

TECH UPDATE

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MCCC SECURES \$1.7 MILLION GRANT TO ESTABLISH WELDING CENTER OF EXPERTISE

MCCC recently secured a \$1.7 million in federal grant to establish a Welding Center of Expertise. The college was among 68 of the approximately 274 submitting organizations to be awarded Community-Based Job Training Grant funds from the U.S. Department of Labor. MCCC was the only community college in Michigan to win the award.

Grant funds will be used to hire additional highly qualified faculty, upgrade the existing welding lab to a state of the art, cross-categorical welding skills laboratory, and develop and offer an accelerated beginning and advanced welding certification program to serve employment needs in the advanced manufacturing, construction and energy industries.

The curriculum will be delivered in a 10-week, 250-hour format and will prepare students to earn their American Welding Society QC-10 and QC-11 certifications and qualify them for entry into advanced-level employment, self-employment and local welding labor unions. In addition, an eight-hour, non-credit Foundational Skills Boot Camp – based on the Workkeys® job skills assessment system – will be available to participants to enrich their skills in applied mathematics, reading for information and location of information, after which they will earn a National Career Readiness Certification.

Story continued at the bottom of the next page.

X-TECH: EXPLORING CAREERS IN INDUSTRIAL TECHNOLOGY

The Industrial Technology Division held X-TECH in late fall. The division hosted 163 participants; 125 potential students and 38 parent/guardians. The event provided high school students, parents and adults seeking opportunity to change careers to try their hand at numerous technology demonstrations, including CAD, welding, manufacturing, automation, robotics, metrology technology, materials engineering and construction management technology.



X-Tech photos by Mark Spensoso.



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DIVISION CONTRACTS FOR NEW PROGRAMMABLE LOGIC CONTROL TRAINING UNIT

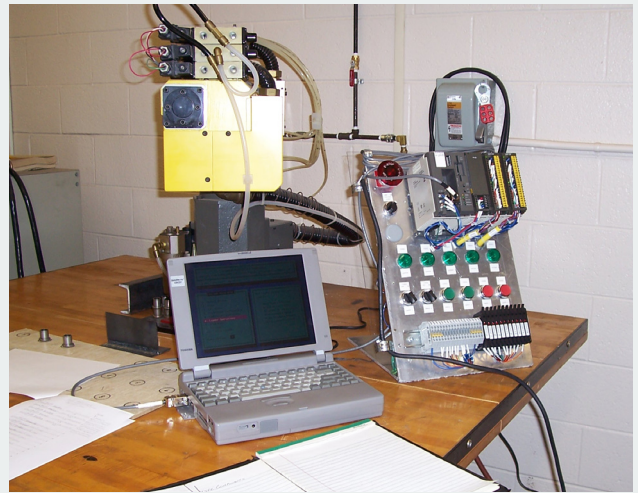
MCCC's industrial technology students now have the opportunity for additional hands-on training on programmable logic controllers – electronic devices used in industrial automation to provide logic and sequencing controls for machinery.

The Industrial Technology Division has contracted for a new prototype PLC training unit that can be used as a stand-alone PLC programming tool or interfaced with external equipment.

The PLC training unit is a Modicon 984 and can be used in multiple MCCC courses involving automation. The PLCs the division currently uses are Allen Bradley SLC 100s. The new PLC is not meant to replace the Allen Bradley units, but to supplement the learning experience by exposing students to the different types of programming structures used by other PLCs.

In addition, the Allen Bradley PLCs that the division currently uses are more than 20 years old, so this opportunity has allowed the college to upgrade its equipment.

The PLC hardware is surplus from GM Powertrain, allowing the college to obtain a useful piece of equipment at a reduced cost. The IT Division has had input on the particular features it requires and has ensured that these are included.



Programmable logic control unit.

NEW CERTIFICATE AVAILABLE IN HEAVY AND INDUSTRIAL CONSTRUCTION

A certificate in heavy and industrial construction is being offered starting the Fall of 2009, with the support of DTE Energy, as part of the construction management program within the Industrial Technology Division. The certificate is designed for more experienced construction personnel who wish to upgrade their skills to gain entry into management positions with large industrial employers. A number of employees from DTE Energy are currently enrolled in this certificate program. For more information contact Alex Babycz, assistant professor of construction management technology, at (734) 384-4116.

LEONARD EARNS CERTIFIED MANUFACTURING TECHNOLOGIST CREDENTIAL

Bob Leonard, assistant professor of manufacturing technology, attended the Fundamentals of Manufacturing workshop last semester and earned the credential of certified manufacturing technologist (CMfgT) from the Society of Manufacturing Engineers. The CMfgT certification demonstrates competence in the fundamentals of manufacturing, including math, applied science, design, materials, manufacturing processes, manufacturing management, manufacturing economics, quality control, computer applications and automation.

DEPARTMENT OF LABOR GRANT *(continued from first page)*

Prior to the grant opportunity, Andy Burke, associate professor of welding technology, and Peter Coomar, dean of the Industrial Technology Division, visited Odessa Community College in Texas, which offers a similar certification program. After that visit, they were convinced that MCCC could be successful in getting funded, given the accelerated-format niche.

Burke and Coomar worked with Beth Kohler, coordinator of alumni and resource development, to write the grant. Dean of Corporate and Community Services John Joy added additional expertise on the basic skills boot camp concept. The proposal was submitted in November. The office of U.S. Rep. John D. Dingell, D-Dearborn, was notified in January by the U.S. Department of Labor that MCCC was one of the winners.

While the new Career Technology Center will allow for further expansion of the welding program, this grant was needed to address the welding shortages even sooner.

