

# Spring 2010 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'll meet the instructors, review the course materials, and get your questions answered. Most 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., Jan. 18, 2010

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

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

### Required Prerequisites

#### **Electrical Calculations**

2 weeks, 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 overcurrent 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 093Q** M/T/W/R/F., Jan 11  
8:00 a.m.-12:00 p.m., AC220

#### **Electrical Blueprint Reading**

2 weeks, 36 hours, \$275

(DFTG 1023 – Electrical Blueprint Reading)

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*

**KC477025.307 093Q** M/T/W/R/F, Jan 11  
1:00-5:00 p.m., AC

## **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 is required.**

*Longview: TBA*

**KC450006.300 093Q** Tue., Feb. 2

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

## **Certificate Courses**

### **Industrial Electricity**

1 week, 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*

**KC800110.301 093Q** M/T/W/R/F, Mar. 1

8:00 a.m. – 5:00 p.m. AC220

### **Electrical Control Wiring**

1 week, 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:*

**KC477036.301 093Q** M/T/W/R, Mar. 8

8:00 a.m. – 2:00 p.m., AC220

### **Electric Motors**

1 week, 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:*

**KC800108.301 093Q** M/T/W/R/F, Mar. 15

8:00 a.m. – 6:00 p.m., AC220

**Industrial Wiring**

2 weeks, 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 093Q** M/T/W/R/F, Mar. 22

8:00 a.m. – 3:30 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 093Q** M/T/W/R, Apr. 5

8:00 a.m. – 12:00 p.m., AC

**Electro-Hydraulics**

1 week, 24 hours, \$225

(HYDR 1091 – Special Topics in Hydraulics Technology/Technician)

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 093Q** M/T/W/R, Apr. 12

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 093Q** M/T/W/R, Apr. 19

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:***KC477033.301 093Q** M/T/W/R/F, Apr. 26

8:00 a.m. – 6:00 p.m., RCEC

**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 093Q** M/T/W/R/F, May 3

8:00 a.m. – 6:00 p.m., AC220

**Troubleshooting Electrical Systems**

1 week, 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:***KC800103.300 093Q** M/T/W/R, May 10

8:00 a.m. – 2:00 p.m., AC220