Mechanical Operations Technology

This program is designed for individuals who want a career with hands-on technology related to the field of engineering. Mechanical Operation Technology (MOT) is concerned primarily with the practical application of support to industrial activities. This broad field includes work in design, manufacturing, maintenance and testing.

Associate of Applied Science Degree
- Mechanical Operations Technology

Certificates of Achievement
- Machine Tool Technology
- Operations and Production Technology
Highlights of reports from the (WIN) Workforce Intelligence Network

- Median wages for machinists was reported as $22.88, while median salaries for CNC Machine Tool Programmers was reported as $26.07.
- It was estimated that there are 15 job postings for each CNC programmer applicant, and 2 job postings for each operator applicant in Southeast Michigan.
- In 2012, there were 14,940 machinists employed in Southeast Michigan.

Excerpts from the Occupational Outlook Handbook (http://www.bls.gov/oco/)

CNC programmers develop the programs that run the machine tools. They often review three-dimensional computer-aided/automated design (CAD) blueprints of a part and determine the sequence of events that will be needed to make the part. This may involve calculating where to cut or bore into the workpiece...

Computer control programmers and operators use computer numerically controlled (CNC) machines to produce a wide variety of products, from automobile engines to computer keyboards. CNC machines operate by reading the code included in a computer-controlled module, which drives the machine tool and performs the functions of forming and shaping a part formerly done by machine operators. CNC machines use the same techniques as many other mechanical manufacturing machines but are controlled by a central computer instead of a human operator or electric switchboard.

Machinists use machine tools, such as lathes, milling machines, and grinders, to produce precision metal parts. Although they may produce large quantities of one part, precision machinists often produce small batches or one-of-a-kind items. They use their knowledge of the working properties of metals and their skill with machine tools to plan and carry out the operations needed to make machined products that meet precise specifications.

Machinists first review electronic or written blueprints or specifications for a job before they machine a part. Next, they calculate where to cut or bore into the workpiece—the piece of steel, aluminum, titanium, plastic, silicon, or any other material that is being shaped.

Learn More about the Mechanical Programs
Or other programs in the Technology Division...
- Contact Scott Swan, the Advanced Manufacturing (Mechanical) program coordinator at 810.232.3676
- Contact the Advising Center at 810.762.0331
- Check the Technology Division Web site at http://www.technology.mcc.edu