

# CNC Lathe Technology (40 assignment)



This is an integrated instructional module designed specifically to operate within a Modular Program environment. It is ideal for use with our Scantek Technology program. The module includes a 10 assignment exploratory curriculum and an advanced 30-assignment curriculum

The curriculum incorporates assessment through questions. When used in conjunction with a ClassAct networked management system, this provides instant feedback of student performance. The assessments begin with a comprehensive pre-test.

## Typical 40-assignment topic areas include:

- Computer Numerical Control devices
- Working with a CNC Lathe
- Advanced CNC Programming
- Multiple Passes
- Tool Changes and Cutting Techniques
- Quality Control
- Troubleshooting a CNC Program
- Advanced programming using CAM software
- Advanced CNC Latheing design project

## Typical 40-assignment activities include:

- Watch a multimedia presentation introducing machine tools.
- Simulate a components manufacture.
- Identify the separate parts of the CNC machine.
- Watch a multimedia presentation introducing numerical and computer numerical control.
- Safely set up a CNC lathe.
- Set the reference tool position.
- Play an interactive game explaining the Cartesian coordinates system.
- Write a short CNC program.
- Enter and test the short CNC program.
- Watch a multimedia presentation demonstrating stock preparation.
- Set up a piece of stock in the lathe.
- Face off a piece of stock.
- Watch a multimedia presentation introducing Computer Aided Manufacturing.
- Face off the opposite end of the stock on a simple part.
- Watch a multimedia presentation explaining roughing and finishing passes.
- Write a program for multiple passes and simulate it on-screen.
- Watch a multimedia presentation introducing different tools and their applications.
- Use dial scale calipers to measure the dimensions of the component.
- Program circular cutting passes.
- Use the CAM software and simulator to solve advanced problems

Each assignment is designed around a list of performance objectives. These lists include academic, technical, and occupational objectives. The assignments are written in such a way as to enable a student to attain the performance objectives, with the assessment questions linked to these in order to provide a measure of true competency.

The performance objectives are used by the ClassAct management system to generate a comprehensive portfolio of student competency reports. Default reports supplied with this module include:

- Entry report
- Technical/Occupational Exit report
- Basic Skills report based upon the federal SCAN's report.

## The items supplied with this instructional module include:

- 10-assignment Student Workbook
- 10-assignment Instructor's Guide
- 30-assignment Student Workbook
- 30-assignment Instructor's Guide
- CNC Lathe
- Machine tools
- Control unit
- Set wax stock
- End lathes
- Metal engineering rule
- CNC parts fixture

## Additional items required:

- Computer

## Module Facts

For Technology Program, order as:  
ST250/40 CNC Lathe Technology

	No.	Average time
Assignments	30	45 minutes
<b>Total</b>		<b>22.5 hours</b>



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