



ELECTRICITY/ELECTRONICS

NOCTI certification available to all students.

A two-year program which allows students the opportunity to attain entry level job skills and/or prepare for additional in-depth training in the Electricity/Electronics field. Students will first study Consumer/Industrial Electronics and then progress to Electrical Construction techniques. Students will be given job-seeking skills and assisted in finding jobs near the end of the second year.

OBJECTIVES OF THE COURSE:

Electrical Construction

1. To develop safe and sound construction practices and procedures.
2. To develop and acquire residential, commercial, and industrial electrician skills.
3. To develop blueprint-reading skills.
4. To develop National Electrical Code use skills.

Electronics

1. To develop safe and sound electronics practices and procedures.
2. To develop and acquire electronics assembly and repair skills.

Industrial Electronics

1. To develop panel-building skills.
2. To develop motor control technician skills.
3. To develop an understanding of ladder logic and PLC Programming

UNITS OF STUDY

Shop Safety	Transistors
Hand Tools	Diodes
Source of Electricity	Circuit Fundamentals
Soldering	Panel Building
Mathematical Calculations	Motors & Controls
Resistance	Ohm's Law
Voltage Measurement	Circuit Construction
Current Measurement	Oscilloscope Usage
Misc. Test Equipment	Job Seeking Skills
Conductors & Insulators	Series – Parallel Circuit
Nature of Alt. Current	Basic Troubleshooting
PLC Programming	Entry level Robotics theory

Suggested Educational Background and Qualities

1. Good Mechanical Skills
2. General High School Math
3. Good attendance record

JOB OPPORTUNITIES

Maintenance Electrician
Electronic Manufacturing/Service
Electric Power Industries Jobs
Armed Forces
Construction Electrician

Appliance Service
Audio Service Technician
Mechatronics Technician
Electro-Mechanical Systems Mechanic
Electrical Engineering

CAREER ADVANTAGES

ELECTRICAL CONSTRUCTION:

1. Work is often done in factories, hospitals, houses, schools, offices, and apartments.
2. Year round employment.
3. Minimal Layoffs.
4. Construction person may work outdoors.
5. Apprenticeship training available through local unions.
6. Advancement opportunities.

CONSUMER ELECTRONICS:

1. Clean working conditions, many locations are air-conditioned.
2. Minimal layoffs for skilled and efficient employees.
3. Extensive travel required for some specialists.
4. Interact with customers and co-workers.
5. Additional training provided by many companies, to keep abreast of new technologies.

INDUSTRIAL ELECTRONICS:

1. Work is often done in factories
2. Year round employment
3. Minimal layoff
4. Extensive travel is sometimes required.
5. Additional training is provided by many companies.

COLLEGE OPPORTUNITIES

SUNY College of Technology of Delhi & Tech. Prep. Of South Central New York

ECMT 130 Electrical Laboratory I – 4 credits