

**Odessa College  
Technical Studies Division  
Machine Technology Department**

**Course Syllabus**

**Course Number: MCHN 1438**  
**Course Title: Basic Machine Shop I**  
**Credit Hours: 4**  
**Prerequisites: None**  
**Corequisites: None**

**Catalog Description:** MCHN 1438 Machining I – Basic Machine Shop I (CIP 48.0501) (2-6) 4 hours  
An introductory course that assists the student in understanding the machinist occupation in industry. The student begins by using basic machine tools such as the lathe, milling machine, drill press, power saw, and bench grinder. Machine terminology, theory, math, part layout, and bench work using common measuring tools is included. Emphasis is placed on shop safety, housekeeping, and preventive maintenance. The student will develop a basic understanding of the operation, set-up, and applications of machine tools and precision measuring tools. Lab fee required. (SCANS 1, 3, 4, 7, 8, 9, 10, 11)  
Prerequisite: None.

**Textbook:** Machine Tool Practices 9<sup>th</sup> Edition by Richard R. Kibbe, Roland O. Meyer, John E. Neely, Warren T. White. Copyright 2006 Pearson Prentice Hall

**Supplies:** Safety Glasses, textbook, calculator, 6” steel rule, pencil and notebook

**Special Needs:** Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability Services at (432) 335-6861 to request assistance and accommodations.

**Learning Outcomes:** Applications and the proper use of machine tools such as the lathe, milling machine, drill press, power saw, and bench grinder. Set-up procedures, work processes, and precision measuring tool selection.

**Course Requirements:** Students will be expected to be on time with the supplies listed above for every class. Time management is important. Lab exercises and projects are to be completed in class. Tests and final exam are to be completed.

**Method of Evaluation:** The evaluation will be determined by tests, lab projects, professionalism (attitude, attendance, work habits), and a final exam.

Grade Scale		Weight	
Points	Grade	Lab	25%
90-100	A	Homework	25%
80-89	B	Tests	25%
70-79	C	Final	25%
65-69	D		
0-64	F		

**Attendance Policy:** Attendance is expected and necessary. Lectures and demonstrations as well as lab availability is important to your success in this class.

**Academic Ethics:** All lab work and testing is to be your own efforts. Any unethical behavior will result in action taken in accordance with Odessa College policies.

**Student Assistance:** The LRC, Tutoring Center, as well as the instructor are available to assist the student as needed.

**Course Competencies:**

1. To demonstrate competency in machine shop safety; the student shall be able to:
  - A. Identify and properly use personal protection equipment.
  - B. Recognize and report machine shop hazards.
  - C. Know and apply machine tool safety rules.
  - D. Know and apply hand tool safety rules.
2. To demonstrate competency in print reading, the use of precision measuring tools, and basic shop math; the student shall be able to:
  - A. Interpret and understand blueprints and their symbols.
  - B. Properly use precision measuring tools.
  - C. Perform calculations for shop problems, speeds and feeds, and threading.
3. To demonstrate competency in lathe operation; the student shall be able to:
  - A. Operate a lathe safely.
  - B. Perform lathe operations such as turning, facing, drilling, knurling, threading.
  - C. Make thread calculations.
  - D. Set lathe for proper speeds and feeds.
4. To demonstrate competency in milling machine and drill press operation; the student shall be able to:
  - A. Operate a drill press and milling machine safely.
  - B. Select the proper cutting tools for operation being performed.
  - C. Set up the machine properly for the machining operation.
  - D. Set milling machine or drill press for proper speeds and feeds.

