Kentucky CTE

Advanced Manufacturing: Computerized Manufacturing and Machining: Manual Programming 470915 (2026–2027)

Practice and perform safe shop procedures at all times. 1	1 Practice and perform safe shop procedures at all times. 1
Apply the technical math required for employment opportunities in machining. 2	2 Apply the technical math required for employment opportunities in machining. 2
Perform all duties with emphasis on integrity, responsibility, quality, discipline and teamwork. 3	3 Perform all duties with emphasis on integrity, responsibility, quality, discipline and teamwork. 3
Use process planning for CNC equipment. 4	4 Use process planning for CNC equipment. 4
Use manual programming for CNC equipment. 5	5 Use manual programming for CNC equipment. 5
Load a CNC program and set tools and work offsets. 6	6 Load a CNC program and set tools and work offsets. 6
Ide mu job into production. 7	dentify the tasks that must be done to put a job into production. 7

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Use proper tool path sequencing. 8

8 Use proper tool path sequencing. 8

Apply the “Rule of Thumb” to determine rotary axis direction and the “Right-Hand Rule.” 9

9 Apply the “Rule of Thumb” to determine rotary axis direction and the “Right-Hand Rule.” 9

Describe the characteristics and differences between position and reference points. 10

10 Describe the characteristics and differences between position and reference points. 10

Calculate coordinate points using absolute Cartesian values. 11

11 Calculate coordinate points using absolute Cartesian values. 11

Calculate coordinate points using incremental Cartesian values. 12

12 Calculate coordinate points using incremental Cartesian values. 12

Identify basic CNC code structure. 13

13 Identify basic CNC code structure. 13