

Computer Integrated Machining Technology

www.rit.edu/NTID/Engineering

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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	Microsoft PowerPoint	SolidWorks
MasterCam	Microsoft Word	
Microsoft Excel	Microsoft Windows	

Selected Technical Courses Leading to an Associate Degree

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

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

American CNC Machine Co.	Metalex Manufacturing, Inc.	Rochester Precision Optics
Cryomech, Inc.	MWI	Solar Turbines
General Electric	Naval Surface Warfare Center	Sydor Optics
Goodson Manufacturing	Optimax	The Gleason Works

Contact us:

Karen Downs
Employment Specialist
NTID Center on Employment
52 Lomb Memorial Drive
Rochester, NY 14623-5604
585-475-6483 (voice)
585-286-4578 (videophone)
585-475-7570 (fax)
kmdnce@rit.edu (email)

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/coops/jobs/.**