

# Fall 2010 Workforce Development Professional Skills Courses

## 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'll meet the instructors, review the course materials, and get your questions answered. More importantly, you'll 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 903-983-8288.***

**Date:** Mon., Aug. 9

**Time:** 6:30 p.m.

**Place:** Bert E. Woodruff Adult Education Center in Kilgore – Room 220

### ***Required Prerequisite courses:***

#### **Electrical Calculations**

36 hours, \$275

(ELPT 1015 – Electrical Calculations I)

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 and how to compute the size of branch circuits, feeders, and equipment for motors. **Textbook required.**

*Kilgore Campus:*

**KC477035.300 094Q** Mon.-Fri., Aug. 16, 2 weeks  
8:00 a.m.-12:00 p.m., AC220

**KC477082.300 101Q** Mon., Aug. 23, 12 weeks  
6:30-9:30 p.m., AC220

#### **Hydraulics School**

3 weeks, 12 hours, \$225

(HYDR 1000 – Fluid Power I)

This course is an overview of fluid power, covering 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.**

*Longview: TBA*

**KC465006.304 094Q** Tues., Aug.17  
8:00 a.m.-12:00 p.m.

**Electrical Blueprint Reading**

2 weeks, 36 hours, \$275

(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 2008 National Electric Code. **Textbook required.**

*Kilgore Campus:*

**KC477025.31 094Q** Mon.-Fri, Aug. 16, 2 weeks  
1:00-5:00 p.m., AC

**KC479600.303 101Q** Mon., Aug. 23, 12 weeks  
6:30-9:30 p.m., AC

**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:*

**KC800110.300 101Q** Mon.-Fri., Mon. Aug. 30, 1 week  
8:00 a.m. – 5:00 p.m. AC220

**KC800109.301 101Q** Tues., Aug. 24, 12 weeks  
6:30-9:30 p.m. AC220

**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:*

**KC477036.300 101Q** Tues.-Fri., Sept. 7, 1 week  
8:00 a.m. – 3:00 p.m., AC220

**KC477024.301 101Q** Tues., Aug. 24, 8 weeks  
6:30-9:30 p.m. AC220

**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 including operating principles, characteristics, application, selection, installation, maintenance, troubleshooting and NEC review. **Textbook required.**

*Kilgore Campus:*

**KC800108.300 101Q** Mon.-Fri., Sept. 13, 1 week  
8:00 a.m. – 6:00 p.m., AC220

**KC800105.301 101Q** Weds., Aug. 25, 12 weeks  
6:00-10:00 p.m., AC 220

**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:***KC477030.300 101Q** Mon.-Fri., Sept. 20, 2 weeks  
8:00 a.m. – 3:30 p.m. AC220**KC477028.301 101Q** Weds., Aug. 25, 16 weeks  
6:00-10:00 p.m., AC220**National Electric Code (NEC)**

1 week, 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:***KC477037.300 101Q** Mon.-Fri., Oct. 4  
8:00 a.m. – 12:00 p.m., AC**Electro-Hydraulics**

1 week, 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:***KC465008.300 101Q** Mon.-Fri., Oct. 11  
8:00 a.m. – 2:00 p.m., AC**Programmable Logic Controllers**

1 week, 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:***KC477032.300 101Q** Mon.-Fri., Oct. 18  
8:00 a.m. – 2:00 p.m., AC220

**Electrical Power Distribution**

1 week 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:*

**KC477033.300 101Q** Mon.-Fri., Oct. 25  
8:00 a.m. – 6:00 p.m.

**Industrial Automation**

1 week, 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:*

**KC477039.300 101Q** Mon.-Fri., Nov. 1  
8:00 a.m. – 6:00 p.m., AC220

**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:*

**KC800117.302 101Q** Mon.-Fri., Nov. 8, 1 week  
8:00 a.m. – 2:00 p.m., AC220

**KC800103.301 101Q** Tues./Thurs., Nov. 16, 4 weeks

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