

# The cutting edge in CNC

When a Discovery Channel camera crew came to Macomb Community College last fall to film a segment for "Biker Build-Off," they captured the attention to detail that goes into the manufacturing of a quality part. It's all about exact measurements and precise cuts, and, for 22-year-old Eric Lewicki, it is also about a promising future in a progressive field.

Lewicki is a second-year student in the Applied Technology Advanced Processes program at Macomb Community College, where he is learning the intricacies of Computer Numerical Control as both a student and a paid lab tech. He also works full time at Fellows Manufacturing in Harrison Township, and credits both Fellows and Macomb for helping him make his career choice.

"I had been dabbling in other fields — engineering and electrical — but as I took on more responsibilities at Fellows I found what I was looking for," Lewicki said. "It's hands on, but you have to use your mind as well. And, at Macomb, we are learning on the newest, fastest CNC machines."

Benefiting from a partnership with HAAS Automation Inc., the machining equipment used by the college's ATAP program is upgraded about every six months, ensuring that students are honing skills relevant to the field they intend to enter. This is one of the things that places Macomb's ATAP program ahead of the crowd, said Gary Walters, ATAP instructor.

"We're classified as a HAAS Technical Education Center and a HAAS Factory Outlet Showroom. This means that HAAS uses our lab to demo their latest technology while allowing us full use of the equipment for training purposes, free of charge," Walters said. "Industry can move much faster than educational institutions, so we're not only



Gary Walters, an applied technology instructor at Macomb Community College, shows student Eric Lewicki where to make a precise cut using the latest Computer Numerical Control technology on this crossbar for a kit race car.

up to date, we surpass what many do in business."

Courses in the program, most of which Lewicki has already completed, include Feeds, Speeds, & Advanced Tools; Drafting; Digital Art to 3D CNC Machining; 2D MasterCAM — Mill Programming & Machining; CNC Lathe G&M Programming & CNC Machining; Cimatron CAD/CAM — Die/Mold Machining; 3D Computer Aided Mold/Electrode Design; and Rapid Prototyping & Reverse Engineering.

For Lewicki, there is a thrill in using a high-speed machine to pare down a piece of metal to meet precise measurements

necessary to mount a front end on a custom chopper or manufacture quality parts for the automotive industry. While many students step back when the cuts register 1,400 inches a minute, Lewicki steps up to the lathe. "Experience has taught me how to handle it," he said, "and I'm comfortable with it because of what I have learned."

"Eric is a role model for success in the CNC field," Walters said. "He comes from a powerful school — Pankow Vocational Center. Pankow does a fantastic job preparing students for a post-secondary education in manufacturing. This helped

Eric jump start his career right out of high school and helped him accelerate through our program. Pankow provided the fundamentals, while we provided the advanced manufacturing courses."

In Macomb's ATAP program, students can choose from two different certificate options as well as an associate's of applied science degree, which many students, including Lewicki, pursue after earning a certificate. Students in the program include those looking for a new career or to upgrade skills, high school students taking advantage of early admission, recent high

school graduates and the recently unemployed. Walters said all will likely find jobs in the field.

"I have over 100 positions to be filled from employers contacting me directly," Walters said. "Companies are investing in technology to regain their competitive edge, not only in Michigan but in the world. They're buying machine tools and cutters at a record pace. But they're having difficulty finding qualified CNC candidates for programming and operating them. We're teaching students what they need to know to be competitive in industry."

## IT courses aimed at better record-keeping

Shoe boxes stuffed with receipts and manila folders labeled with faded handwriting just don't cut it in the corporate world of the 21st century. As businesses and their employees grapple with new state and federal standards regarding record-keeping, Macomb is one of the first community colleges in Michigan to offer help.

"For companies, updating their record keeping is no longer a choice, it is absolutely necessary," said Cheryl Sypniewski, of Macomb's business information systems faculty. Toward that end, Sypniewski and colleagues have worked with Microsoft to develop two new information technology classes debuting this fall that can provide those responsible for managing their companies' records with the technological tools they need.

