

Programs By Career Cluster:

Manufacturing, Information Technology, Communications

Engineering and Metal Fabrication Academy: Machining **D** **C**

Students gain a global understanding of precision machining, the process of removing metal to create extremely accurate parts. They learn all aspects of the advanced manufacturing industry, including how to operate CNC (Computer Numerical Controlled) lathes, mills and power saws. The creation of blueprints and designs using industry-driven software and technology is covered, as is performing quality control and inspections. Students will also be exposed to basic welding.



Possible Career Paths:

- *With a 2-year CTE program:* Machinist, increased demand 5%* (323 current openings)†
- *An associate's degree or postsecondary:* Industrial Machinery Mechanic, increased demand 10%* (103 current openings)†
- *A bachelor's degree:* Materials Scientist, increased demand 10%*

Engineering and Metal Fabrication Academy: Welding **D** **C**

Students attain comprehensive knowledge of welding, the art and science of joining metal together. Students experience the fabrication of industry-specific products. Common industry standard processes of Shielded Metal Arc Welding (SMAW-Stick), Gas Tungsten Arc Welding (GTAW-TIG), and Gas Metal Arc Welding (GMAW-MIG), as well as plasma arc and oxy-acetylene cutting are covered. Students will be exposed to the programming (CNC) aspect of machining.

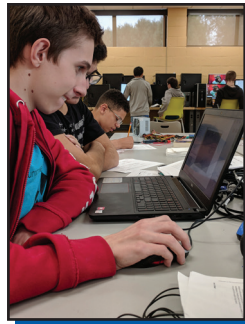


Possible Career Paths:

- *With a 2-year CTE program:* Welder, increased demand 8%* (135 current openings)†
- *An associate's degree or postsecondary:* Certified Welding Inspector, increased demand 10%‡
- *A bachelor's degree:* Materials Engineer, increased demand 14%*

Computer Technology **D** **C**

Students gain knowledge of both hardware and software relevant to the information technology (IT) field. Through the Cisco Networking Academy, students learn the curriculum of the CompTIA A+, a preferred certification for technical support and IT operational roles. Students are introduced to video game design. Hardware studies include computer assembly, preventive maintenance and troubleshooting. Due to the widespread use of mobile devices, these platforms and their operating systems are also a focus.



Possible Career Paths:

- *With a 2-year CTE program:* Help Desk Specialist, increased demand 11%‡
- *An associate's degree or postsecondary:* Web Developer, increased demand 15%‡
- *A bachelor's degree:* Software Developer, increased demand 24%‡

Advertising Design/Multimedia **C**

Students learn how to utilize industry-standard software to create, design, edit and produce graphic images for print design, web design and animation. In addition students produce and edit videos and audio while utilizing lighting, microphones, and traditional camera movements. A focus on strategic communications is woven throughout the curriculum.



Possible Career Paths:

- *With a 2-year CTE program:* Assistant Graphic Designer, increased demand 4%‡
- *An associate's degree or postsecondary:* Audio Visual Technician, increased demand 12%‡
- *A bachelor's degree:* Multimedia Artist, increased demand 8%‡

KEY

D Dual Enrollment

C Industry Credentials (or credentialing/ licensing preparation)

* New York projected growth, careeronestop.org †Finger Lakes Region, source MCC Economic and Workforce Development

‡ Projected national growth for 2016-2026, US Bureau of Labor Statistics

Programs & Career Cluster Alignment

Our programs correlate to one or more US Dept. of Education Career Clusters

<u>Program</u>	<u>Correlated Career Clusters</u>	<u>Program</u>	<u>Correlated Career Clusters</u>
Advertising Design/ Multimedia	Arts, A/V Technology & Communications	Culinary Arts	Hospitality & Tourism Human Services
Auto Body and Collision Repair Technology	Transportation, Distribution & Logistics Science, Technology, Engineering & Mathematics	Dental Assisting	Health Science
Automotive Technology	Transportation, Distribution & Logistics Agriculture, Food & Natural Resources	Engineering and Metal Fabrication Academy - Machining	Manufacturing Transportation, Distribution & Logistics
Baking	Hospitality & Tourism Human Services	Engineering and Metal Fabrication Academy - Welding	Manufacturing Transportation, Distribution & Logistics
Carpentry	Architecture & Construction Science, Technology, Engineering & Mathematics	Exercise Science	Health Science
Certified Nurse Assisting	Health Science	HVAC/Plumbing	Architecture & Construction
Child and Family Development	Education & Training Human Services	Heavy Equipment Operation and Maintenance	Transportation, Distribution & Logistics Agriculture, Food & Natural Resources
Computer Technology	Information Technology Science, Technology, Engineering & Mathematics	Outdoor Powersports Technology	Transportation, Distribution & Logistics
Intro to Construction Trades	Architecture & Construction Science, Technology, Engineering & Mathematics	Phlebotomy and Laboratory Science	Health Science Agriculture, Food & Natural Resources
Cosmetology	Human Services Marketing	Residential and Commercial Electrical	Architecture & Construction Science, Technology, Engineering & Mathematics
Criminal Justice	Law, Public Safety, Corrections & Security Government & Public Administration	New Visions Health Professions	Health Science
		New Visions STEM Professions	Science, Technology, Engineering & Mathematics

For details on Career Clusters, visit the U. S. Department of Education website or Advance CTE (careertech.org)