Hagerstown Community College Master Syllabus
EGT 150 - Introduction to CNC Programming and Laboratory

Course Information

EGT–150-01 Introduction to CNC Programming
3 Credits
Fall 2018

Instructor Information

Instructor: Mr. Kevin Stoops

Course Description

This laboratory course covers the use of "G" and "M" coding in programming the automated lathe and the automated milling machine. A CNC program is entered into a computer. The completed program is run on the computer and the resulting simulation is checked for errors. Selected programs are transferred to a Computer Numerical Control machine that produces a part. The lathe projects included turning, tapering, grooving and threading. The milling projects include pocketing, contouring and drilling.

Textbook and Course Materials

Introduction to Computer Numerical Control (CNC), By James V. Valentino and Joseph Goldenberg, (ISBN-13) 978-0-13-217603-3 or (ISBN-10) 0-13-217603-3

Student Learning Outcomes

Upon successful completion of this course the student will be able to:

- Demonstrate an understanding of the role of "M" codes.
- Be able to use "G" codes for linear and circular interpolation.
- Understand the coordinate systems for tool movement on a CNC lathe and mill.
- Run a Haas-VF3 milling machine.
- Program a CNC mill using drill and milling methods**.**

Definition of Credit Hour: Classroom Courses

To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute "academic" hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours within the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit. For most classes, students should expect to do at ***least 2 hours*** of coursework outside of class for each hour of in-class coursework.

Credit Hour to Clock Hour Calculation:

Direct Faculty Instruction: 1 hour/week/credit for 15 weeks;
50 min = 1 classroom hour
(50 min x 3 credits x 15 weeks) = 2250 minutes = 37.5 hours
Student Work Outside the Classroom: 2 hours/week/credit for 15 weeks

(2 hrs x 3 credits x 15 weeks) = 90 hours

Minimum clock hours required for this course

	Direct Faculty Instruction (In Class) _37.5 Hrs. Required_	Student Work (Out of Class) _90 Hrs. Required_
Lecture	52.5 Hours	
3 Exams (2 Tests, Class Final and Lab Final)		(4 Exams) x (3 Hrs. Prep) = 12. Hrs.
Chapter Assignments		(11 CA's) x (4.Hrs) = 44. Hrs.
Projects/Labs		(8 Projects) x (4.Hrs) = 32. Hrs.
Other Instructor Material		6. Hrs.

Services for students with disabilities: Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.