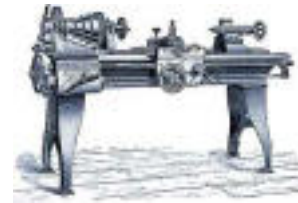


**Course:** Machining MET 255 4 credits  
**Instructor** W.E. Cattin  
**Hours:** Tuesday, Thursday, 8:00am - 10:50am  
**Office** 301  
**E-mail** [cattinw@cwu.edu](mailto:cattinw@cwu.edu)  
**Web Page** [www.cwu.edu/~cattinw](http://www.cwu.edu/~cattinw)  
**Hogue Tech** 963-1191  
**Home** 962-8370



**TEXT:** Machine Tool Technology, Repp & McCarthy; McKnight & McKnight

### **COURSE DESCRIPTION:**

This course introduces the student to basic operations and technical information concerning common metal working machines and metal machining processes. Emphasis will be placed on developing skills sufficient to perform metal removal operations safely. Written and visual communication skills are considered necessary for success in this course.

### **COURSE OBJECTIVES:**

**Upon completing the course, the student will be able to:**

1. Perform simple and accurate turning operations using an engine lathe
2. Operate an engine lathe to cut threads.
3. Select materials and processes for production of a simple mechanical design.
4. Setup and perform simple milling operations on a vertical milling machine.
5. Use hand tools to accurately layout part feature locations.
6. Manually sharpen tools and bits using a bench grinder.
7. Produce round threaded holes and external threads manually.
8. Demonstrate a complete understanding of safety procedures in theory and in practice while using lab equipment.
9. Measure part features using precision instruments accurately.



10. Create an operations process document for a simple machining job.

**GRADING PROCEDURE:**

1. All assignments will be turned in on the day designated during class time for the course. No grade will be given for late work.
2. No make-up assignments or examinations will be allowed unless provisions for circumstances are made in advance of the date in question.
3. All written work will be evaluated on the following criteria:
  - a. neatness
  - b. spelling
  - c. content quality
  - d. completeness
4. Please ask questions if assignments are unclear. The final responsibility for misunderstandings and late work rests with the student.
5. Points will be assigned for each student's work. The total points obtained throughout the course will then be evaluated according to the following chart:

A	100-92%	A-	90-92%		
B+	88-90%	B	82-88%	B-	80-82%
C+	78-80%	C	72-78%	C-	70-72%
D+	68-70%	D	62-68%	D-	60-62%

6. Missing class is **not** "OK". Discussion questions, safety instruction, and instruction on equipment and instruments are all valuable and should not be missed. Absences cause expensive wear and tear on equipment, supplies and facility. Demonstrations on equipment and technique will not be given over.
7. Students are expected to perform ongoing cleaning and minor maintenance on equipment in the laboratory if used in this course. Work areas should be straightened up and clean before leaving the lab area.
8. All written work will be typed or word-processed double-spaced, with 1" margins. Papers will be stapled in the upper left-hand corner.
9. Appointments can be directly made with the instructor or via E-Mail.
10. "Close" grades will be determined by attendance patterns, enthusiasm and willingness to learn.



**ADA:**

Students who have special needs or disabilities that may affect their ability to access information and / or material presented in this course are encouraged to contact the instructor or the ADA Compliance Officer, Director, ADA Affairs and Students Assistance on Campus at 963-2171, for additional disability related educational accommodations.

**SPECIAL EQUIPMENT AND SUPPLIES:**

Two 5/16" x 5/16" x 2-1/2" or 1/4" x 1/4" x 2" HSS tool bits  
One pair of safety glasses  
One padlock

**Methods of Instruction:**

Lecture	Audio visual
Demonstration	Laboratory practice
Projects	Handouts
Group Discussion	Guest Speakers

