Volume 7, Issue 1 August 2011

TECH UPDATE

NEWS FROM THE INDUSTRIAL TECHNOLOGY DIVISION

CONTACT INFORMATION

Dean
Parmeshwar Coomar
pcoomar@monroeccc.edu
734-384-3409

Automotive Engineering
Don Kehrer
dkehrer@monroeccc.edu
734-384-4117

Construction Management
Alex Babycz
ababycz@monroeccc.edu
734-384-4116

Electronics/Electricity
Tom Harrill
tharrill@monroeccc.edu
734-384-4115

Product & Process Technology
Bob Leonard
bleonard@monroeccc.edu
734-384-4114

Mechanical Design
Dean Kerste
dkerste@monroeccc.edu
734-384-4121

Mechanical Engineering
Martin Dubois
mdubois@monroeccc.edu
734-384-4120

Nuclear Engineering Technology
Martin Dubois
mdubois@monroeccc.edu
734-384-4120

Admissions & Guidance
Mark Hall
mhall@monroeccc.edu
734-384-4261

Quality Systems & Metrology
Parmeshwar Coomar
pcoomar@monroeccc.edu
734-384-4209

Welding & Materials Technology
Roop Chandel
rchandel@monroeccc.edu
734-384-4165

Apprentice Programming/ Administrative Assistant
Cameron Albring
calbring@monroeccc.edu
734-384-4112

Renewable Energy
Clifton Brown
cwbrown@monroeccc.edu
734-384-4264

CAD Lab Technician/Perkins
Technical Specialist
David Dowler
ddowler@monroeccc.edu
734-384-4467

CAREER TECHNOLOGY CENTER UPDATE

Architectural rendering of the Career Technology Center.

On July 25, the College submitted the Phase 400 – Preliminary Design/Development Submission for the new Career Technology Center to the Department of Technology, Management and Budget (DTMB). This submittal, which further refines the project providing more detail and definition, was developed over the past months by our architects in concert with faculty and administrators to address our needs while keeping the scope of the project within the $17 million approved budget.

The DTMB is currently reviewing MCCC'S submittal and, when approved, it will authorize the college to proceed to the Final Design/Construction Documents phase. It is during this phase that MCCC will move the project to the level of detail required for bidding and construction.

It is anticipated that this phase will be completed and the Final Design/Construction documents will be submitted to the DTMB in December. The building is expected be bid in January 2012 with construction beginning in March 2012. In addition, MCCC has proposed to the DTMB that it be given approval to bid the building pad preparation in September and begin site preparation in October 2011. Should this be approved, the campus main drive will be closed between the Health Education Building and the Life Sciences Building in November through the duration of the construction.

As designed, the Career Technology Center is a 60,350-square foot facility. Information about the building is posted at www.monroeccc.edu/finance.

MCCC DEBUTS RENEWABLE ENERGY COURSES

Starting this fall, the Monroe County Community College will be offering two courses in renewable energy:

- ELEC 156 (Intro to Renewable Energy) will cover the science and basic principles of energy systems as well as energy related sustainability and societal issues. This course provides the scientific foundation for the Renewable Energy program.
- ELEC 157 (Intro to Solar Energy) will cover the basics of solar thermal and photovoltaic systems

Two additional courses will be offered starting Winter Semester:

- ELEC-158 (Intro to Wind Power) covers both small and large wind systems, including technology, power generation, available wind and site selection, economics and environmental concerns.
- ELEC-257 (Applied Photovoltaics) covers system planning and design, grid tie, commissioning, National Electric Code and zoning.

These classes are hands-on with extensive lab work, eventually leading to possible certificates in the areas of solar and wind technology.

For more information on renewable energy courses at MCCC, contact Clifton Brown, assistant professor of renewable energy, at cwbrown@monroeccc.edu, or call the Industrial Technology Division office at (734) 384-4112.

INDUSTRIAL TECHNOLOGY DIVISION ADDS FACULTY

Clifton Brown

Clifton Brown joined the Industrial Technology Division faculty in January as **assistant professor of renewable energy.** Brown has developed four new courses in alternative energy that will be offered this year. He has extensive experience in the renewable energy industry and is an electrical engineer by profession. He holds both a bachelor's degree and master's degree in electrical engineering from North Carolina State. Prior to coming to MCCC, Brown taught courses in renewable energy and applied physics at Lansing Community College and held a senior engineer/scientist position in the electronics industry.

Jason Karamol joined the Industrial Technology Division as a **full-time temporary faculty member in the summer of 2011 to teach in the Department of Labor grant-funded accelerated welding program.** He is a certified welding inspector by the American Welding Society and worked as a contract welder in various organizations. Karamol earned his associate of applied science degree in welding and gas tungsten arc and gas metal arc welding certificates at Owens Community College. He is currently working on a bachelor's degree in welding technology degree at Siena Heights University.

