

## Partnerships bolster training opportunities

Written by Linda K. Fischer, Associate Editor  
Tuesday, 01 March 2005 00:00

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News from the education arena.

Do you recall an instance when you had to complete a certain task, but were not able to do it by yourself? You enlisted a partner to assist, and the job was completed without trouble.

Well, that is what many industrial companies are doing with educational institutions and other groups to address the shortage of skilled workers needed to bolster workforces in high-technology plants. Here are some examples from around the United States.

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Michigan Technical Education Centers (M-TECs) are located at 18 community colleges across the state and provide on-demand training in numerous technical fields. Often the equipment used in the classes has been provided by area businesses.

Each facility is independent, but all offer open entry, open exit training which means training can be started at any time without waiting and without lengthy commitments. Instruction is self-paced and skill-based, allowing trainees to advance when the required competencies are mastered.

The centers, coordinated by the Michigan Economic Development Corp., are housed in new facilities, offering advanced training technologies. The accent is on providing training based on industry standards, which reflects current certification and qualification requirements of the respective local industries. Training can be done at either the M-TEC facility or an employer's plant.

Occupational training varies by center and can include information technology, manufacturing and production, construction, health occupations, or automotive technology. Courses generally reflect the needs of the business community around the center.

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For example, the center at Kalamazoo Valley Community College offers courses in certified pump and seal specialists I and II, certified pump repair technician, and operating mechanically sealed equipment. Students move from classrooms to static and dynamic labs for hands-on work on more than 50 pumps. Flowserve Corp. is the sponsor of this program.

The Lansing Community College M-TEC has partnered with Lincoln Electric Co. to outfit 43 welding stations in a welding lab and eight stations in an autobody area for various welding classes. The center also offers programs in electrical and machine trades, lean manufacturing, computer drafting and design, construction, quality, and team development, among others. Other corporate partners there are General Motors, EDS, and Haas. <http://medc.michigan.org/miadvantage/education/mtec/>

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U. S. Steel, after shifting its narrowly defined job functions to more universal multi-craft job functions with specific focus on mechanical and electrical fundamentals, turned to Penn State University McKeesport for a training program to upgrade the skills of its employees to match the new job functions.

What developed were Mechanical Learner and Electrical Learner training programs that encompass 4000 hours of instruction in the classroom and on-the-job in the plant. The programs take 2 years to complete and accommodate 20 students at a time.

According to material from the company which provided much of the courseware, candidates who want to apply for one of the programs must pass an assessment test and be willing to accept a reduced salary. Classroom work takes place at U.S. Steel's onsite training facilities and on-the-job training takes place in the Edgar Thomson and Irvin plants near Pittsburgh. [www.mk.psu.edu](http://www.mk.psu.edu)

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The Akron chapter of the National Tooling and Machining Association owns the nonprofit Akron Machining Institute which offers a diploma-level training program for machine tool maintenance and repair. The 7 month, 960 hour program covers math, blueprint reading, manual machining, hydraulics, pneumatics, electricity, welding, programmable controls, millwright, and maintenance.

Enrollment involves a personal interview, tour, application, and entrance exam. Credit will be granted for previous knowledge or training. [www.akronmach.com](http://www.akronmach.com)

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MPACT Learning Center LLC and the Greensboro (NC) Women's Resource Center have developed a strategic alliance to advance vocational options for women in the maintenance industry.

The center's New Choices program is a job-readiness program for displaced homemakers who are re-entering the paid workforce. A displaced homemaker is a woman who has been out of the paying workforce for at least 5 years and now needs to return to work to support herself and her family.

Since the fall of 2004, the center has been sending some clients from its job-readiness program to MPACT to help introduce them to the nontraditional program. MPACT has provided technical skills to maintenance personnel for 20 years. Adult learners study hydraulics, pneumatics, electrical, electronics, systematic troubleshooting, and other curricula. WRC: (336) 275-6090. [www.mpactlearning.com](http://www.mpactlearning.com)

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Companies often develop a close relationship with a nearby educational facility. Such is the case with the Milwaukee School of Engineering and ABB Inc., New Berlin, WI. The school's Industrial Control Laboratory has 10 new motor drives to give students access to latest generation electrical motor drive technology. An ABB vice president noted many MSOE

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graduates have joined ABB and “it is satisfying—and important—to continue to support an academic institution that is graduating this level of talent.”

The school has historic close ties to industry, so students’ projects are industry-oriented to give them real-world experience. The new equipment helps make the transition from academic test lab to engineering company’s work team easier. [www.msos.edu](http://www.msos.edu)

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This example may not involve maintenance, but it shows an opportunity to reach young workers. The Mechanical Contractors Association (MCA) is facing some of the same problems as maintenance—perception of jobs as menial and low-paying, lack of interest in the construction field, an aging workforce.

Among other activities by MCA affiliates around the country, the Chicago group has brought together a board that represents all the trades, as well as engineering and construction, to open ACE-Tech, the Architecture, Construction, and Engineering Technical Charter High School in Chicago.

The school provides a curriculum—including strong math and science—that complies with Illinois education standards for a high school diploma. Students choose a concentration their second year. In the last two years, they will be exposed to all the construction fields as well as job shadowing and internships.

According to the school Web site, there are no tests for entrance and no tuition. The rigorous program will “prepare students very well for college entrance and trades apprenticeship programs.” [www.acetechnical.org](http://www.acetechnical.org)

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Here's one news item where you can create your own partnership. The Instrumentation, Systems, and Automation Society (ISA) has launched its Certified Industrial Maintenance Mechanic (CIMM) program.

The 4-hour exam will test competencies in four performance domains: maintenance practices, preventive and predictive maintenance, troubleshooting and analysis, and corrective maintenance. Eligibility requirements include a minimum of 5 years of relevant work experience as a maintenance mechanic in an industrial setting or 3 years of work and 2 years of education, application, and fee. ISA will give credit toward education for relevant coursework at an accredited school or in a certified apprenticeship program.

A study guide is available and a review course is under development. Recertification is every three years. [www.isa.org/cimm](http://www.isa.org/cimm)