Kentucky CTE

Advanced Manufacturing: Industrial Maintenance Technology: HVAC Electricity (Ind Maint) 470365 (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
Measure ohms with an ohmmeter. 4	4 Measure ohms with an ohmmeter. 4
Measure voltage with a voltmeter. 5	5 Measure voltage with a voltmeter. 5
Measure amps with an ammeter. 6	6 Measure amps with an ammeter. 6
Measure watts with a wattmeter. 7	7 Measure watts with a wattmeter. 7

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Solve electrical circuit problems using Ohm's Law. 8

8 Solve electrical circuit problems using Ohm's Law. 8

Draw and interpret electrical symbols. 9

9 Draw and interpret electrical symbols. 9

Construct series circuits. 10

10 Construct series circuits. 10

Construct parallel circuits. 11

11 Construct parallel circuits. 11

Construct series-parallel circuits. 12

12 Construct series-parallel circuits. 12

Connect, operate, and identify the types of single-phase motors. 13

13 Connect, operate, and identify the types of single-phase motors. 13

Measure the resistance of windings in a split-phase motor and identify the start/run windings. 14

14 Measure the resistance of windings in a split-phase motor and identify the start/run windings. 14

Test capacitors. 15

15 Test capacitors. 15

Select wire and fuse sizes. 16

16 Select wire and fuse sizes. 16

Test transformers. 17

17 Test transformers. 17

Locate faults in electrical circuits. 18

18 Locate faults in electrical circuits. 18

Identify types of 3-phase power supplies. 19

19 Identify types of 3-phase power supplies. 19

Troubleshoot magnetic motor starters and coils. 20

20 Troubleshoot magnetic motor starters and coils. 20