

NASSAU BOCES - ADULT EVENING PROGRAM
Joseph M. Barry Career & Technical Education Center
1196 Prospect Ave.
Westbury, NY 11590

COURSE OUTLINE

Course Name: **Trade Electric II – Residential II**
Weeks: 10
Sessions: 20
Hours 60
Days/Time Tue/Thu 6:30- 9:30 pm
Instructor: Jim McKillop
Required Textbook: Electrical Wiring-Residential 15th Ed.; Ray C. Mullen
Prerequisites: Trade Electric-I (Student must provide some tools and materials-list provided)
Adult evening Office: (516) 622-6950

Course Overview:

This course includes: basic electrical theory, code review, single phase wiring methods. Also includes practical wiring using cable layouts for various lighting, receptacle and switch wiring. This is a Nassau BOCES *Green Certified* course.

Trade Electricity Certificate Program: Trade Electric Theory, Trade Electric I, Trade Electric II, Trade Electric III, Trade Electric IV, Minimum 270 hours.

Course Topics

- Session 1 Introduction
- Shop procedure – course outline – OSHA – Electrical Safety in Field
 - Basic Review, Tool and Electrical Components
 - Review basic course – Cabling diagrams – Box Fill - Calculations
- Session 2 Practical Review
- Switches, receptacles and general lighting circuits
- Session 3 Wiring Techniques
- Wiring Methods (Article 300)
 - Romex (RX), Armored Cable (BX),
 - Multi conductor cables – wiring diagrams- 3 Way Switches
- Session 4 4 Way Switches
- Session 5 Split Receptacle Installation
- Session 6 Ground Fault Circuit Interrupters – (GFCI)
- Use and proper installation

- Session 7 Planning Electrical Installations
- Proper equipment, job layout
 - Job specification, special equipment
 - Working with blue prints
- Session 8 Planning Electrical Installations (Continued)
- Session 9 Planning Electrical Installations (Continued)
- Session 10 Midterm Part 1 - Written; Part 2 - Shop Project
- Session 11 Overcurrent Protection / Panel Wiring
- Session 12 Residential Service Installation Procedures/ NEC and LIPA Requirements
- Session 13 Residential Service Installation
- Session 14 Electric Service Calculations
- Session 15 Connecting Branch Circuits to Service Panel
- Session 16 220 Volt appliance circuits
- Session 17 Calculating the Cost of Solar Panels for Residential Service Installations.*
- Session 18 Luminaires- Incandescent, Fluorescent, Quartz and Sodium Vapor Type
- Session 19 Written Final Exam Review / Begin Final Practical Exam
- Session 20 Complete Final Practical Exam / Final Exam Written

* *This topic is Green Technology compliant.*