PROGRAM ASSESSMENT PLANNING FORM

Program to be assessed:

Title: Machine Tool Programming (CNC)
Division: ATP   Department: INTD   Program Code: CTMTP

Type of Award: ☐ A.A.   ☐ A.S   ☐ A.A.S.
                ☒ Cert.   ☐ Adv. Cert. ☐ Post-Assoc. Cert.   ☐ Cert. of Completion

Assessment plan:

Learning outcomes to be assessed	Assessment tool	When assessment will take place	Describe population to be assessed	Number of students to be assessed
Code for programming machine tool motion resulting in desired part features.	Capstone Project	Fall 2016	NCT 221	All
Troubleshoot, debug and edit programs to enhance productivity and part quality.	Capstone Project	Fall 2016	NCT 221	All
Model and post machine tool paths using CAD/CAM software,	Software Quiz	Fall 2016	NCT 123	All
Design and build mechanism to hold parts.	Capstone Project	Fall 2016	NCT 221	All

Scoring and analysis of assessment:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Attach the rubric/scoring guide.

   Outcomes 1 - 4 will be assessed using a departmentally-developed rubric.

2. Indicate the standard of success to be used for this assessment.

   75% of the students will score 70% or better on each outcome.

3. Indicate who will score and analyze the data (data must be blind-scored).

   Departmental faculty

Submitted by:

Name: _Thomas Penino_ _____ Date: _10/15/2015_

Print/Signature

Dept. Chair: _Thomas Penino_ _____ Date: _10/22/2015_

Print/Signature

Dean: _Brandon Tucker_ _____ Date: _11/10/15_

Print/Signature

Please return completed form to the Office of Curriculum & Assessment, SC 257.

logged 11/11/15

PROGRAM PROPOSAL FORM

☐ **Preliminary Approval** – Check here when using this form for preliminary approval of a program proposal, and respond to the items in general terms.

☒ **Final Approval** – Check here when completing this form after the Vice President for Instruction has given preliminary approval to a program proposal. For final approval, complete information must be provided for each item.

Program Name:	Machine Tool Programing (CNC)
Division and Department:	Advanced Technology and Public Services Careers/ Industrial Technology Department
Type of Award:	☐ AA ☐ AS ☐ AAS ☒ Cert. ☐ Adv. Cert. ☐ Post-Assoc. Cert. ☐ Cert. of Comp.
Effective Term/Year:	Fall 2015
Initiator:	Thomas Penird

Program Features Program's purpose and its goals. Criteria for entry into the program, along with projected enrollment figures. Connection to other WCC programs, as well as accrediting agencies or professional organizations. Special features of the program.	Students in this program will demonstrate competence in writing, editing, troubleshooting, and debugging CNC (computerized machining) code for manufacturing parts. Students learn 3D modeling and application of CAD/CAM software to produce machine tool code for CNC machine tools. This certificate is linked to the Mechatronics Program as one of the specialty tracks.
Need Need for the program with evidence to support the stated need.	Many of our students are only here to get specific training required by local industry. This is reflected in our completion numbers. Several students have asked for certification. Local employers would like the certification as an indication of the level of skill sets the potential employee has attained. We had eliminated the machine tool technology program from the Automation program (now Mechatronics).

Program Outcomes/Assessment State the knowledge to be gained, skills to be learned, and attitudes to be developed by students in the program. Include assessment methods that will be used to determine the effectiveness of the program.	Outcomes	Assessment method
	1. Code for programming machine tool motion resulting in desired part features.	1. Capstone Projects
	2. Troubleshoot, debug and edit programs to enhance productivity or part quality.	2. Capstone Projects
	3. Model and post machine tool paths using CAD/CAM Software.	3. Software Quizzes
	4. Design and build mechanisms to hold parts.	4. Capstone projects

Curriculum List the courses in the program as they should appear in the catalog. List minimum credits required. Include any notes that should appear below the course list.	NCT 121 4Cr Manual Programming NC Tools NCT 221 4Cr Advanced Manual Programming NC Tools NCT 249 <u>4Cr</u> CAD CAM 12 credits **These are all existing courses**

Budget		START-UP COSTS	ONGOING COSTS
Specify program costs in the following areas, per academic year:	Faculty	$ 0.0	$.
	Training/Travel	0.0	.
	Materials/Resources	.	.
	Facilities/Equipment	.	.
	Other	.	.
	TOTALS:	$.	$.

Program Description for Catalog and Web site	In this program, student will learn to write, read and edit programs for CNC machine tools. They will understand core canned cycles for milling and turning operations on CNC machine tools and have the skills to do 2D and 3D modeling and posting of CNC code using CAD/CAM software. Students completing this certificate will be able to create, edit and debug code for local manufacturing companies.
Program Information	Accreditation/Licensure - Advisors – Advisory Committee - Norgren: Mike Rodocker, Josh Jeffers Zero Hour Parts: Brandon Hoag, Debra Adams, MS PHR Faurecia: Wes Nichols Mechanized Numerics LLC: Andrew Dubuc L&W Engineering: David Braun Jacobs Technologies: Ed Grabow Heller Precision Machining: Jason Barnhart, Chris Wehrle **Admission requirements – Completion of Machine Tool Setup and Operations certificate or comparable courses or work experience.** Articulation agreements - Continuing eligibility requirements -

Assessment plan:

Program outcomes to be assessed	Assessment tool	When assessment will take place	Courses/other populations	Number students to be assessed
1. Code for programming machine tool motion resulting in desired part features.	Capstone Project	Fall 2016	NCT 221	All
2. Troubleshoot, debug and edit programs to enhance productivity or part quality.	Capstone Project	Fall 2016	NCT 221	All
3. Model and post machine tool paths using CAD/CAM Software.	Software Quiz	Fall 2016	NCT 249	All
4. Design and build mechanisms to hold parts.	Capstone Project	Fall 2016	MEC201	All

Scoring and analysis plan:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally-developed rubric, external evaluation, other). Attach the rubric.
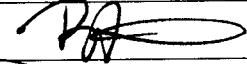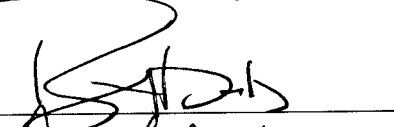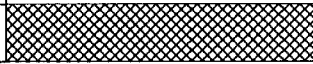
    Outcomes 1 – 4: Departmentally- developed rubrics

2. Indicate the standard of success to be used for this assessment.

    Outcomes 1 – 4: 75% of the students will score 70% or better.

3. Indicate who will score and analyze the data.

    Department Faculty

REVIEWER	PRINT NAME	SIGNATURE	DATE
Department Chair/Area Director	Thomas Penird	Penird	1/6/2015
Dean	Brandon Tucker	Tucker	1/6/15
Vice President for Instruction ☐ Approved for Development ☐ Final Approval	William Abernethy		2/5/15
President	Rose Bellanca	Rose B Bellanca	2/23/15
Board Approval			3/24/15