"Small, medium, large — I don't think any company is insulated," Sypniewski said. "The new requirement is that all companies be capable of producing at a state or federal agency's request all records pertaining to a litigious issue within a specified period of time."

Offered under the college's Information Technology Applications Professional program, the two courses are Enterprise Content Management and Electronic Records Management. Content management, in general, involves the capture, storage, security, revision, control, retrieval, distribution, preservation and destruction of records. Electronic records management involves the conversion of paper documents and existing electronic records into one system. The two classes are designed to complement each other, but may also be taken alone or as part of the comprehensive ITAP program. In addition to preparing students for Microsoft Office certification, a globally recognized standard, Macomb's ITAP program also leads to an associate's degree.

Both courses offer prospective students (and their employers), whether taken as part of the ITAP degree program or not, the means for managing a variety of documents and being prepared for if and when the call comes to produce them.

"Part of the content management class will be helping students ascertain their own company's needs for retention (how long to keep a document) and taxonomy (how to classify a document)," explained Sypniewski. "These courses are perfect for the support person in the office who is responsible for managing content, whether electronic or legacy records. We have the answer for 'what do you do with all those papers in boxes?'"

The Next CTE Page will feature the MISD

## Earn college credits online, high school through graduate school

In the 1970s, when personal computers were just making their way into the marketplace and the Internet would have been considered science fiction, students continued to earn their high school and college degrees in the same way that their parents and grandparents had.

Now, not only are computers carried around in shoulder bags, but high school and college students are earning college credit without ever coming on campus in some cases. Classes are delivered online via the Internet or as hybrid classes.

Keeping pace with ever-changing resources, technology and community needs, Macomb Community College continues to enhance its offering of online courses — from those in its own degree credit programs to those offered by senior colleges and universities at the Macomb Uni-

versity Center on Center Campus and through other partnerships.

Macomb's online courses are also taken by high school students seeking a smooth transition to college with advanced standing, as well as those participating in dual enrollment programs, which allow them to earn high school and college credit simultaneously. A college course is typically eligible for high school credit when it is not available through a school district. Macomb is also involved in a pilot program with the Chippewa Valley Schools district in which an entire business class is taking an online course. The students will earn high school and college credit concurrently. More of these types of programs are being considered as solutions to specified situations, such as when there are



Chippewa Valley High School students, from left, Christina Szymczak, Matthew Vitale, Sara Snider and Jessica Koessler take part in a pilot program with Macomb Community College in which an entire business class is taking an online course to earn high school and college credit concurrently.

not enough students to fill a class, said Donald Amboyer, Ma-

comb College vice provost for learning outreach.

"Macomb has approximately 1,000 dually enrolled students. The Macomb Intermediate School District and local superintendents support the added value of dual enrollment, including those courses offered online to help high school students become more aware of career choices and earn college credit while still in high school," Amboyer said. Michigan, he also noted, became the first state in the nation to require all students to take an online course or have an e-Learning experience in order to graduate from high school.

MCC is the largest grantor of associate's degrees in Michigan, and many Macomb students accumulate their credits via online classes, with some of the classes offering concurrent credit toward a bachelor's degree through Macomb's partner-

ships with senior institutions. Franklin University, Walsh College and the University of Michigan Dearborn offer online courses through agreements with Macomb that lead to bachelor's degrees.

More than two years worth of credits can be taken at Macomb's tuition rates as students earn a bachelor's of science degree in seven fields through the Franklin University Community College Alliance Program. Franklin also offers an online master's degree program in business administration.

For more information regarding degree opportunities at Macomb, contact the college's counseling and academic advising at (586) 445-7221 or (586) 286-2228 or go online to [www.macomb.edu](http://www.macomb.edu) and select "Macomb College Online."

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to Career Technical Education

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For more information about CTE at the high school level contact the Macomb Intermediate School District. Contact Macomb Community College for college level programs. See contact information above.

Macomb Career and Technical Education Administrators Association

Cutting Edge to the Future  
Macomb County/St. Clair County

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