INSTRUCTIONAL GUIDE

MODULE: VII - LATHE

TASK: 30 - Chase external right hand and left hand unified threads

PERFORMANCE OBJECTIVE: Given blueprint, workpiece, tool holder, tool blank, center gauge, cutting fluids, and precision measuring instruments, the student will cut external threads on workpiece to tolerances for class 3 fit for external threads and in accordance with industry specifications. Use thread micrometer and/or three wire system for checking threads.

TEACHER PREPARATION	RESOURCES	REFERENCES
1. Review lesson plan. a. Lesson introduction and overview. b. Safety rules and regulations. c. Motivational techniques to be used. 2. Construct or review test to be given. 3. Secure necessary tools, equipment and materials. 4. Establish safety rules and regulations. 5. Secure audio-visual materials and equipment.	Blueprint Workpiece Tool holder Tool blank Center gauge Cutting fluids Precision measuring instruments Machinery's Handbook	TMT MF

ENABLING OBJECTIVES (Theory)	METHOD/MEDIA	STUDENT ACTIVITY
1. Explain the relevant safety precautions/procedures. 2. Explain the formula used in the three wire system for measuring external threads. 3. Explain how to calculate proper cutting speeds for cutting external threads. 4. Describe the procedures for cutting external threads. 5. Select the correct cutting fluid for threading operations. 6. Explain how to calculate thread depth. 7. Explain how to calculate feed in of compound. 8. Determine depth per pass. 9. Determine direction of feed for compound.	Method Lecture/Discussion Other Media Handouts Transparencies Slides	Study handouts Take notes. Observe Take oral or written test Ask questions Read assignments

PRESENTATION/DEVELOPMENT

MAJOR STEPS AND PROCEDURES (Demonstration)	**METHOD/MEDIA**	**STUDENT ACTIVITY**
Demonstrate how to chase external right hand and left hand unified threads. 1. Chuck workpiece in lathe. 2. Turn to proper diameter. 3. Remove turning tool and insert threading tool. 4. Set machine for number of threads per inch. 5. Set compound on correct angle. 6. Apply lubricant. 7. Cut thread to specifications. 8. To cut left hand, reverse the feed.	<u>Method</u> Demonstration/Other <u>Media</u> Handouts Transparencies Slides Filmstrips Other:	Observe Ask questions Perform task as demonstrated, following all steps, including safety Other:

<u>APPLICATION</u>: Perform task as demonstrated using correct procedures and observing safety precautions.

<u>EVALUATION (Criterion-Referenced Measure)</u>:

Evaluate to ensure the student:

can cut external threads on workpiece to tolerances for class 3 fit for external threads and in accordance with industry specifications.

<u>SUMMARY/CLOSURE</u>:

1. Summarize lesson and make other demonstrations as necessary.
2. Reemphasize safety precautions.
3. Introduce next task and make necessary assignments.