MACH 8215: Machine Tool Train the Trainer for High School Instructors

A. COURSE DESCRIPTION
   Credits: 1
   Lecture Hours/Week: *.*
   Lab Hours/Week: 2
   OJT Hours/Week: *.*
   Prerequisites: None
   Corequisites: None
   MnTC Goals: None
   This course familiarizes high school instructors with the planning, organization, programming, and operation of computer numerical control machine tools to teach high school students. Running manual machines will also be covered. Prerequisite: High School Instructor.

B. COURSE EFFECTIVE DATES: 05/15/2017 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
   1. Explain the common components of a CNC machine tool.
   2. Demonstrate NC programming skills using project blueprints.
   3. Explain basic CNC machining processes.
   4. Identify proper selection of CNC cutting tools.
   5. Learn programming concepts using NC code.

D. LEARNING OUTCOMES (General)
   1. The learner will learn the basics of Numerical Control operating system.
   2. The learner will learn how to write a program for a 3-Axis CNC Machining Center.
   3. The learner will learn how to write a program for a Turning Center.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted