NTID
Computer Integrated Machining Technology Program Outcomes Assessment
Plan and Report for AY 2010-2011

Program Goal: Program Goal: Students develop job entry skills for the precision machining and/or precision optics manufacturing. Graduates have a working knowledge of manufacturing processes, equipment, and software. Technical jobs may include machinists and lathe and milling machine operators, both traditional and CNC, for the precision machining and/or precision optics industries.

Critical Outcomes for all Students		Assessment of Outcomes		Timeline		Results	
Domain/Task/ Capability	**Performance Criteria/ Benchmarks**	**Instrument/ Opportunity**	**Assessment of Performance**	**Develop**	**Collect**	**Summarization of Results**	**Use of Results**
1. Technical	Produce machined parts and optical elements to specifications: a. set up and operate two axis, lathes, mills, grinders and polishers to a tolerance of + – .003 b. apply math and engineering graphics skills to solve machining problems c. use precision measuring instruments and computers to control quality	Students complete a timed, competency based final exam for CIMT 4 and Precision Optics Manufacturing I.	Given a print, material and lab access, 85% of the students will produce 80% of the specified features in tolerance.	20073	Spring Quarter 20083	Spring 103 n=11 100% of the students met 80% or above specifications in producing a machined part.	Met expectations and no action required.
2. Technical	Create CNC programs using solid modeling techniques; create, edit, and verify toolpaths; copy and paste	Students complete a timed, competency based final exam in CNC Graphics and CNC Solids.	Given a print, material and lab access, 85% of the students will produce 80% of the specified features in tolerance	20063	Spring Quarter 20083	Spring 103 n=11 100% of the students met 80%	Met expectations and no action required.

	parameters, toolpaths and tool associative geometry					or better on CNC programming requiremets.	
3. Technical	Develop a student-based project that simulates actual job related skills found in industry: a. apply concepts of project planning and development b. demonstrate ability to work in a team atmosphere. c. demonstrate time management skills. d. show abilities to control budget and costs	Students must complete and present a capstone project within the time limit of the fall quarter in Automated Machining (0813-258) or Precision Optics II (0813-245)	Given a contract that specifies budget limits, technical specifications, and time constraints, 85% of the students will produce all of the contract expectations.	20083	Beginning Fall 20091	Fall 101 n=8 100% of the students met 80% or above specifications in producing and presenting a capstone project according to contract expectations.	Met expectations and no action required.
Technical skills evaluation							
4. Job Skills	Students will demonstrate problem-solving, decision-making, responsibility, pride in self and work performance, and other learned behaviors and attitudes necessary for	Co-op Supervisor Evaluation Form	Score of 3 or higher on RIT Supervisor On-line Co-op Evaluation system, sections "Interaction in the Work Environment," "Quality of Work," and Communication and Literacy Skills."	On-going	Beginning Summer 20084	For students in the Engineering Studies Department the mean ratings by co-op supervisors who completed the evaluation online during the four quarters 20094-20103 was as follows:	Met expectations and no action required.

	entering the work force and being self-sufficient.					4.00 (N=16) for Interaction 1 3.94 (N=16) for Interaction 2 3.81 (N=16) for Interaction 3 3.94 (N=16) for Interaction 4 3.87 (N=16) for Interaction 5 4.25 (N=16) for Quality of Work 1 4.12 (N=16) for Quality of Work 2 3.67 (N=16) for Communication 1 3.64 (N=16) for Communication 2 3.93 (N=16) for Communication 3	
5. Co-op Work Experience	Students will demonstrate technical competency on the job for an approved co-op employer, which will allow them access to participation within our global society.	Co-op Supervisor Evaluation Form	Score of 3 or higher on RIT On-line Co-op Evaluation system, sections “Problem Solving” and “Technical Skills.”	On-going	Beginning Summer 20084	For students in the Engineering Studies Department the mean ratings by co-op supervisors who completed the evaluation online during the four quarters 20094-20103 was as follows: 3.88 (N=16) for Overall Satisfaction 4.00 (N=16) for Problem Solving 1 4.00 (N=16) for Problem	Met expectations and no action required.

						Solving 2 4.06 (N=16) for Technical Skills 1 3.79 (N=16) for Technical Skills 2 3.29 (N=16) for Technical Skills 3 3.91 (N=16) for Technical Skills 4	
6. Job Placement	Students will demonstrate technical competency on the job for an approved co-op employer, which will allow them access to participation within our global society.	NCE	90% of graduates will be employed in the field of precision manufacturing and/or precision optics.	On-going	Beginning Winter 20092	For AY 2008-2009 N=4; 100% of students in Computer Integrated Machining Technology who were seeking employed were working	Met expectations and no action required.
7. Student Satisfaction	Graduating students will indicate satisfaction with program and courses.	Survey	85% of students will rate all aspects of the program and courses as satisfactory or above.	On-going	Beginning Fall 20081	Cummulative results for the previous two years: N = 15 80% of students “agreed” or “strongly agreed” that “Overall, I am satisfied with the courses in this program.” 93% of students “agreed” or “strongly agreed” that “Overall, I	Met expectations and will continue to seek ways to improve the overall satisfactory rating.

						believe that this program will help me with my career."	

Comments:
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