

## THE OH-PENN MACHINING CAREER PATHWAY – AN INTRODUCTION

Many students (and their parents) believe the only way to get a good job is to go to college right after high school. We're here to tell them that's not true! There are great alternatives to college in the manufacturing industry—jobs and training programs that cost a lot less than college and often give young adults a chance to earn while they learn. ***As a guidance counselor, you see students daily and often identify students who may not be interested in a traditional college track but are well-positioned for technical training.*** We hope you'll use this tool to help these students find their way to rewarding careers in manufacturing.

The enclosed Machining Career Pathway was designed to show students the jobs that are available in advanced manufacturing, the training needed, and how much money they can expect to earn each step of the way. ***The purpose of the Machining Career Pathway is to educate students about jobs in manufacturing—jobs they can start right away and earn a living wage.*** The pathway begins with a standard high school diploma and an entry-level job, and guides students through the experience, training, and education needed to move up. Students can move from one level to the next through work experience and formal training, or they can choose to exit the pathway when they find an occupation they love. Choosing a manufacturing career doesn't mean giving up on college! Students can earn a Bachelor's Degree in Engineering or a related field and then find work in a number of challenging and extremely technical roles. Whichever path they choose, students are eligible for federal financial aid, and many manufacturers offer tuition assistance to their employees.



As you share the Machining Career Pathway with your students, you can walk them through each step using the information on the next page. You can also find more information on our website: [IndustryNeedsYou.com](http://IndustryNeedsYou.com).

### OUR REGION NEEDS MORE MACHINISTS!

Fact: Because of a misperception of the manufacturing industry, stable, good-paying jobs are going unfilled in the Mahoning Valley. Many people have an outdated view of manufacturing, picturing laborers in dark, dirty, and dangerous environments, but this visual could not be further from the truth. Today's Machinists work in highly technical, clean, and well-regulated environments, setting up and operating a variety of machine tools to produce precision parts and instruments. These jobs require strong math skills and an eye for detail.

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## STEP 1: Manufacturing Foundation

A traditional high school senior can sign up for the Manufacturing Readiness Program and, in just six weeks, learn important workplace skills and earn certifications that show employers they're ready to work. Students who decide to pursue manufacturing while they're still in high school can earn the same credentials by attending a High School Career and Technical Center.

<i>Training:</i>	Manufacturing Readiness
<i>Duration:</i>	6 weeks
<i>Cost:</i>	Free
<i>Certification(s):</i>	OSHA 10, NCRC (WorkKeys), MSSC CPT*
<i>Credits:</i>	Up to 12 College Transfer Credits
<i>Occupation:</i>	Certified Production Technician
<i>Wage Range:</i>	\$9.50 to \$14.50 per hour

\*OSHA 10 = Occupational Safety and Health Administration 10 hour Certificate  
 NCRC = National Career Readiness Certificate  
 MSSC CPT = Manufacturing Skill Standards Council - Certified Production Technician

## STEP 2: Entry Level Machining

With a high school diploma or GED, anyone can sign up for a one-year Machining Program and earn certifications, college credits, and complete an on-site internship. Those who want more formal education can follow up with an additional year at a community college, earning an Associate's Degree in applied science or engineering technology.

<i>Training:</i>	Machining Program / Associate's Degree
<i>Duration:</i>	1 year / 2 years
<i>Cost:</i>	~\$11,000 per year (Financial Aid is available!)
<i>Certification(s):</i>	5-9 NIMS, * 240 hour internship or co-op
<i>Credits:</i>	30-60 College Credits
<i>Occupation:</i>	Manual Machine Operator / Machinist
<i>Wage Range:</i>	\$12.00 to \$15.00 / \$15.00 to \$18.00

## STEP 3: Advanced Machining

Students who want to focus on hands-on training should move on to Step 3. As a Machining Apprentice, students will work part-time and go to school at the same time, thus earning a paycheck while completing college level coursework. Apprenticeships can take anywhere from two to four years.

<i>Training:</i>	Advanced Machining Apprenticeship and/or Employer Sponsored Training
<i>Duration:</i>	Varies
<i>Cost:</i>	Usually none
<i>Certification(s):</i>	NIMS Level 2*
<i>Credits:</i>	Varies
<i>Occupation:</i>	Journeyman Machinist
<i>Wage Range:</i>	\$18.00 to \$22.00 per hour

\* NIMS = National Institute for Metalworking Skills

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## STEP 4: Management and Engineering

With an Associate’s Degree, students can transfer into a four year college or university and complete two additional years of college to earn a Bachelor’s Degree. As a result, graduates will be well positioned for promotion into supervisory or engineering roles. This is the most creative of machining related occupations! Manufacturing Engineers are often designing or perfecting systems and processes for new or existing products.

<i>Training:</i>	College coursework in Engineering, Physics, and Math
<i>Duration:</i>	2 years beyond Associate’s Degree
<i>Cost:</i>	Varies
<i>Certification(s):</i>	SME*
<i>Credits:</i>	Bachelor’s Degree
<i>Occupation:</i>	Manufacturing Engineer, Shop Supervisor, Quality Analyst
<i>Wage Range:</i>	\$19.00 to \$30.00 per hour

\* SME = Society of Manufacturing Engineers

### Education Providers:

There are a number of education providers at each step of the pathway, so that students can find a program that is convenient and close to home. More information about providers can be found at [IndustryNeedsYou.com](http://IndustryNeedsYou.com). High school students can also contact the Career and Technical Center in their area for information about the next steps. Programs are starting this summer!

<b>Choffin Career and Technical Center</b>	Youngstown	(330) 744-8700
<b>Columbiana County Career and Technical Center</b>	Lisbon	(330) 424-9561
<b>Lawrence County Career and Technical Center</b>	New Castle	(724) 658-3583
<b>Mahoning County Career and Technical Center</b>	Canfield	(330) 729-4000 ext. 1970
<b>Mercer County Career Center</b>	Mercer	(724) 662-3000
<b>Trumbull Career and Technical Center</b>	Warren	(330) 847-0503



### About Oh-Penn

The Oh-Penn Manufacturing Collaborative was established as a joint effort between the Mahoning Valley Manufacturers Coalition and the Advanced Manufacturing Industry Partnership of Lawrence and Mercer Counties. It is the brand under which the groups promote their goals to increase the manufacturing skilled workforce in the region and create more seamless manufacturing career pathways in the five-county Oh-Penn Interstate Region.