# Curriculum for Academia

- ➢ Two Comprehensive Curriculums
  - ➢ Machining Center Programming, Setup, & Operation (24 lessons)
  - ➢ Turning Center Programming, Setup, & Operation (28 lessons)
- ➢ Two Delivery Options (same content for both)
  - ➢ On-Line and Off-Line (with manuals and workbooks)
- ➢ Proven Key Concepts Approach

Learning Materials: Every lesson contains a presentation and reading materials. The first 13 lessons contain NCGuide lab exercises.

- On-line: Downloaded from lesson activities
- Off-line: Included in a presentations CD and textbook
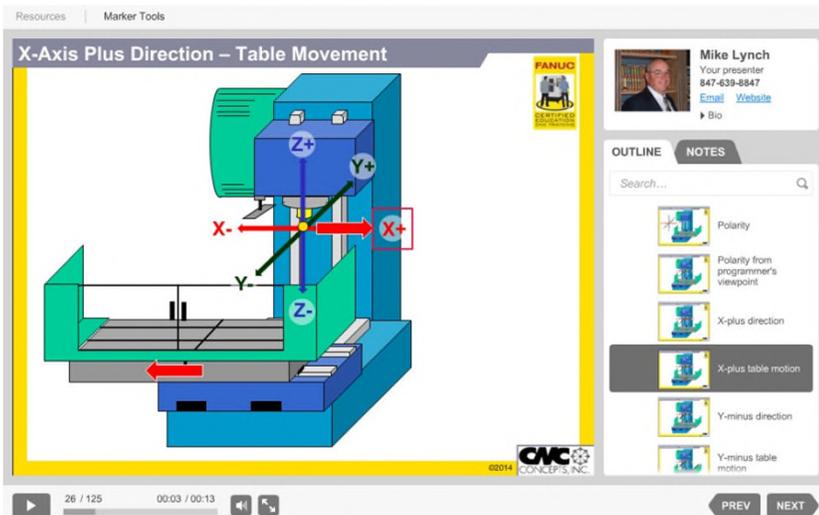
Presentations are viewable from all electronic devices, and can be saved if using an IPad
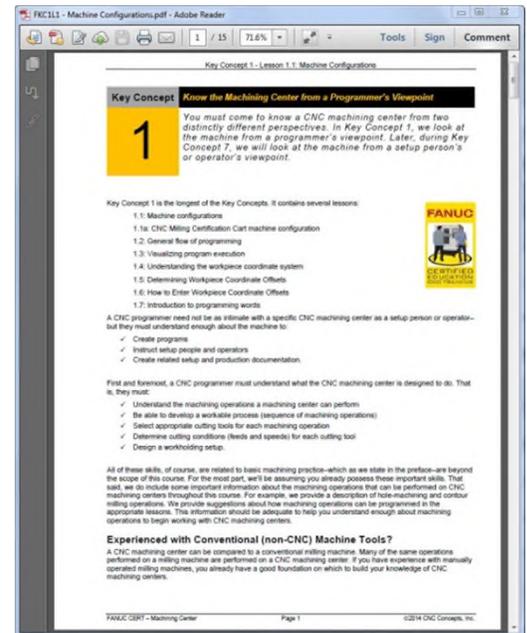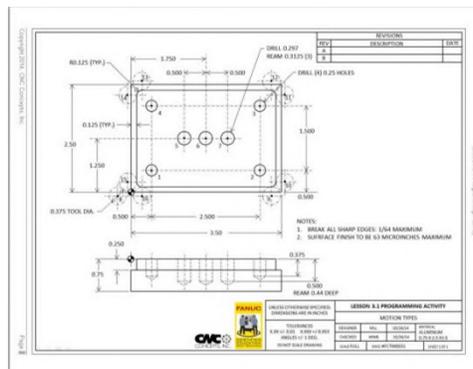

