

CNC Mill

Academic Representative



Technology Education Concepts

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Description

The CNC Mill curriculum introduces students to the industrial process used to machine complex parts on a computer controlled milling center. Students will gain knowledge in setup, safety, operation, and NC programming.

Skills

- Describe the importance of numerical codes in modern manufacturing
- Set up and verify numerical codes
- Machine sample parts
- Translate numerical codes
- Write original numerical codes

Knowledge

- Use relative and absolute coordinate positioning
- Describe the use and necessity of accurate tool paths
- Commonly used numerical codes

Activities

- Activity 1 - Introduction
- Activity 2 - Machine a Sample Part
- Activity 3 - NC Code and Verification
- Activity 4 - Coordinate Positioning
- Activity 5 - NC Code Translation
- Activity 6 - Cube Project
- Activity 7 - Mill Project I
- Activity 8 - Mill Project II
- Activity 9 - Mill Project III
- Activity 10 - Post-Test and Wrap-up
- Activity 11 - Bonus Activities
- Activity 12 - Challenge
- Activity 13 - Open-Ended Challenge
- Activity 14 - Careers
- Activity 15 - Internet

Standards

Math/Measure Problem Solving Reading

Module Includes:

Student Workbook, Instructor's Manual, Installation CD, CNC Milling Center, Mill Machinist Kit, Mill Control Software, Safety Glasses (2), T-Allen Driver Wrench, Headphones (2), CNC Mill Supply Kit for 24 Students

Requirements

Sufficient workspace should be provided to accommodate a computer monitor, keyboard, mouse, mill control box, and CNC mill. Computer and supplies are required and sold separately.

Curriculum Specifications

The student workbook contains concise hands-on procedures, illustrations, screen captures, and photographs which reinforce the multimedia content. Special attention is placed on interesting and relevant graphics to encourage visual learning. DEPCO Studio is an effective curriculum delivery system that uses the power of the computer to deliver educational content. By using interesting digital videos, full-color animations, professional quality narrations, challenging interactions, relevant photographs, and Computer Aided Instruction (CAI), DEPCO has modernized the way subject matter is taught. Modules are 15 units consisting of: - 10 basic activity days with Pre-Test, Post-Test, and Activity Review Questions - 5 enrichment activities include: vocabulary reinforcement, problem-solving, open-ended challenges, careers, and Internet activities An instructor's section includes: lesson plan outlines, installation instructions, and answer keys.