3-D printer boosts KCC design classes

A recent acquisition is helping the Kirtland Community College's engineering design technologies department stay on the cutting edge of technology and offer students the opportunity to learn the latest in design techniques, as well as assisting surrounding industries to be more effective and cost-efficient.

"We have recently acquired the latest in rapid prototyping technology for use in our Engineering Design Technology program with the purchase of a Z Corp. model 310 three-dimensional printer," said Jason Prout, head of the college's EDT department. "This gives us the ability to produce prototype parts at a fraction of the time andor cost of in-house metal machining or CNC."
Originally developed at the Massachusetts Institute of Technology in 1993, three-dimensional printing technology forms the basis of Z Corp.'s prototyping process. The 3DP technology creates 3-D physical prototypes by solidifying layers of deposited powder using a liquid binder.

"This breaking edge technology allows an engineer to generate a working prototype part far cheaper than conventional means," Prout said. "Our department can generate a concept part drawing on our three-dimensional modeling software and literally have an in-hand part within minutes, this advance in technology allows industries to proof part designs without the costs related to fixturing, production runs, material and related labor," he added. By definition, 3DP is a versatile and rapid process accommodating geometry of varying complexity in hundreds of different applications, and supporting many types of materials. Z Corp. pioneered the commercial use of 3DP technology, developing 3-D printers that leading manufacturers use to produce early concept models and product prototypes. Using 3DP technology Z Corp. has developed 3-D printers that operate quickly, at low costs and within a broad range of applications.

"Kirtland's engineering design technologies department is currently integrating training and/or use of the printer into all its EDT classes," Prout said. "While the most dominant use of the technology will be in the three-dimensional Solidworks modeling classes, this new technology is expected to have a profound effect on the activities throughout all the EDT classes."
"As shops that were previously automotive focused diversify to adjust for other new and innovative industries, their design engineers are the people that they turn to for leadership in these new areas," Prout said. "Kirtland's engineering and design technology degree, taken with an emphasis on engineering design technologies, is the path to this new and innovative future.
"In effect, we are introducing a new technology to the area.," he said. "For example, before we brought the Solidworks 3-D software into the area, there were no known industries using it. Now, five years later, Solidworks is either in place or being integrated into nearly every nearby industry."