View, print, & save reading materials

Evaluation Methods: Every lesson contains a test. Some programming-related lessons contain a coordinate sheet exercise. Others contain a programming activity.
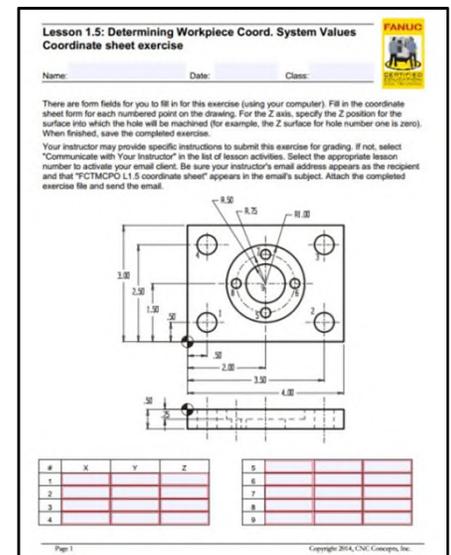
- On-line: Downloaded from lesson activities
- Off-line: Included in a workbook
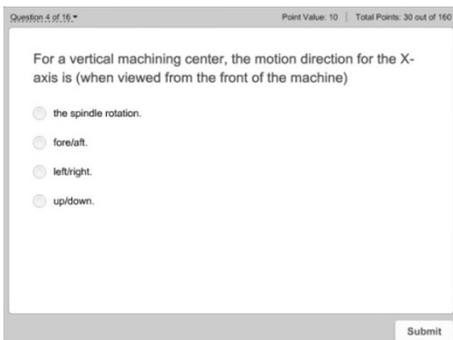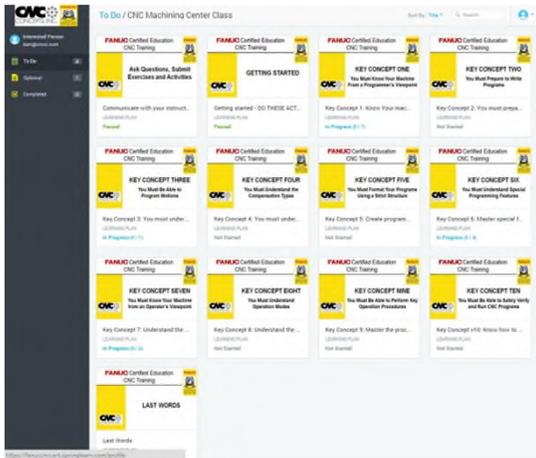

On-line tests automatically graded
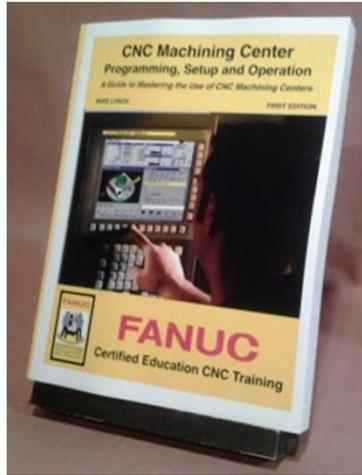

Programming activity

Coordinate sheet exercise

On-Line Learning Platform:

Off-Line: Textbook, Workbook, Presentations CD:

Comprehensive, yet tutorial:

Key Concepts and Lessons

Machining Center Programming, Setup, and Operation

1: Know your machine - programmer's viewpoint
1: Machine configurations
1a: Certification cart
2: CNC job work flow
3: Visualizing the execution of a program
4: Understanding the workpiece coordinate system
5: Determining workpiece coordinate system offset values
6: Setting workpiece coordinate system offsets
7: Introduction to programming words
2: You must prepare to write programs
1: Preparation steps for programming
3: Understand the motion types
1: Motion commands
4: Know the compensation types
1: Introduction to compensation
2: Tool length compensation
3: Cutter radius compensation
4: Workpiece coordinate system offsets

5: You must provide structure to your CNC programs
1: Introduction to program formatting
2: Structured program format
6: Special features that help with programming
1: Hole-machining canned cycles
2: Working with subprograms
3: Other special programming features
4: Programming rotary devices
7: Know your machine - operator's viewpoint
1: Tasks related to setup and running production
2: Buttons and switches on the operation panels
8: Know the three basic modes of operation
1: The three modes of operation
9: Understand the importance of procedures
1: The key operation procedures
10: You must know how to safely verify programs
1: Program verification

Students will spend about 30 hours working through each curriculum.

For instructors

➢ On-going access to on-line content
➢ Ability to monitor student progress
➢ Instructions for teaching/facilitating (manual)
➢ Lesson plans (manual)
➢ Excel gradebook included to record grades
➢ Easy access to NCGuide tutorials

➢ Templates provided for easy grading
  ➢ Test results/recording response
  ➢ Coordinate sheet exercises with answers
  ➢ Programming activities with answers

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CERTIFIED CNC TRAINING

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