

## SYSTEM ELECTRICIAN APPRENTICE

3/18

Special Note: courses updated 3/18

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### Base Program

Course Title	Course Number	Course Duration	Study Unit
Learning Strategies	050028	5 hours	Print
Basic Industrial Math	Block X31	30 hours	Print
Addition and Subtraction	186303	(5 hours)	Print
Multiplication and Division	186304	(5 hours)	Print
Fractions, Percents, Proportions, and Angles	186305	(5 hours)	Print
Metric System	186306	(5 hours)	Print
Formulas	186307	(5 hours)	Print
Introduction to Algebra	186308	(5 hours)	Print
Practical Measurements	Block X32	25 hours	Print
Linear and Distance Measurement	186125	(5 hours)	Print
Bulk Measurement	186126	(5 hours)	Print
Temperature Measurement	186127	(5 hours)	Print
Energy, Force, and Power	186128	(5 hours)	Print
Fluid Measurement	186129	(5 hours)	Print
Algebra	2469A-E	50 hours	Print
Practical Geometry and Trigonometry	5567	10 hours	Print
Problem Solving and Troubleshooting	186073	10 hours	Print
Introduction to Print Reading	186080	8 hours	Print
Electrical Drawings and Circuits	186044	8 hours	Print
Working Safely With Electricity	186108	(10 hours)	Print
DC Principles	Block A31	30 hours	Print
Nature of Electricity	086112	(5 hours)	Print
Circuit Analysis and Ohm's Law	086113	(5 hours)	Print
Capacitors and Inductors	086114	(5 hours)	Print
Magnetism and Electromagnetism	086115	(5 hours)	Print
Conductors, Insulators, and Batteries	086116	(5 hours)	Print
DC Motors and Generator Theory	086117	(5 hours)	Print
AC Principles	Block A32	40 hours	Print
Alternating Current	086118	(5 hours)	Print
Alternating Current Circuits	086119	(5 hours)	Print
Inductors in AC Circuits	086120	(5 hours)	Print
Capacitors in AC Circuits	086121	(5 hours)	Print
Transformers	086122	(5 hours)	Print
Alternators	086123	(5 hours)	Print
Electrical Energy Distribution	086124	(5 hours)	Print
Rectification and Basic Electronic Devices	086125	(5 hours)	Print
Analog Circuit Measurement	Block A33	15 hours	Print
Basic Test Equipment	086126	5 hours	Print
Troubleshooting with Volt-Ohm-Milliamp Meter (VOMs)	086127	(5 hours)	Print
Using Basic Oscilloscopes	086128	(5 hours)	Print

## ***SYSTEM ELECTRICIAN APPRENTICE PG2***

Component Testers	086062	6 hours	Print
Digital Test Equipment	086063	6 hours	Print
Electrical Measuring Instruments	4146A-C	30 hours	Print
Reading Electrical Schematic Diagrams	006022	10 hours	Print
Electrical Blueprint Reading	006036	10 hours	Print
Electricity and Magnetism	4010A-C	30 hours	Print
Alternating Current Motors	4032	10 hours	Print
Alternators	4031	10 hours	Print
Transformers	4040	10 hours	Print
Transformer Operation	4041	10 hours	Print
Voltage Regulation of Distribution Systems	4370	10 hours	Print
Wiring Electrical Circuits	006037	10 hours	Print
Electrical Wiring Practices	086E02	20 hours	Print
Connecting Electrical Equipment Part 1	086074	5 hours	Print
Connecting Electrical Equipment Part 2	086075	5 hours	Print
National Electrical Code	5177EM	60 hours	Print
Industrial Motor Controls (for PLCs)	006010 - 006012	30 hours	Print
Storage Batteries	4343	10 hours	Print
Instrument Transformers	6793	10 hours	Print
Protective Relaying	6538A-B	20 hours	Print
Switchgear	086092	10 hours	Print
Fiber Optics	086E03	30 hours	Print
Data, Voice and Video Cabling	086E16	20 hours	Print
Radio Frequency Circuits	6515	10 hours	Print
Electrical Power Distribution and Transmission for the Technician	786E01	80 hours	Print

Estimated Total Curriculum Duration: 708 hours.

Number of Exams: 92.

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