

Workforce Development

Helping You To Meet Your Workforce Challenges

Training the Next Generation: Students: Prepare for the World of Advanced Manufacturing

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Americans today still believe that manufacturing is the foundation of a strong economy. However, relatively few Americans are personally interested in manufacturing careers according to Deloitte. Here are some facts and ideas regarding our need to create a workforce to meet our advanced manufacturing challenge.

Facts:

The youth unemployment rate is more than 11 percent.

Manufacturers need 600,000 skilled workers to fill vacant positions.

The highly skilled manufacturing worker shortage could be as high as 875,000 workers by 2020, according to Boston Consulting Group.

The existing workforce is aging, and the expected number of manufacturing jobs to become available by 2020 is 3.5 million.

Middle-skill jobs make up at least 25 percent of all jobs opening between now and 2018.

In this century, 60 percent of new jobs in the U.S. will require skills possessed by only 20 percent of the workforce. (US Dept. of Education)

85 percent of PMPA shops responding to our monthly surveys state that outlook for employment is steady or improving.

Jobs Today: Technology-Based

Technology-based means employees need math functionality.

Programming our CNC machines requires numeracy, arithmetic skills, algebraic skills, understanding order of operations and an understanding of geometry.

Technology does not mean robots substituting for workers; it means workers need to be able to program and understand robots.

All products made are first rendered with a software package to create a human and computer-readable design. Machining is a high-tech, computer-based process of creation.

Skills Needed: Not Just Technical

Technical skills are needed; we do not expect these from the schools. We expect the graduates to be trainable for technical skills, meaning they have the ability to use algebra, geometry, arithmetic, graphs and make inferences from calculations.

Cognitive skills are what we need to have so that our training can be successful. Conscious efforts to reason, think, remember salient facts and make decisions based on these efforts are examples of cognitive skills.

Non-cognitive skills can be deal-breakers in our hiring if they are not present. Motivation, integrity, willingness to learn, effective communications and interpersonal relations are just a few examples.

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“33 percent of employers cited lack of ‘soft skills’ as a key reason they were having trouble filling jobs.” (Manpower 2013 Talent Shortage survey)

What Can We Do?

We can provide increased opportunity for career exploration for students beyond “go to college” in early-years’ open houses, career fairs, Manufacturing Day. Sponsor robotics, STEM, science day and makers clubs in schools in your area.

Get involved and increase outreach to schools and communities to engage with students and promote manufacturing as a great career choice.

Invite local media to your shop and discuss career opportunities and success stories.

More hands-on programs like invention convention, science fairs, and makers fairs to get students into “doing,” not just listening, to lectures and watching videos.

Make sure your shop is a clean, well-lit and safe operation where people would be proud to have their sons and daughters find their place to make a difference as they make a living.

What have you done?