

IEC's Electrical Apprenticeship Program 3rd Year Course Outline



First Semester

Introduction to Grounding and Bonding

First Aid/CPR/AED Training

General Requirements for Grounding and Bonding

System Grounding I

System Grounding II

Grounding Electrode System and Grounding Electrode Conductor

Enclosure, Raceway, and Service Cable Connections - Bonding

Equipment Grounding and Equipment Grounding Conductors

Methods of Equipment Grounding and Grounding of Specific Equipment

First Semester Mid-Term Exam

Printreading: Project Design, Development, and Specifications

Printreading: Survey, Civil, and Structural Drawings

Printreading: Architectural Drawings I

Printreading: Architectural Drawings II

Printreading: MEP, M, E, P, and Special Prints

Project Planning: Foreman Training

First Semester Exam Review

First Semester Final Exam

Second Semester

Electrical Quantities, Circuits, Test Instruments, and Safety

Manual Control Circuits: Devices and Symbols – Logic and Diagrams

Introduction to Contactors and Relays

Applications Using Contactors and Relays

Manual and Automatic Control Devices

Ladder Diagrams Using Manual and Automatic Control Devices

Lab - Automatic Controls

Magnetic Motor Starters

Lab - Pilot Devices & Holding Contacts

Second Semester Mid-Term Exam

Motor Overload Protection and Connections

Lab - Magnetic Motor Starters

Reversing Motor Controllers, Starters, and Motor Connections

Lab - Reversing Motor Starters

Latching and Alternating Relays and Jogging Circuits

Lab - Multi- Motor Equipment

Second Semester Final Exam Review

Second Semester Final Exam



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