

Spring and Summer 2012 Workforce Development Professional Skills Courses

Industrial Electrical Technology Certificate



Industrial Electrical Technology Certificate Information Session

You are invited to a free information session to learn more about the Industrial Electrical Technology Certificate and other electrical courses offered by Kilgore College. You will meet the instructors, review the course materials and get your questions answered. More importantly, you will find out how these courses can assist you with your career objectives, all without cost or obligation. *For reservations or for more information, please call 903-988-7426 or e-mail emcclellan@kilgore.edu*

Date: Mon., Jan. 10, 2012

Time: 6:30 p.m.

Place: Bert E. Woodruff Adult Education Center, Kilgore Campus, AC 220

KC's Industrial Electrical Technology Certificate consists of ten courses which train students to be job-ready for the manufacturing, industrial, and mechanical environments. Graduates are qualified to enter the workforce as an apprentice working under the direction of a licensed electrician.

Prerequisite courses are required before enrollment in the Industrial Electrical Technology Certificate courses.

Required Prerequisite Courses

Electrical Calculations

16 hours, \$150

(TECM 1013 – Occupational Math)

This course covers the mathematical applications utilized to solve problems in the electrical field. Topics include fractions, decimals, percentages, simple equations, ratio and proportion, and unit conversions. Emphasis will be placed on how to calculate the size of conductors, boxes, raceways, and over-current protective devices for branch circuits supplying electrical equipment and building services, as well as how to compute the size of branch circuits, feeders, and equipment for motors. **Textbook required.**

Kilgore Campus:

KC477035.205 112Q

Sat., Jan. 28

1:00-3:00 p.m., AC

8 weeks

KC477035.206 112Q

Wed., Feb. 8

6:00-8:00 p.m., AC

8 weeks

Electrical Printreading

18 hours, \$150

(DFTG 1023 – Blueprint Reading for Specific Occupations)

This course is an overview of electrical blueprint reading as it pertains to the applicable sections of the 2011 National Electric Code. **Textbook required.**

Kilgore Campus:

KC477025.214 112Q

Sat., Jan. 28

3:00-5:00 p.m., AC

9 weeks

KC477025.215 112Q

Wed., Feb. 8

8:00-10:00 p.m., AC

9 weeks

Hydraulics School

16 hours, \$195

(HYDR 1000 – Fluid Power I)

This course is an overview of fluid power and covers principles, major components, and basic circuitry. It is designed to introduce the beginning student to fluid power concepts and at the same time show how fluid power relates to areas of manufacturing like metal forming, plastics, basic metals, and material handling. **Textbook required.**

Kilgore Campus:

KC465011.200 112Q

Mon., Feb. 6

6:00-10:00 p.m., AC

4 weeks

KC465011.201 113Q

Sat., Apr. 14

8:00 a.m.-12:00 p.m., AC

4 weeks

Certificate Courses

Industrial Electricity

36 hours, \$275

(IEIR 1014 – Basic Industrial Electricity)

This course covers the theory and application of electrical energy. Topics include AC and DC theory, voltage, current, resistance, power, electrical values for series, parallel and combination circuits, electrical generation, transmission, and distribution and switching. **Textbook required.**

Kilgore Campus:

KC800120.202 112Q

Sat., Jan. 28

8:00 a.m.-12:00 p.m., AC

9 weeks

KC800109.201 112Q

Tues., Jan. 31

6:30-9:30 p.m., AC

12 weeks

Electrical Control Wiring

24 hours, \$225

(ELPT 1002 – Introduction to Electrical Controls)

This course covers the general principles of electrical controls and their components in the electrical power and air conditioning industries. Topics include reading electrical schematics, identifying industrial switches and pilot devices, and reviewing NEC. **Textbook required.**

Kilgore Campus:

KC477024.201 112Q

Thurs., Feb. 2

6:30-9:30 p.m., AC

8 weeks

KC477024.202 113Q

Sat., Apr. 14

1:00-4:00 p.m., AC

8 weeks

Electric Motors

48 hours, \$350

(IEIR 1006 – Electric Motors)

