

## Manufacturers: Support Schools that Support Manufacturing!



The FIRST Robotics Competition combines the excitement of a varsity sport with hands-on training in science and technology to help high school students discover how rewarding a career in engineering or technology can be. Remote-controlled robots, piloted by students and cheered on by thousands of screaming fans, go head-to-head in short games on the floor of a sports arena, battling it out to earn points during a two-minute round.

Students on FIRST teams learn from and play with the "pros" - professional engineers who donate their time to work side-by-side with students to help design and build the sophisticated competition robots. This gives FIRST students an insider's view of a career in science, engineering and technology not possible in a normal classroom setting. Plus, unlike other high school athletics, every student on a FIRST robotics team has a chance to turn "pro." FIRST is always interested in gaining additional industry support, in the form of sponsorship, volunteering as a competition judge, and serving as a mentor to a school robotics team.

There are over 200 FIRST teams in Michigan in 2013. For corporate involvement, please contact François Castaing at [francois.castaing@gmail.com](mailto:francois.castaing@gmail.com) or go to <http://www.firstinmichigan.org/> for more information. **Source:** see website.



As a manufacturer you could become a sponsor or a competition judge with Skills USA. See more information at the Michigan student leadership organization website: <http://www.miskillsusa.org/> or contact Corporate Development Coordinator: Steve Lick, [slick@miskillsusa.org](mailto:slick@miskillsusa.org); or call 734/487-3888

SkillsUSA is a national organization serving more than 310,000 high school and college students and professional members who are enrolled in training programs in technical, skilled, service and health occupations.

SkillsUSA prepares America's high performance workers by providing quality education experiences for students in leadership, teamwork, citizenship and character development through



building and reinforcing self-confidence, work attitudes and communications skills. The organization also emphasizes total quality at work, high ethical standards, superior work skills, life-long education and pride in the dignity of work. SkillsUSA also promotes understanding of the free enterprise system and involvement in community service activities.

Approximately 15,000 teachers and school administrators serve as professional SkillsUSA members and instructors. More than 1,000 corporations, trade associations and labor unions actively support National SkillsUSA through financial aid, in-kind contributions, and involvement of their people in SkillsUSA activities. Many more work directly with state associations and local chapters.

SkillsUSA programs include local, state and national competitions where students demonstrate occupational and leadership skills. During the annual national-level Championships, more than 5,000 students compete in 92 occupational and leadership skill areas. The programs also help to establish industry standards for job skill training in the classroom. SkillsUSA Michigan does not compete in health occupations contests.

### **Youth Employment Programs (e.g. apprenticeship, internships, and employment opportunities) for K-12 Students:**

Contact your local Career Education Planning District Administrator, by County:

<http://www.ptdtechnology.com/Portals/4/PTD/Files/CTEIS/CEPD%20Look%20Up.pdf>

### **Donate Equipment to a Local Program**

Career and Technical Education (CTE) programs have been the grateful recipient of many donations by either business and industry or people throughout the years. If you would like to donate equipment to your local CTE program, follow the steps below to view schools offering programs that align with your business (or follow the steps in the next section – “Become a CTE Program Advisor” to explore programs in your area):

Go to: <http://cteisreports.com> (this is a Public viewing site)

Select: X0108 Secondary Funding

In the pull down menu, Select the program that aligns with your business

Select Report 4483D (latest year)

Click Run Report, to view a list of schools offering that program.

To view entire list, pull down list from the floppy disc icon (located on top right side of page); then Select PDF format.

## Become a CTE Program Advisor

Program Advisory Committees effectively support successful Career and Technical Education (CTE) programs. The primary purpose of these committees is to serve as a resource and connection to the workplace for CTE teachers and administrators. The expertise of individuals from business and industry plays an integral role in providing high-quality CTE programs, in addition to fostering the development of a trained and educated workforce.

Program Advisory Committees must meet a minimum of twice a year. The chair of the Advisory Committee must be from business/industry. Advisory committees consist of local representation, including business, industry, labor, parents, academic and CTE teachers, administrators, faculty, and councilors. Visit the “Area Career and Technical Education Center website. Click on your local area to obtain contact information for school administrators:

[http://www.michigan.gov/documents/mde/Area\\_Center\\_Map\\_395187\\_7.pdf](http://www.michigan.gov/documents/mde/Area_Center_Map_395187_7.pdf)

## Engage with or Develop an Industry/Education Association

Assist local manufacturing Career and Technical Education (CTE) programs by developing an industry/education association or become involved with an existing one. Refer to the “Area Career and Technical Education Center” website:

[http://www.michigan.gov/documents/mde/Area\\_Center\\_Map\\_395187\\_7.pdf](http://www.michigan.gov/documents/mde/Area_Center_Map_395187_7.pdf)

Welding, Soldering and Brazing program currently has 2 student chapters in Michigan, and the contact information is listed below. These welding programs are monitored by the American Welding Society (AWS), which provides the program standards, end-of-program assessments, and certifications for qualified programs. At present there are 45 state-approved welding, soldering, and brazing high school programs operating; and serving approximately 4,098 students.

### Michigan

Ferris State University  
Welding Engineering Dept.  
Technology Building  
Big Rapids, MI 49307  
(231) 591-2952

Advisor: Jeff Carney  
Chairman: tba

Muskegon Area Career Tech Center  
200 Harvey St.  
Muskegon, MI 49442  
(231) 767-3600

Advisor: Rodney Bulthouse  
Chairman: Alex Basaj

The Electrical/Electronics Equipment Installation and Repair programs are concerned with robotics, engineering, and electronics. Currently, there are 22 state-approved high school

programs in operation, serving approximately 1,615 students. For additional information, call the Office of Career and Technical Education at 517/335-0359.

Woodworking program focuses on technicians laying out and shape stock, assemble wooden articles or subassemblies, mark, bind, saw, carve, and sand wooden products, repair wooden articles, and use a variety of hand and power tools. There are approximately 12 state-approved programs operating; serving 1,647 students. For additional information, call the Office of Career and Technical Education at 517/335-0359.

The Heavy/Industrial Equipment Maintenance Technologies program provides instruction in inspection, maintenance, and repair of tracks, wheels, brakes, operating controls, pneumatic and hydraulic systems, electrical circuitry, and engines and techniques of welding and brazing. There are 8 state-approved programs operating; serving 798 students. For additional information, call the Office of Career and Technical Education at 517/335-0359.

Machine Tool Technology/Machinist program delivers instruction so that technicians can manufacture, assemble, test, and repair parts, mechanisms, machines, and structures in which materials are cast, formed, shaped, molded, heat treated, cut, twisted, pressed, fused, stamped, or worked. Currently, there are approximately 39 state-approved programs operating; serving 4,073 students.

The Michigan Industrial and Technology Education Society (MITES) is a non-profit organization with over 600 members and volunteers, providing opportunities for students to compete in regional, state and national skills-based competitions in: Wrought Metals (includes welding), Mechanical Drawing, Architectural Drawing, Graphic Arts, and Machining. For additional information, visit <http://www.inghamisd.org/cacc/futurestudents/studentorg/mites/>

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**Source:** Compiled with assistance from staff from the Michigan Department of Education, Career and Technical Education (CTE), especially Patricia Talbott-Collins, Ed.D.