TURNING
Course Syllabus

Course Number: NCMT-1686    OHLAP Credit: No
OCAS Code: None
Course Length: 120 Hours
Career Cluster: Machining
Career Pathway: Production
Career Major(s): Certified Machine Operator, Certified Machine Technician

Pre-requisite(s):

Course Description: This course includes theory and laboratory instruction about basic lathe operations, such as turning, facing, drilling, and threading. It also incorporates terminology and safety with the use and care of lathes.

Textbooks: Instructor developed curriculum – on Blackboard site

Course Objectives:

A. Introduction to the Lathe
   1. Headstock
   2. Headstock
   3. Lathe Bed
   4. Carriage
   5. Tailstock
   6. Lathe Size

B. Workholding & Toolholding Devices for the Lathe
   1. Workholding
   2. Holding Cutting Tools

C. Machining Operations on the Lathe
   1. Depth of Cut, Speed, Feed and Time Calculations
   2. General Lathe Safety
   3. Facing & Turning Operations
   4. Filing & Polishing
   5. Center & Spot Drilling
   6. Holemaking on the Lathe
   7. Thread Cutting with Taps & Dies
   8. Form Cutting
   9. Grooving 7 Cutoff (Parting)
  10. Knurling

D. Manual Lathe Threading
   1. Screw Thread Terminology
   2. Class of Fit
   3. Determining Thread Data
   4. Producing Threads on the Lathe
5. Lathe Setup
6. Lathe Threading Operation
7. Thread Measurement
8. Other Thread Forms
E. Taper Turning
1. Typical Taper Specifications
2. Taper Dimensions & Calculations
3. Taper Turning Methods

NIMS/TTC objectives

Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures: 1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/ College Credit: The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

College Credit Eligibility: The student must maintain a grade point average of 2.0 or better.