

NTID
Computer Integrated Machining Technology Program
Outcomes and Assessments

Program Goal: Students develop job entry skills for positions in the precision machining industry as toolmakers, diemakers, mold makers, inspectors, lathe operators, milling machine operators, instrument makers, numerical control set-up persons, computer numerical control set-up persons, numerical control operators, computer numerical control operators, programmers (numerical control or computer numerical control), and machinists (all around).

Critical Outcomes for all Students (Ss)		Assessment of Outcomes		Timelines		Use of Results
Skill	Performance Elements with Benchmarks	Assessment Activity	Skills Assessed	Develop	Collect	
1. First Year CIMT Technical Skills	Produce machined parts to blueprint specification: 1 a. set up and operate lathes, mills, and grinders to a tolerance of + - .003 b. apply math and blueprint reading skills to solve machining problems c. use precision measuring instruments and computers to control quality	Students complete: • timed competency - based mid-quarter skills exams during MPT I, II, and III 1 • timed competency-based skills exams at the end of MPT I, II, and III 1 (minimum of 80%) • comprehensive exams at the end of Blueprint Reading I and II and Precision Measurement (C or better)	See CIMT First Year Technical Skills Profile (attached)			
2. First Co-op Employment Skills	Successfully complete a cooperative work	Students complete: • 10 weekly worksheets	100% compliance with employer's:		Summer 2002	Fall 2002

	<p>experience (co-op):</p> <ol style="list-style-type: none"> prepare resumes, seek employment demonstrate safe work habits investigate salaries and benefits develop technical skills develop interpersonal skills 	<p>(formative)</p> <ul style="list-style-type: none"> co-op performance self - evaluation (formative) <p>Employers complete a formal evaluation (summative).</p>	<ul style="list-style-type: none"> attendance policy safety policy quality standards 			
3. Second Year CIMT Technical Skills	<p>Produce machined parts to blueprint specification:</p> <ol style="list-style-type: none"> <ol style="list-style-type: none"> set-up and operate lathes, mills, and grinders to a tolerance of + - .001 program, set-up, and operate Proto-Trak mills and lathes apply math and blueprint reading skills to solve machining problems and to write programs use precision measuring instruments and computers to 	<p>Students complete:</p> <ul style="list-style-type: none"> timed competency-based mid-quarter skills exams during MPT IV,V, and VI 1 timed competency-based skills exams at the end of MPT IV, V, and VI 1 	<p>See CIMT Second Year Technical Skills Profile (attached)</p>			

	control quality					
4. Second Co-op Employment Skills	<p>Successfully complete a cooperative work experience (co-op):</p> <ol style="list-style-type: none"> prepare resumes, seek employment demonstrate safe work habits investigate salaries and benefits develop technical skills develop interpersonal skills 	<p>Students complete:</p> <ul style="list-style-type: none"> 10 weekly worksheets (formative) co-op performance self-evaluation (formative) <p>Employers complete a formal evaluation (summative)</p>	<p>100% compliance with employer's:</p> <ul style="list-style-type: none"> attendance policy safety policy quality standards 		Summer 2002	Fall 2003
5. Third Year CIMT Technical Skills	<p>Produce machines parts to blueprint specification:</p> <ol style="list-style-type: none"> <ol style="list-style-type: none"> set-up and operate lathes, mills, grinders to a tolerance of + - .001 program, set-up, and operate Proto-Trak mills and lathes apply math and blueprint reading skills to solve machining problems and to write programs for 	<p>Students complete:</p> <ul style="list-style-type: none"> timed competency-based mid-quarter skills exams during Advanced Machining and Processes and CNC I, II, and III 1 timed competency-based skills exams at the end of Advanced Machining and Processes and CNC I, II, and III 1 comprehensive exams at the end of 	<p>See CIMT Third Year Technical Skills Profile (attached)</p>			

	CNC machines d. use precision measuring instruments and computers to control quality e. program, set-up, and operate 3 axis CNC machining and turning centers	Advanced Precision Management and Manufacturing Analysis (C or better based on skill profile)				
<i>Students will gain entry-level employment in CIMT field.</i>		<i>NCE</i>	<i>_____ % of graduates will be employed in the field.</i>			
<i>Graduating students will indicate satisfaction with program courses.</i>		<i>Student Satisfaction Survey</i>	<i>_____ % of students will rate program courses as satisfactory better as measured by a score of _____ or above in Student Satisfaction Survey.</i>			
<i>Alumni will indicate satisfaction related to program.</i>		<i>Alumni Survey</i>	<i>_____ % of alumni will indicate an average score of _____ or above on related components of Alumni Survey.</i>			

1 CIMT projects and exams are periodically and formally validated by industrial advisors.

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