Grant partners include Southeast Michigan Community College Consortium, Southeast Michigan Wired, Monroe Public Schools, Southeast Michigan Community Alliance Workforce Board, Utility Workers Union of America, International Brotherhood of Boilermakers Local 85-Ohio and Local 169-Detroit, United Association Local 671 (Plumbers and Pipefitters), DTE Energy, Midway Products Group, Marathon Petroleum and Baker's Gas and Welding Supplies.

RECRUITING HIGH SCHOOL STUDENTS TO INDUSTRIAL TECHNOLOGY, CIS PROGRAMS

Last Winter Semester, Tom Harrill, assistant professor of electronics and computer technology, Marty DuBois, assistant professor of mechanical engineering technology, Bob Leonard, assistant professor of manufacturing technology, and Chuck Kelly, associate professor of computer information systems, participated in a program designed to recruit students from the local high schools.

A presentation venue was set up and students were offered a chance to see what sort of industrial technology and computer information systems programs the college offers. Students experienced a variety of concepts, from electronics to robotics to computer programming. Brochures for various programs were available to students as well. Schools visited were Monroe, Jefferson, Woodhaven, Bedford, Ida, Dundee, Airport, Mason and St. Mary Catholic Central high schools. The presentations were well received by staff and students. The faculty plan on continuing visits to the remaining schools in Monroe County and the Downriver area.

ELECTRONICS LABS TRANSFORMED

MCCC's two electronics labs have been completely transformed with new flooring, lighting, benches and stools, along with a variety of equipment that will help prepare students for today's electronics jobs, as well as those in the future.



Electronics labs.

FACULTY MEMBERS ATTEND PHOTOVOLTAICS SEMINAR

Alex Babycz, assistant professor of construction management technology, and Tom Harrill, assistant professor of electronics and computer technology, recently attended a seminar on Photovoltaics at Owens Community College. This seminar was intended to introduce students to the components and theory behind converting solar energy to electricity and how to assemble them into a working system that can actually power a home. Items such as charge controllers, solar panels and inverters were covered, and an opportunity to connect them into various configurations was provided. This knowledge will be used by the instructors to develop and offer curriculum at MCCC related to renewable energy sources.

IT DIVISION RECEIVES ENHANCEMENT GRANT

The Industrial Technology Division was awarded a \$2,139 Enhancement Grant Program Award to support professional growth by ITD Students through trade show tours. The applicants included Thomas Harrill, assistant professor of electronics and computer technology; Martin Dubois, assistant professor of mechanical engineering technology; Roop Chandel, professor of materials technology; Bob Leonard, assistant professor of manufacturing technology; and Parmeshwar Coomar, dean of the Industrial Technology Division. This grant will be used to support student attendance at electronics and manufacturing trade shows in Michigan in the fall of 2009 and the International Machine Tool and Automation Show in Chicago during the fall of 2010. The tours will include students from multiple program areas in the Industrial Technology Division.

MCCC BECOMES A CERTIFIED TESTING SITE TO ADMINISTER CAD CREDENTIALS

MCCC recently acquired the status "Certified SolidWorks Testing Site."



SolidWorks is a CAD (computer aided design) software package used in the creation of 3D parametric models. This certification allows MCCC the right to administer the CSWA (Certified SolidWorks Associate) exam. The exam is a three-hour comprehensive and timed assessment that will be given at the completion of the new Introduction to Solid Modeling/SolidWorks course.

Certifications of this type are in-line with state requirements for all occupational programs seeking state support and funds in the future. Successful attainment of credentials will demonstrate students aptitude with the SolidWorks mechanical design software and confirm that they have met a minimum set of standards for performance and overall conceptual knowledge to perform successfully in industry.

In addition, this will raise the visibility of our mechanical design technology program, help develop stronger industry partnerships and assist with the promotion and marketing of our program through the use of the SolidWorks software testing site logo.

Dean Kerste, associate professor of mechanical design technology, worked with the SolidWorks Corporation Education Division in becoming a certified testing site and was also successful in obtaining \$10,000 in testing vouchers. In addition, Kerste recently attended an international design conference in Orlando, Fla. that was sponsored by SolidWorks. At the event, which featured more than 100 exhibitors, he attended numerous technical training sessions and networked with SolidWorks users and employees.

WOMEN IN ROBOTICS

Bob Leonard, assistant professor of manufacturing technology, has put together a program that will expose students to a hands-on, team-oriented engineering design project. Students will be redesigning a robot for competition. The emphasis of the program is to encourage females to participate, in an effort to stimulate interest in technology careers.

Students who participate in the program will become members of the student chapter of the Society of Manufacturing Engineers. In addition, the group is seeking women to participate in designing a Web page for the group, controlling finances and creating a log.

The group is meeting on Fridays from 2:30-4 p.m. in W-169. Interested individuals should contact Leonard at (734) 384-4114 or bleonard@monroeccc.edu.

STRONG COMES TO MCCC

On February 6, the Industrial Technology Division hosted a tour of 41 female sophomore and junior students from Monroe High School's STRONG program. STRONG stands for Science, Technology and Related Occupations Need Girls. This is a grant-funded program for females in grades 10-12 that began in 2005 and has grown to include more than 125 young women.

The event began with a presentation by the Admissions Office. After the presentation, the students broke into groups and toured the Industrial Technology programs. During each 20-minute session, there was a presentation by the faculty member, a presentation by a current MCCC female in that program or a female working in industry, and a hands-on activity or demonstration.



PROFESSIONAL GROWTH THROUGH TRADE SHOW TOURS

As part of the Professional Growth Through Trade Show Tours program, Monroe County Community College students and faculty attended the Manufacturing and Electronics Show in Novi in 2007 and the International Manufacturing Technology Show (IMTS) in Chicago in 2008 (pictured here). These trips — funded by an Enhancement Grant from The Foundation at MCCC — proved to be a great learning experience for IT Division faculty and the 16 students who participated.