Kentucky CTE

Advanced Manufacturing: Industrial Maintenance Technology: Fundamentals of Machine Tools – B (For Maintenance) 470314 (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 maintenance. 2	2 Apply the technical math required for employment opportunities in maintenance. 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
Demonstrate and practice safe work habits in the lab area. 4	4 Demonstrate and practice safe work habits in the lab area. 4
Demonstrate knowledge of lathes, parts, and applications. 5	5 Demonstrate knowledge of lathes, parts, and applications. 5
Demonstrate the care an	6 Demonstrate the care and safe use of lathes. 6

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Demonstrate use and knowledge of mill parts and applications. 7	7 Demonstrate use and knowledge of mill parts and applications. 7
Demonstrate knowledge of cutting tools. 8	8 Demonstrate knowledge of cutting tools. 8
Demonstrate knowledge of cutting fluids. 9	9 Demonstrate knowledge of cutting fluids. 9
Identify and explain the handling procedure for hazardous material and the content of MSDS (Material Safety Data Sheet). 10	10 Identify and explain the handling procedure for hazardous material and the content of MSDS (Material Safety Data Sheet). 10
Calculate and set speeds and feeds on a lathe. 11	11 Calculate and set speeds and feeds on a lathe. 11
Sharpen high-speed tool bits. 12	12 Sharpen high-speed tool bits. 12
Mount workpiece on a lathe. 13	13 Mount workpiece on a lathe. 13
Face a workpiece. 14	14 Face a workpiece. 14
Perform turning operations. 15	15 Perform turning operations. 15
Machine with carbide cutting tools. 16	16 Machine with carbide cutting tools. 16
File and polish a workpiece. 17	17 File and polish a workpiece. 17
Demonstrate knowledge of a milling machine, parts, and applications. 18	18 Demonstrate knowledge of a milling machine, parts, and applications. 18
Demonstrate the care an ma	19 Demonstrate the care and safe use of milling machines. 19

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Calculate and set speeds and feeds on the milling machine. 20

20 Calculate and set speeds and feeds on the milling machine. 20

Mill flat surfaces and grooves using a vertical mill. 21

21 Mill flat surfaces and grooves using a vertical mill. 21

Apply cutting fluid to machining operations. 22

22 Apply cutting fluid to machining operations. 22