

**NORTHEASTERN TECHNICAL COLLEGE  
COURSE OUTLINE**

<b>COURSE:</b>	<b>PREFIX NO.</b>	<b>EFFECTIVE DATE</b>	<b>NEXT REVIEW DATE</b>		
MTT	252	SPRING 2010	SPRING 2012		
<b>TITLE:</b>	<b>CREDITS</b>	<b>CONTACTS</b>			
		<b>CLASS</b>	<b>LAB</b>	<b>TOTAL</b>	
CNC SETUP AND OPERATIONS	4	3	3	4	

**PREREQUISITES:** MTT 251

**DESCRIPTION:** LEVEL 1: This course covers CNC setup and operations.

LEVEL II: This course provides instruction in the CNC setup and operations. It covers the codes used for CNC Machines, the creating of programs, the setting up and operation of the machines.

**TEXTBOOK(S) OR ALTERNATIVE:** Machine Manuals

**MATERIALS (specifying those to be purchased by student):**

Safety Glasses

**COLLATERAL READING:** Machine Manuals and Handouts

**CLASS MANAGEMENT ACTIVITIES (Attendance, tardies, testing, etc.):**

Academic Dishonesty: Students are expected to do their own work.

Please refer to the NETC Student Code and Grievance Procedure for a definition of academic dishonesty and an outline of the disciplinary action that may result therefrom.

Attendance: The student is required by the instructor to attend **90%** of the classes. Excessive absences will result in the student being dropped from the course.

Tardies: Three tardies constitute one absence.

**Safety glasses must be worn at all times in the lab!** Three warnings will be issued by the instructor. The third warning will result in the student being dismissed from class.

Loose clothing must not be worn in the lab and shoes are required.

Testing: Tests and pop quizzes will be given at instructor's discretion.

Projects: Appearance and Tolerance will be graded. Machines will be

available on a first come first serve basis.

Lab Clean up: Each student is required to participate in lab clean-up. Lab clean-up will be announced prior to the end of the semester. Anyone not present for clean-up day will receive an "I" (incomplete) grade.

Disabilities Statement: Students with disabilities are encouraged to contact the Vice President for Student Services to discuss needs or concerns as they pursue an academic program and participate in campus life. The Vice President for Student Services will provide guidance regarding official documentation of disabilities and/or accommodation of needs. (See College Catalog)

Student ID: It is mandatory that every student wear his or her student ID at all times. Instructors are required to dismiss students without ID from class. The student may get his/her ID and return to class before the midpoint of the class. If the student cannot get an ID and return to class by the midpoint, the instructor will record the absence.

**OBJECTIVES OF COURSE/STUDENT LEARNING OUTCOMES:**

1. The student will be knowledgeable in standard and machine specific G and M codes
2. The student will demonstrate the ability to use standard and machine specific G and M codes.
3. The student will know the coordinate system of measurement.
4. The student will demonstrate the ability to write programs using canned cycles.
5. The student will demonstrate the ability to load programs into a machine.
6. The student will demonstrate the ability to troubleshoot and correct programs.
7. The student will demonstrate the ability to set tool offsets and tool lengths.
8. The student will demonstrate the ability to run programs to

produce piece parts to print tolerances.

**INSTRUCTIONAL METHODS TO COMPLETE STUDENT OBJECTIVES:**

Classroom lecture  
Homework assignments  
Lab work  
Tests

**EVALUATIVE METHODS TO APPRAISE STUDENT OBJECTIVES:** Students will be graded by the following break down:

Observation of work habits and care of equipment count 30% of final grade.

Quantity of projects: Student will be required to complete each project assigned. Projects not completed will receive a grade of zero.

Quality of projects: Projects will be graded on print dimensions and surface finish. Grading will be 1 point for every ".001" out of print dimension.

Tests and projects will count 70% of the final grade.

**GRADING SCALE:**

A = 93 - 100  
B = 85 - 92  
C = 77 - 84  
D = 69 - 76  
F = 68 - below

**PARTICIPATION:** Evaluation of your participation will be based on the following:

- (100 - 80) Comes to class prepared; voluntarily and enthusiastically participates in classroom activities, presentations, and clean up. Stimulates creativity and demonstrates excellent completion of in-class assignments. Must demonstrate respect to instructor and fellow students.
- (80 - 60) Comes to class prepared; usually participates in classroom activities, presentations, and clean up. Demonstrates satisfactory completion of in-class assignments. Must have above average attendance, a

positive attitude, and demonstrate respect for instructor and fellow students.

- (60 - 40) Usually comes to class prepared; occasionally participates in classroom activities, presentations, and clean up. Completes most in-class assignments. Has average attendance, a positive attitude, and demonstrates respect for instructor and fellow students.
- (40 - 20) Occasionally comes to class prepared; reluctantly participates in classroom activities. Occasionally completes in-class assignments. Has below averages attendance, uncooperative attitude, and demonstrates lack of respect for instructor and fellow students.
- (20 - 0) Seldom comes to class prepared; uncooperative and disruptive to class discussions or other learning activities. Has poor attendance and shows disrespect for instructor and fellow students. Avoid class clean up and/or has a negative attitude.