COMMON COURSE OUTLINE: Course discipline/number/title: PMT 1805: CNC Offsets

A. CATALOG DESCRIPTION
1. Credits: 1
2. Hours/Week: 1/16
3. Prerequisites (Course discipline/number): MATH 1015, CAD 1050, CAD 1230, PMT 1205, PMT 1255
4. Co-requisites (Course discipline/number): CAD 2000, PMT 1705, PMT 1755
5. MnTC Goals (if any): NA

This course identifies the various offsets used on both the lathe and the mill to properly reference each cutting tool in relationship to the workpiece.

B. DATE LAST REVISED (Month, year): April, 2009

C. OUTLINE OF MAJOR CONTENT AREAS:
1. The Purpose of Offsets
2. Machine and Program Zero for Turning
3. Offsets for the Turning Center
4. Workshift Offsets
5. Using a Reference Tool
6. Geometry Offsets
7. Wear Offsets
8. Offset Features for Turning
10. Offsets for the Machining Center
11. Workshift Offsets
12. Tool Length Offsets
13. Tool Length Offset Methods
14. Cutter Radius Compensation
15. Offset Features for Milling
16. Recognizing Tool Wear

D. LEARNING OUTCOMES (GENERAL): The student will be able to:
Identify, calculate, and use offsets, to correctly create a program on a CNC lathe or mill.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:
1. Online learning
2. Successful completion of online lessons
3. Successful completion of online assignments

G. RTC COMMUNITY AND TECHNICAL COLLEGE CORE OUTCOME(S) ADDRESSED:
- Communication
- Critical Thinking
- Global Awareness/Diversity
- Civic Responsibility
- Personal/Professional Accountability
- Aesthetic Response

H. SPECIAL INFORMATION (if any):
All numbered courses ending with a 5 (Example: 0005) will be online classes provided by Tooling U. Please see link below http://www.toolingu.com/class-300210-cnc-offsets.html