Computer Integrated Machining Technology

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Program Overview for Employers

The Computer Integrated Machining Technology (CIMT) program for deaf and hard-of-hearing students at Rochester Institute of Technology (RIT) prepares students for careers in the precision machining and precision optics manufacturing industries. **Graduates are well qualified and prepared for jobs that include computer numerical control set-up, computer numerical control operator and programmer, die maker, general machinist, inspector, instrument maker, mold maker, and tool maker as these jobs apply to both the precision machining and precision optics manufacturing industries.**

Degree Awarded

Associate in Occupational Studies (AOS)

Potential Job Candidates

Approximately 35 students currently are enrolled.

Cooperative Education (Co-op) Component Required

Students are required to complete one 10-week summer co-op block.

Equipment and Facilities

Students use precision machines common to industrial tool rooms and industrial shop floors. They learn to set up, program and operate manual and computer assisted lathes (Haas Toolroom Lathe), manual and computer assisted vertical milling machines (Prototrak Conversational Controls), CNC Wire Electrical Discharge Machines, CNC and Manual Curve generators, horizontal milling machines, vertical rotary grinder, double-sided planetary machines, spindle polisher, indexing head, band saw, glass bead/sand blaster, drill press, shear and press brake, and tool room lathes.

Student Skills and Capabilities – Preparation for a Career

CIMT students qualify for various positions in the precision machine industry and the precision optics manufacturing industry. They are proficient at creating and examining 3D models and reading blueprints, lapping and polishing, and are skilled in the set-up and operation of lathes, milling machines, wire EDMs and grinders. Students receive extensive safety training and recognize safety as a top priority.

Computer Numerical Control (CNC): Students receive a full year of set-up and operation instruction on a Hardinge VMC-600 three axis machining center (Fanuc 0i-MB control) and a Hardinge CHNC I two axis turning center (Fanuc 0t control), Haas Toolroom Mill, and a Sodick AQ300L wire EDM (LN1W control). They learn to use G and M code programming, both manually and in conjunction with MasterCam software. They can produce parts with linear and circular interpolation, as well as numerous canned cycles and sub-routines. Students complete two trigonometry courses specially designed to solve complex machining problems.

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Computer Integrated Machining Technology

Selected Software Used to Develop Technical Skills

AutoCad
MasterCam
Microsoft Excel
Microsoft PowerPoint
Microsoft Word
Microsoft Windows
SolidWorks

Selected Technical Courses Leading to an Associate Degree

Algebra
Blueprint Reading I-II
CIMT I-V
CNC I
CNC II
Geometric Dimensions and Tolerances
Industrial Materials
Optical Testing
Precision Grinding
Precision Measurement I-II
Precision Optics Mfg I & II
Triginometry for Coordinate Analysis

The following employers throughout the country have hired Computer Integrated Machining Technology students and graduates:

Bausch & Lomb
Cryomech, Inc.
General Electric
Goodson Manufacturing
HDM Hydraulics, LLC
Metalex Manufacturing, Inc.
MWI
Naval Surface Warfare Center
Optimax
Parabit Systems, Inc.
Rochester Precision Optics
Solar Turbines
Sydor Optics
Tecomet
The Gleason Works
Zip Products, Inc.

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RIT/NTID co-op students, graduates and alumni provide employers with highly trained, highly motivated employees with excellent skills. We appreciate your interest in our co-op students and graduates and will work with you through the recruiting process to help you hire the right employee. **For your convenience, access further information and services on our website at www.rit.edu/ntid/nce.**