

IEC's Electrical Apprenticeship Program 4th Year Course Outline



First Semester

First Aid / CPR / AED Training

Power Distribution Systems

Phase Loss and Solid State Relays and Starters

On-Delay, Interval and Recycle Timers

Lab - Timing Relay

Off- Delay, One Shot, and Multifunction Timers

Lab - Advanced - Timing Relay

Counters & Sensors

Mid-term Review and Exam

Motor Starting Methods

Motor Drives - Accelerating and Decelerating Methods

Introduction to Programmable Controllers

Lab - Advance - Automatic Car Wash

Energy Management and Building Automation

Lab - Advance - Fire Suppression System Control of Kitchen Equipment

Preventative Maintenance and Troubleshooting

1st Semester Exam Review

1st Semester Final Exam

Second Semester

Introduction, Definitions, and Boxes

Cables

Raceways and Conductors

Residential Single Family - General Provisions

Specific Provisions:
Residential Single Family Dwellings

Residential and Commercial Services and Equipment

Multifamily Dwellings & Commercial Installations - General Provisions

Hazard Conditions and Health Care Facilities

Mid-term Review and Exam

Special Occupancies and Specific Equipment

Specific Equipment and Industrial Locations

Industrial Locations and Power Quality

Load Calculations

BCES Load Calculations

Fire Alarm Systems - Introduction and Overview

Voice, Data & Video - Introduction and Overview

Final Exam Review

2nd Semester Final Exam



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