NEW NUCLEAR ENGINEERING TECHNOLOGY PROGRAM BEGINS

Monroe County Community College's new nuclear engineering technology program begins this fall.

MCCC is one of 40 colleges nationwide offering a program in the area. The industry partner for the program is DTE Energy, and the curriculum conforms to the Nuclear Uniform Curriculum Program as developed by the nuclear industry and professional societies in support of nuclear power in the U.S. The Nuclear Uniform Curriculum Program consists of a three-step approach to 1) quantify the need, 2) define the curriculum, and 3) implement the right number of programs in each region.

The intent of the nuclear engineering technology program is to provide graduates with the initial preliminary training and education required to work in the nuclear industry. Contact Mark Hall, director of admissions and guidance services (mhall@monroeccc.edu), Martin Dubois, assistant professor of mechanical engineering technology (mdubois@monroeccc.edu) or the ITD office at (734) 384-4112 for more information on the program.

HOT JOBS FOR ITD STUDENTS

Daniel Lake, former construction management technology graduate, is now employed as an engineer for Ventower Industries.

Alex Britz, current mechanical engineering technology student, is now employed at Sentinel Fluid Controls.

Shane Raymo, former welding grant student, is working at the UAW shop in Faurencia, Mich.

Jim Canales, former advanced welding grant student, is now employed with BP Oil Refinery (Local 8).

Laurie Grey, former welding grant student, is now employed at CDX Railroad.

TWO NEW ELECTRONICS COURSES DEVELOPED

Two new electronics courses will be offered at MCCC this year: AC/DC Motors and Electronic and Electrical Troubleshooting.

AC/DC Motors will be offered in the Fall Semester. This course is designed to provide students with knowledge of AC/DC motor operating characteristics and control circuits. It will provide hands-on experience in wiring control circuits, checking the operational characteristics of motors and the use/installation of circuit protection devices. The construction and operation of three-phase induction motors and their related starting control and protection circuits along with variable-frequency drives will also be addressed.

Electronic and Electrical Troubleshooting will be offered during the Winter Semester. It introduces the logic and concepts of a systematic approach to troubleshooting and repair of a variety of electrical and electronic equipment.

Each course is three credit hours. For registration information, contact the Admissions and Guidance Office at (734) 384-4104 or go to www.monroeccc.edu.

FACULTY, STUDENTS TOUR GLOBAL MANUFACTURING ALLIANCE PLANT

On May 3, 2011 Faculty, part-time instructors and students visit Global Engine Manufacturing Alliance (GEMA) in Dundee, Michigan. The Global Engine Manufacturing Alliance is an owned subsidiary of Chrysler LLC/Fiat. The plant manufactures an advanced family of fuel-efficient, cost-competitive, in-line four-cylinder gasoline engines for the automotive industry. Special thanks to Natasha Avant for organizing the plant tour.

MCCC students and faculty at the Global Engine Manufacturing Alliance.

GREEN LEAD PRESENTATION

Alex Babycz faculty in the ITD Division, who is also a LEED AP, presented a seminar to college staff and personnel. The topics covered included green conservation, geothermal energy uses, energy conservation and aspects of green construction. This provided the college staff with useful insight into construction and building of a green facility like the Career Technology Center.

PERKINS TECHNICAL ASSISTANCE VISIT FINDS COLLEGE IN COMPLIANCE

A representative from the state visited the college on a technical assistance visit in May of 2011. The representative, Shree Price, found the college in full compliance with all aspects of the grant operation and any immediate questions she had were promptly attended to by college personnel. The Perkins grant is managed and administered by the dean of the Industrial Technology Division, who is also the Perkins occupational contact for the college. The Perkins allocation to the college in 2010-11 was roughly $183,000. Areas served by the grant include the special populations area of the college, disability services, placement services, and all occupational programs including health, industrial technology and business.

PROFESSIONAL DEVELOPMENT NEWS

• **Tom Harrill,** assistant professor of electronics and computer technology, participated in a two-day workshop this summer for electric-drive vehicle technology at Wayne State University. At the workshop, participants explored and discussed state-of-the-art technologies involving electric-drive vehicles. This information will be incorporated into future electric/hybrid electric vehicle classes at MCCC.

• **Marty Dubois,** assistant professor of mechanical engineering technology, attended the American Society of Engineering Educators 2011 Annual Conference held this summer in Vancouver, BC. The conference featured 125 exhibitors and 1,500 individual papers. It was attended by more than 3,900 people. The attendees included education faculty, administrators and industry representatives. Three main areas were of direct benefit to the conference attendee: conference paper presentations, vendor displays and the opportunity to meet and discuss academic issues with educators from other institutions.

ASSE Conference location in Vancouver, BC.

