

## Troubleshooting Electrical Circuits "Hands-On" 3-DAY SEMINAR



**This course is designed for anyone requiring an understanding of electricity,** and needing to advance their skills further as it applies to the everyday workplace. This is NOT ONLY a seminar on electrical theory; the discussion will be on practical applications.

**"Hands-On" Training.** Students will build and experiment with circuits constructed on our fully equipped simulators. Anyone desiring an in-depth understanding and appreciation of electrical systems, component operation and troubleshooting techniques will benefit from this training. Time is spent equally between lecture and hands-on lab experiments.

### COURSE TOPICS:

- Introduction To Electricity
- Introduction To Electrical Components
- Current
- Voltage
- Resistance
- Ohm's Law
- Kirchhoff's Law
- Generator Principles
- Single Phase Distribution
- Three Phase Distribution
- Magnetism
- Transformers
- Conductivity
- Sizing Conductors
- Circuit Protection
- Circuit Protection Sizing
- Grounding
- Electrical Graphic Symbols
- Relays & Contactors
- Resistors & Capacitors
- Photocells
- Motor Starters
- Heater Sizing
- Parallel Circuits
- Series Circuits
- Ladder Logic
- Electrical Drawings
- Solenoids
- Solid State Devices

### TROUBLESHOOT CIRCUITS & COMPONENTS USED IN:

- Basic Control Circuits
- Remote Start/Stop Circuits
- Time Delay Circuits
- Reversing Circuits
- Run/Jog Circuits
- Sequencing Circuits
- Two Speed Motor Controls
- Time Delay/Off Circuits
- Overload Protection
- Transformers



### MULTIMETER USED TO TROUBLESHOOT:

- Motors
- Motor Starters
- Relays
- Limit Switches
- Photocells
- Timers
- Circuit Protection

**NOTE: Attendees should bring their own multimeter for this "Hands-On" training**



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### COURSE INCLUDES

- Lab Manual
- Certificate of Completion
- All Materials and Supplies

### REGISTRATION FORM

ENROLLMENT ARRANGEMENTS SHOULD BE RECEIVED A MINIMUM OF SEVEN DAYS PRIOR TO THE SEMINAR DATE

**PLEASE USE A SEPARATE FORM FOR EACH COURSE NUMBER**

COURSE LOCATION: \_\_\_\_\_ COURSE DATES: \_\_\_\_\_

STUDENT: \_\_\_\_\_

COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PERSON TO CONTACT IF THERE IS A CHANGE IN SCHEDULE: \_\_\_\_\_

PHONE: \_\_\_\_\_ EXT: \_\_\_\_\_

EMAIL: \_\_\_\_\_

### SELECT PAYMENT METHOD:

\_\_\_\_\_ STUDENT(s) @ \$1,895 PER PERSON TOTAL \$ \_\_\_\_\_

☐ CHECK IS ENCLOSED

☐ USE OUR PURCHASE ORDER NO. \_\_\_\_\_

☐ VISA ☐ M/C ☐ AMEX CARD HOLDER \_\_\_\_\_

CARD NUMBER: \_\_\_\_\_ EXP: \_\_\_\_\_ CVV: \_\_\_\_\_

### Class Schedule:

7:30 A.M. – 3:30 P.M.

LUNCH (NOT PROVIDED)

11:00 A.M. – 12:00 P.M.

ENROLL TODAY, classes fill quickly

3-Day Seminar \$1,895 Per Person

On-Site Programs Available

For more information or to register contact us:

800-704-1066 or email [info@nfpitraining.com](mailto:info@nfpitraining.com)