

**Odessa College
Machine Technology Department**

Course Syllabus

Course Number: MCHN 2433
Course Title: Advanced Lathe Operations
Credit Hours: 4
Prerequisites: MCHN 1413
Corequisites: None

Instructor Information

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Catalog Description: MCHN 2433 Advanced Lathe Operations (CIP 48.0501) (2-6) 4 hours
A study of advanced lathe operations. Identification and use of special cutting tools and support tooling, such as form tools, carbide inserts, taper attachments, follower, and steady rests. Close tolerance machining required. The student will continue to progress in their skill level in the operation of a lathe and the use of precision measuring tools. This is the capstone course for the Engine Lathe Operator Option Level I Certificate. Lab fee required. (SCANS 1, 4, 5, 8, 9)
Prerequisite : MCHN 1413 or consent of department chair

Textbook

Machine Tool Practices 9th 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 Resource Center (Library)

The Library, known as the [Learning Resources Center](#), provides research assistance via the [LRC's catalog](#) (print books, videos, e-books) and [databases](#) (journal and magazine articles). [Research guides](#) covering specific subject areas, [tutorials](#), and the "Ask a Librarian " service provide additional help.

Student E-mail

Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

Student Portal

Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

Technical Support

For Blackboard username and password help and for help accessing your online course availability and student email account contact the Student Success Center at 432-335-6878 or online at https://www.odessa.edu/dept/ssc/helpdesk_form.htm.

Important School Policies

For information regarding student support services, academic dishonesty, disciplinary actions, special accommodations, or student's and instructors' right to academic freedom can be found in the [Odessa College Student Handbook](#).

Learning Outcomes

Applications and the proper use of the lathe. Set-up, work processes, and tool selection. A higher level of machine tool and measuring tool proficiency and accuracy should be achieved.

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 lab projects, homework and a final exam.

Grade Scale		Weight	
Points	Grade		
90-100	A	Lab	50%
80-89	B	Homework	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.

Course Competencies:

1. To demonstrate competency in machine shop safety; the student should 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 should 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 should 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 should 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.