

Industrial Electronics & Circuits



A DIVISION OF ECPI UNIVERSITY

Learn the fundamental concepts, symbols and components of electronic circuits. Sharpen your troubleshooting skills to help reduce downtime of equipment. You will work with real world industrial components and circuits and wire electronic circuits using schematic diagrams, testing the circuit for proper operation. Participants will gain invaluable experience using and understanding common electronic test equipment, such as, oscilloscopes, signal generators, power supplies and multimeters to verify electronic operation. The course covers all aspects of industrial electronics, including Ohm's law, terminology, common circuits, test equipment, and safety. Theory and explanations support numerous hands-on exercises.

Gain hands-on experience with diodes, SCRs, triacs, transistors, MOSFETS, and ICs are utilized in conjunction with resistors, capacitors and LEDs, to measure, test and troubleshoot variable frequency drives, PLCs, power supplies and UPS systems.

WHAT THIS COURSE COVERS

- Electronics Fundamentals
- Resistance and Basic Circuit Laws
- Electromagnetics and Inductance
- Capacitance
- AC Resistive, Capacitive, and Inductive Circuits
- Semiconductor Devices
- Linear Integrated Circuits
- Photoelectronics
- Digital Logic
- Soldering Considerations
- Meters

WHO SHOULD TAKE THIS

- Apprentice and Experienced HVAC Technicians
- Maintenance Technicians
- Fire Alarm Technicians
- Electricians
- Plant and Facility Maintenance Technicians
- Building Engineers
- Stationary Engineers

COURSE OUTCOMES

- Understand Electricity Concepts Such as Voltage, Current, Wiring, Switches, and Circuits.
- Learn How Electricity Applies to Transformers, Motors, and Common Electrical Devices.
- Safely Perform Electrical Wiring, Troubleshooting, and Repairs.

COURSE AGENDA

- Electronics Fundamentals
- Resistance and Basic Circuit Laws
- Troubleshooting Basic Resistor Circuits
- Electromagnetics and Inductance
- Capacitance
- AC Resistive, Capacitive, and Inductive Circuits
- Semiconductor Devices
- Linear Integrated Circuits
- Photoelectronics
- Digital Logics
- Soldering Considerations
- Meters

Lecture

Hands-on

• **ONSITE:** 2-days (16 hours)

• **LIVE ONLINE:** N/A



ONSITE - TRAINING TOUR - LIVE VIRTUAL - ONLINE - HANDS ON - AUDITS - CONSULTING - **TRAINED WORKERS. STRONGER COMPANIES.**
NTT TRAINING INC. • 1.800.922.2820 • www.nttinc.com • contact@nttinc.com

IE Course Overview and Agenda v11152024.docx