

Industrial Maintenance Technology: Fundamentals of Machine Tools - A (For Maintenance)

Practice and perform safe shop procedures at all times. **FMTA1**

1 Practice and perform safe shop procedures at all times. **FMTA1**

Apply the technical math required for employment opportunities in maintenance. **FMTA2**

2 Apply the technical math required for employment opportunities in maintenance. **FMTA2**

Perform all duties with emphasis on **FMTA3**

a integrity **FMTA3A**

b responsibility **FMTA3B**

c quality **FMTA3C**

d discipline **FMTA3D**

e teamwork **FMTA3E**

Demonstrate and practice safe work habits in the lab area as outlined in NIMS Framework for Machining Skills. **FMTA4**

4 Demonstrate and practice safe work habits in the lab area as outlined in NIMS Framework for Machining Skills. **FMTA4**

Perform bench work processes, hacksaw, files, layout, drill, tap and other activities to meet industry standards. **FMTA5**

5 Perform bench work processes, hacksaw, files, layout, drill, tap and other activities to meet industry standards. **FMTA5**

Perform safe and functional activities on the following machines: horizontal band saw, vertical band saw, drill press, arbor press, lathes, and mills. [FMTA6](#)

6 Perform safe and functional activities on the following machines: horizontal band saw, vertical band saw, drill press, arbor press, lathes, and mills. [FMTA6](#)

Perform tasks with cutting hand tools and non-cutting hand tools. [FMTA7](#)

7 Perform tasks with cutting hand tools and non-cutting hand tools. [FMTA7](#)

Identify and explain the handling procedure for hazardous material and the content of MSDS (Material Safety Data Sheet). [FMTA8](#)

8 Identify and explain the handling procedure for hazardous material and the content of MSDS (Material Safety Data Sheet). [FMTA8](#)

Identify safety needs and regulations in a machine shop. [FMTA9](#)

9 Identify safety needs and regulations in a machine shop. [FMTA9](#)

Identify non-cutting hand tools and the proper use of them. [FMTA10](#)

10 Identify non-cutting hand tools and the proper use of them. [FMTA10](#)

Prepare for a bench work process. [FMTA11](#)

11 Prepare for a bench work process. [FMTA11](#)

Hand saw with a hacksaw. [FMTA12](#)

12 Hand saw with a hacksaw. [FMTA12](#)

Bench file the workpiece. [FMTA13](#)

13 Bench file the workpiece. [FMTA13](#)

Dress and true grinding wheels on bench and pedestal grinders. [FMTA14](#)

14 Dress and true grinding wheels on bench and pedestal grinders. [FMTA14](#)

Demonstrate knowledge of power saws, parts, and applications. [FMTA15](#)

15 Demonstrate knowledge of power saws, parts, and applications. [FMTA15](#)

Demonstrate the care and safe use of the power saw. [FMTA16](#)

16 Demonstrate the care and safe use of the power saw. [FMTA16](#)

Cut and weld band saw blades [FMTA17](#)

17 Cut and weld band saw blades [FMTA17](#)

Perform operations on the cut-off saw [FMTA18](#)

18 Perform operations on the cut-off saw [FMTA18](#)

Perform operations on the vertical band saw. [FMTA19](#)

19 Perform operations on the vertical band saw. [FMTA19](#)

Demonstrate knowledge of drill press, parts, and applications. [FMTA20](#)

20 Demonstrate knowledge of drill press, parts, and applications. [FMTA20](#)

Demonstrate the care and safe use of the drill press. [FMTA21](#)

21 Demonstrate the care and safe use of the drill press. [FMTA21](#)

Calculate and set the cutting speed and feed on the drill press. [FMTA22](#)

22 Calculate and set the cutting speed and feed on the drill press. [FMTA22](#)

Sharpen drills. [FMTA23](#)

23 Sharpen drills. [FMTA23](#)

Set up a drill press and drill holes. [FMTA24](#)

24 Set up a drill press and drill holes. [FMTA24](#)

Shape and finish holes on a drill press. [FMTA25](#)

25 Shape and finish holes on a drill press. [FMTA25](#)

Tap holes by hand and machine on a drill press. [FMTA26](#)

26 Tap holes by hand and machine on a drill press. [FMTA26](#)

Thread by hand with taps and dies. [FMTA27](#)

27 Thread by hand with taps and dies. [FMTA27](#)

Operate an arbor press. [FMTA28](#)

28 Operate an arbor press. [FMTA28](#)

Use chisels and punches. FMTA29

29 Use chisels and punches. FMTA29

Demonstrate knowledge of hazardous materials handling. FMTA30

30 Demonstrate knowledge of hazardous materials handling. FMTA30

Demonstrate knowledge of hazardous materials storage. FMTA31

31 Demonstrate knowledge of hazardous materials storage. FMTA31

Demonstrate lock-out/tag-out procedures. FMTA32

32 Demonstrate lock-out/tag-out procedures. FMTA32

Demonstrate use of MSDS (Material Safety Data Sheet). FMTA33

33 Demonstrate use of MSDS (Material Safety Data Sheet). FMTA33

Measure with basic hand-held measuring instruments. FMTA34

34 Measure with basic hand-held measuring instruments. FMTA34