

IEC's Electrical Apprenticeship Program 1st Year Course Outline



First Semester

Orientation And Basic Principles

Tools and Blueprints

First Aid/ CPR/ AED Training

Applied Math - Circuit Theory - Plans & Specs

Conduit Bending

Applied Math - Electrical Symbols & Outlets - Ohm's Law

General-Purpose and Small - Appliance Circuit

Conductor Sizes, Types, & Connections - Type NM Cables

Voltage Drop, Other Wiring Methods, and Printreading

Mid-term Review and Exam

Switch Control

GFCI Protection

Luminaires

Front Bedroom Lighting and Introduction to Series Circuits

Master Bedroom and Series Circuits

Lighting and Small Appliance Branch Circuits

1st Semester Final Exam

Second Semester

Living Room and Study Branch Circuits - Introduction to Parallel Circuits

Laundry Outlets and Parallel Circuits

Garage Circuits and Parallel Circuit Calculations

Conduit Fill and Special Purpose Outlets

Special Purpose Outlets - Kitchen

Special Purpose Outlets - Bathroom, Exhaust Fans and Hydromassage Tub

Heating and Air Conditioning

Low Voltage and Fire Alarms

Mid-term Review and Exam

Recreation Room - Multiwire Branch Circuits and Introduction to Combination Circuits

Workshop Lighting and Receptacle Branch Circuits - Combination Circuits

Service Entrance Equipment

Knots, Rigging, and Specialty Tools

Overcurrent Protection

Service Entrance Calculations

Swimming Pools, Spas, and Hot Tubs

Home Automation, Standby Power, and Review

2nd Semester Final Exam



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