This hands-on course covers the fundamentals of single phase and three phase alternating current motors and direct current motors. Topics include operating principles, characteristics, application, selection, installation, maintenance, troubleshooting, and NEC review. **Textbook required.**

Kilgore Campus:

KC800105.200 112Q

Mon., Jan. 30

6:00-10:00 p.m., AC

12 weeks

KC800105.201 113Q

Sat., May 12

8:00 a.m.-12:00 p.m., AC

12 weeks

Industrial Wiring

64 hours, \$450

(ELPT 1057 – Industrial Wiring)

This hands-on course covers wiring methods using NEC guidelines for industrial installations. Topics include computation of circuit sizes, overcurrent protection for the installation of branch circuits, feeders, and service entrance conductors, proper installation of wiring devices, grounding methods, and conduit bending. Emphasis will be placed on safety requirements. **Textbook required.**

Kilgore Campus:

KC477089.200 113Q

Tues./Thurs., May 22

6:30-10:00 p.m., AC

10 weeks

KC477028.201 114Q

Sat., June 9

1:00 p.m.-5 p.m., AC

16 weeks

National Electric Code (NEC)

16 hours, \$150

(ELPT 1001 – Electrical Code)

This course is a study of the electrical requirements specified in the National Electric Code (NEC). Topics will include the minimum requirements for approval of electrical installations. **Textbook required.**

Kilgore Campus:

KC477094.200 113Q

Sat., Mar. 3

8:00 a.m.-12:00 p.m., AC

4 weeks

KC477094.201 113Q

Wed., May 2

6:00-10:00 p.m., AC

4 weeks

Electro-Hydraulics

24 hours, \$225

(HYDR 2050 – Fluid Power III)

This course introduces participants to the electrical control of hydraulic circuits. Topics include a review of hydraulic principles and fundamentals, electrical theory related to circuit design, amplifier theory and control concepts, and proportional, servo, and electro-hydraulic valve systems. **Textbook required.**

Kilgore Campus:

KC465012.200 113Q

Mon., Mar. 19

6:30-9:30 p.m., AC 220

8 weeks

Programmable Logic Controllers

24 hours, \$225

(ELPT 1003 – Programmable Logic Controllers)

This course covers basic hardware and software applications for industrial Programmable Logic Controllers (PLC). Topics include power supplies, discrete Input/Output (IO) modules, programming devices, processors, basic logic elements, timers, and counters. **Textbook required.**

Kilgore Campus:

KC477095.200 112Q

Thurs., Feb. 2

6:30-9:30 p.m., AC

8 weeks

KC477095.201 114Q

Sat., Aug. 4

9:00 a.m.-12:00 p.m., AC

8 weeks

Electrical Power Distribution

48 hours, \$350

(ELPT 2039 – Electrical Power Distribution)

The course covers the design, operation, and technical details of modern power distribution systems including generating equipment, transmission lines, plant distribution, and protective devices. Topics include calculations of fault current, system load analysis, rates, and power economics. **Textbook required.**

Kilgore Campus:

KC477096.200 113Q

Thurs., Apr. 5

6:00-10:00 p.m., AC220

12 weeks

Industrial Automation

48 hours, \$350

(ELPT 1019 – Special Topics in Electrical and Power Transmission Installer, General)

This course covers electrical control systems, applications, and interfacing utilized in industrial automation. **Textbook may be required.**

Kilgore Campus:

KC477093.200 113Q

Mon., May 14

6:00-10:00 p.m., AC220

12 weeks

Troubleshooting Electrical Systems

24 hours, \$225

(EECT 2043 – Troubleshooting and Maintenance)

This course covers the application of troubleshooting techniques to correct electrical system problems.

Textbook may be required.

Kilgore Campus:

KC800119.200 112Q

Tues., Jan 31

6:30-9:30 p.m., AC220

8 weeks