# West Virginia University at Parkersburg

IM 254. CNC MACHINING 1.

**Credit Hours:** 3 Hrs.

Scheduled hours per week

Lecture: 2 Lab: 2

Other: Varies as needed due to blended nature of presentation

**Catalog Course Description**: This course will teach students how to program computer controlled milling machines. Conversational language will be used and G codes will be discussed. (Pre-requisite: IM 111 or equivalent)

**Pre-requisites:** IM 102 or permission

Co-requisites: None

#### **Course Learning Outcomes:**

Demonstrates comprehensive understanding and application of Multicraft competencies

## Topics to be studied:

This class will include assigned reading materials, Demonstrations, Practice program writing, putting written program into the machines computer, using a separate computer to simulate cutter action, Practice machine operation using a cutting tool to cut in material.

Relationship of Course to Program or Discipline Learning Outcomes:	
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Relationship of Course to General Education Learning Outcomes:	Т
Composition and Rhetoric Students illustrate a fundamental understanding of the best practices	X
of communicating in English and meet the writing standards of their college or program-based	
communication requirements.	
Science & Technology Students successfully apply systematic methods of analysis to the natural	Χ
and physical world, understand scientific knowledge as empirical, and refer to data as a basis for	
conclusions.	
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the	Χ
practical application of numerical, symbolic, or spatial concepts.	
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to	
successfully analyze human behavior, societal and political organization, or communication.	
Human Inquiry & the Past	
Students interpret historical events or philosophical perspectives by identifying patterns,	
applying analytical reasoning, employing methods of critical inquiry, or expanding problem-	
solving skills.	
The Arts & Creativity	
Students successfully articulate and apply methods and principles of critical and creative inquiry	
to the production or analysis of works of art.	
5/3/2016	

## Special requirements of the course:

- a) Reports
- b) Surveys
- c) Other: Each student is required to write 10 programs in both Cartesian and Polar, put the programs into the computer, simulate running the program on the computer, print a hard copy of the program, save the program on disk, download the program to the milling machine, run the program. The final project is cut in material.

### **Additional information:**

Prepared by: Craig Giffin

**Date**: 10/20/2017