Dimension's ease of use, desktop accessibility and low cost allow NEIT's mechanical engineering department to easily provide services to other departments within the school.

The New England Institute of Technology (NEIT) has more than 3,000 students pursuing associate and bachelor degrees. The school's mechanical engineering program helps students link product development to the production phase of new product design, teaching skills in such areas as computer-aided-design (CAD) and design for manufacturing and assembly.

The mechanical engineering department's four faculty members are continuously seeking ways to grab students' attention early in the program and maintain their interest throughout the semester. Throughout the past year, the department used the Dimension 3D printer as one of its primary teaching tools, racking up more than 2000 hours of use on the machine.

"We have our freshman students using Dimension right off the bat, and they all present a 3D model to the class after the first nine weeks," said Bruce Feodoroff, Chairman/Associate Professor, Mechanical Engineering Technology, NEIT. "Designs are often difficult for people to visualize on a two-dimensional plain. With 3D printing, my students can design something, quickly print it and hold it in their hand. What engages them the most is that they know instantly how they can improve their design after holding it. They get excited and want to do more — we are reinforcing their creativity."

According to Feodoroff, the Dimension 3D Printer not only allows for improved communications between student and teacher, but motivates students to do more designing on their own time. "Three years ago, no one was in our design department on their free time. Today, our four stations and the 3D printer are always being used. There's no doubt that 3D printing encourages commitment and creativity."

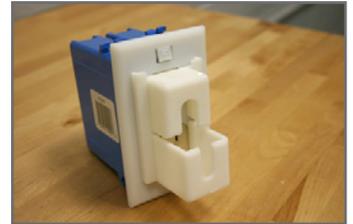
The Dimension Solution

Dimension outputs 3D prints made of ABS plastic, a durable material that enables students and faculty to easily test their designs for fit and function.

"One of our students designed a retaining ring to hold a bonnet on the stick shift in his car," continued Feodoroff. "He was eventually going to make it out of metal, but after testing the fit of the piece using the Dimension part, it worked so well he never took it off. Similarly, we had a faculty member use Dimension to design and produce a bunch of replacements for outlet covers that are no longer in stock — they are still being used today."

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According to Feodoroff, "The contribution 3D printing has made goes well beyond the mechanical engineering department, benefiting anyone involved with design. Students from the interior design program love to use it. One of them recently teamed with a CAD student and used Dimension to make a piece of medieval furniture for a project. An architectural student used Dimension to design a four-foot skyscraper."



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