The SolidWorks Design Conference at the Henry B. Gonzalez Convention Center in San Antonio.

• **Dr. Dean Kerste,** professor of mechanical design technology, recently attended the week-long SolidWorks World Design Conference at the Henry B. Gonzalez Convention Center in San Antonio. The conference consisted of keynote speakers, more than 150 technical breakout sessions, more than 100 exhibitors and the ability to network with other SolidWorks users, resellers and SolidWorks employees. SolidWorks is a 3D computer aided design (CAD) suite that focuses exclusively on product design. Its applications are intended for mechanical designers and engineers in a wide range of sectors: industrial, medical, scientific, consumer, technology, transportation, and education. SolidWorks is used by more than 1.5 million product designers and engineers worldwide, representing 144,600 organizations.

• **Clifton Brown,** assistant professor of renewable energy, attended two seminars this summer that were sponsored by the Department of Energy. The first was the Model Photovoltaic Program Institute held at the Midwest Renewable Energy Association in Custer, Wisc. The one-week seminar was for college faculty building solar programs at their college and in their local communities. The second was the two-week Sustainable Energy Education and Training Technology Workshop held at the Colorado School of Mines and the National Renewable Energy Laboratory in Golden, Colorado. NREL is the nation's foremost research lab in the Renewable Energy field. This workshop was based on research in emerging energy technologies and future global energy infrastructure conducted by the U.S. Department of Energy's National Laboratories and other research institutions, such as MIT.

A renewable hydrogen fueling station at the National Renewable Energy Laboratory.

A charging station under development for the Midwest Renewable Energy Association's plug-in Toyata Prius. The Prius will be parked under the photovoltaic modules once the charger is completed.

WELDING CENTER OF EXPERTISE FACILITY ON HURD ROAD NOW OPERATIONAL

The new signage at the Hurd Road Facility.

Monroe County Community College is offering 10-week courses to prepare students for American Welding Society QC10 and QC11 certifications at its new Welding Center of Expertise facility located at 1004 W. Hurd Road in Monroe.

To meet program demand, the college recently completed the renovation of approximately 6,770 square feet of former factory space that was donated to The Foundation at MCCC by Hurd Road Property Inc. in fall 2010.

This no-cost training is funded by a grant awarded under the Community Based Job Training Grant as implemented by the U.S. Department of Labor's Employment and Training Administration.

Application forms are available at www.mcccweldcoe.org.

For more information, contact Joe Czapiewski, welding grant coordinator, at (734) 384-4145 or jczapiewski@monroeccc.edu.

FUNDS FOR IMPROVEMENT OF POST SECONDARY EDUCATION (FIPSE 1) GRANT CLOSED OUT

This summer, Monroe County Community College has closed out a $123,000 Department of Education Funds for Improvement of Post Secondary Education (FIPSE 1) Grant, which was allocated through the Michigan Community College Association to develop comprehensive curriculum and buy limited equipment for the newly launched nuclear engineering technology program.

Comprehensive curriculum with extensive class notes, lab activities and assessment strategies were developed for six courses with the help of subject matter experts from DTE Energy. The lead for the project was Martin Dubois, assistant professor of mechanical engineering technology. Work is currently underway on a follow up grant from the Department of Education (FIPSE 2) to develop a non-destructive program certificate in support of the nuclear technology program. The expected completion date of the activities associated with this grant is October 2012.

FACULTY ACHIEVEMENTS

Dr. Dean Kerste, professor of mechanical and design technology, earned his doctorate in education from Northcentral University.

Justin Schmidt, instructor of welding technology, earned Certified Welding Inspector/Certified Welding Educator certification from the American Welding Society.

Dr. Roop Chandel, professor of materials technology, completed 25 years of service with the American Welding Society and received the Sliver Certificate from the organization.

140 EXPLORE CAREERS AT X-TECH EVENT

On April 20 , the Industrial Technology Division at Monroe County Community College invited all area sophomores, juniors and seniors and their parents to X-Tech to explore the various technology careers offered at MCCC. About 140 participants attended the event and were introduced to industrial technology programs through hands-on activities led by the faculty. Participants had the chance to weld metals, run state-of-the-art machine tools, control robots, draw with CAD equipment, test steel strength, program electronic equipment and more. The program provided a great opportunity for both high school students and career changing adults to explore careers they may not otherwise consider. Industry and university partners represented included DTE Energy and Lawrence Technological University. ITD programs areas represented included automotive engineering technology, construction management technology, mechanical design technology, mechanical engineering technology, nuclear engineering technology, renewable energy, electronics, product and process technology, quality and metrology, and welding.

QUESTIONS ABOUT THIS PUBLICATION

Contact Cameron Albring,
Industrial Technology Division
calbring@monroecccedu
734-384-4112