Common Course Outline

CAMM 152

Turning Technology

3 **Credits**

Community College of Baltimore County

Description

CAMM 152 – Turning Technology provides instruction and practice in the theory and operation of engine lathes, which includes set-up, operation, adjustment and maintenance.

3 Credits

Prerequisites: CAMM 111 with a passing grade of "C" or higher or NIMS "Measurement, Material and Safety" certification.

Overall Course Objectives

Upon completion of this course, students will be able to:

1. set-up and operate engine lathes;
2. use an engine lathe to chase precision threads;
3. construct various tapers on the lathe;
4. create and use their own cutting tools for the engine lathe;
5. construct simple and complex set-ups for projects;
6. calculate feeds and speeds for various work materials and cutting tools;
7. create precision tuned parts to specifications;
8. evaluate finished lab projects as per specifications and list deficiencies;
9. prepare for the National Institute of Metalworking Skills (NIMS) Level 1 "Chucking" certification; and
10. prepare for the National Institute of Metalworking Skills (NIMS) Level 1 "Turning Between Centers" certification.

Major Topics

I. The Engine Lathe
   A. Safety
   B. Advanced cutting tools
   C. Speeds and feeds
   D. Work support devices
   E. Tool holding devices

II. Processes
   A. Cutting tapers using the compound slide
   B. Using the taper attachment

C. Truing the work piece in a 4 jaw chuck
D. Turning between centers
E. Turning irregular shaped parts
F. Knurling
G. Chasing threads
H. Using a face plate

III. Grinding
A. Sharpen existing tools
B. Grind specialized tooling

Course Requirements

Grading procedures will be determined by the individual faculty member but will include the following:

Grading/exams

- Minimum of 1 turning project
- Minimum of 2 quizzes
- Minimum of 10 homework assignments
- 1 Midterm
- 1 Final exam

Written Assignments: Students are required to use appropriate academic resources.

Other Course Information

This course uses ToolingU as the online resource.
This course is taught in a laboratory environment.

Date Revised 12/6/2017