

Certificate in Electrical Wiring Technology CT-ELWIR

PROGRAMME OVERVIEW

In an effort to deliver a curriculum which is both current and timely, Bermuda College in collaboration with the Electrical Occupational Advisory Committee (EOAC) and the National Joint Apprenticeship and Training Committee (NJATC) of America has adopted this comprehensive modular programme as the standard for apprenticeship training in Bermuda. The programme will take five years to complete and upon successful completion of the entire course, the student will be certified as a Journeyman Inside Wireman by both the NJATC and Bermuda College. The NJATC certificate is highly regarded in the US, Canada, and around the world wherever US and Canadian electrical standards are in use.

Studying under the guidance of an experienced lecturer, students work through the modules in order, covering theoretical concepts while honing their practical skills. The passing grade for each module is 75%.

The apprenticeship programme is very broad-based, covering all areas of the trade and providing the graduate with the skill, knowledge and confidence to enter a dynamic and exciting industry. Additionally, instructors in the programme bring meaning to a high tech industry that is more rapidly changing than the curriculum can reflect. The experience and understanding that these individuals bring to the classroom make the programme the most unique way to learn to work in the electrical industry.

CURRICULUM

ELN 1101	How to Study This Course and Achieve Your Personal Goals	ELN 3130	Grounding and Bonding Fundamentals
ELN 1102	Introduction to Test Instruments and Overcurrent Protection Devices	ELN 3131	The Grounding Electrode System
ELN 1103	Building Wire Construction and Insulation Properties	ELN 3132	Personnel Protection and Ground Fault Protection of Equipment
ELN 1104	Conduit Fabrication	ELN 3133	Grounding and Bonding of Electronic Equipment
ELN 1105	The Metric System and Metrication Changes	ELN 3134	Review of the Theory of Three Phase Transformers
ELN 1106	Blueprint Reading and Sketching	ELN 3135	NEC: Overcurrent Protection
ELN 1107	DC Theory: OHM'S Law	ELN 3136	NEC: Transformer Protection and Ground Fault Protection
ELN 1108	The DC Series Circuit	ELN 4137	Lightning Protection Systems
ELN 1109	The DC Parallel Circuit	ELN 4138	AC Alternators
ELN 1110	The DC Combination Circuit	ELN 4139	Electronic Variable Speed-Control
ELN 1111	Norton's and Thevenin's Theorems and Kirchoff's Laws	ELN 4140	Motor Starters, Contactors and Control Relays
ELN 1112	Intro to the National Electrical Code	ELN 4141	Manual and Automatic Operating Devices
ELN 2113	Testing and Measuring with the Analog and Digital Multimeter	ELN 4142	Timing Devices and DC Motor Controls
ELN 2114	Developing NEC Code Book Skills	ELN 4143	AC Motor Speed Control and Troubleshooting
ELN 2115	Understanding the Design and Function of AC and DC Generators	ELN 4144	Digital Electronics and Boolean Algebra
ELN 2116	Laying-Out Residential Circuits and Basic Estimating	ELN 4145	The Allen Bradley SLC 500 Family PLC's
ELN 2117	AC Theory: Inductance	ELN 4146	Air Conditioning and Refrigeration
ELN 2118	AC Theory: Capacitance	ELN 4147	Cable Tray Systems and the NEC
ELN 2119	Working with Series and Parallel RL & RC Circuits	ELN 4148	NEC: Hazardous-Locations Wiring Methods and Equipment
ELN 2120	Analysing and Working with Combination RLC Circuits	ELN 5149	Motivation and Leadership
ELN 2121	Filters, Power Factor and Power Factor Correction	ELN 5150	Fire Alarm Systems
ELN 2122	Principles of Three Phase Systems	ELN 5151	Introduction to Instrumentation
ELN 2123	NEC - Branch Circuits 1 & 2 and Feeders and Services	ELN 5152	Fundamentals of Controllers
ELN 2124	Cabling Assemblies & Wiring Methods	ELN 5153	Security Systems & Telephone Wiring
ELN 3125	Health and Safety	ELN 5154	Structured Cabling Systems
ELN 3126	Advanced Blueprint Reading	ELN 5155	Solar Power Generation and Fuel Cell Basics
ELN 3127	Semiconductor Theory	ELN 5156	High Voltage Testing
ELN 3128	BJTs, MOSFETs, & Other Transistor Types	ELN 5157	Harmonics and Power Quality Surveys
ELN 3129	Differential & Operational Amplifiers	ELN 5158	Automation Networks
		ELN 5159	Understanding Emergency Building Installation Requirements
		ELN 5160	Electrical Load Calculations

TOTAL CREDITS: 60

Each module is one (1) credit.