

Diploma Program in

ELECTRICITY TECHNICIAN

8 MONTHS - 24 CREDITS

DC Circuits

EET1011 (L)(L)(L)(L)

This course emphasizes Direct Current (DC) principles and methods as well as in the underlying theories and concepts needed for a strong foundation on electrical technology. The students are introduced to the fundamentals of electricity and DC circuits, including how the properties of materials affect them to be categorized into conductors, semiconductors, and insulators. In-depth coverage of Ohm's Law and its relation to voltage, current, resistance, and power are presented followed by theoretical and practical applications of electrical components connected in series.

AC Circuits

EET1021 (L)(L)(L)(L)

This course will provide the concepts of capacitance and inductance as they relate to alternating current theory. In addition, the course reinforces concepts related to AC which have been previously studied. Aspects of electromagnetism are emphasized. An introduction to vectors and complex numbers is followed by an immersion into AC concepts while being compared to DC theory. Most contents of this course will discuss how to analyze all the possible combination of RLC circuits including series, parallel and combination circuits. Parameters such as apparent power, reactive power and power factor are studied. Transformers, three-phase circuits and delta and wye connection characteristics are covered. Theoretical topics will be verified using computer programs and mounting real circuit in the lab.

Prerequisites: EET1011

National Electric Code (NEC)

EET1000 (L)(L)(L)(L)

This course will help students to obtain a better understanding of the structure, regulations, principles and organization of the National Electrical Code (NEC).

Prerequisites: EET1011 and EET1021

Electrical Materials & Components

EET1051 (L)(L)(L)(L)

This course will provide the students with adequate knowledge in order to identify the most common materials used in today's industry as well as the proper understanding of related terminology. Topics covered in this course will permit future electricians to be familiar with current materials and components utilized for electrical projects at residential, commercial and industrial areas. A description about the diverse types of conductors used in lighting, entrant services, communications and control will be studied, together with explanations on boxes, tubing and fitting for circuit installations. Emphasis is focused on the service and distribution equipment, safety disconnection and fire protection, security, communication and digital control devices.

Blue Print Reading

EET1050 (L)(L)(L)(L)

This course will offer to future electricians efficient and accurate blue print reading skills in the electrical area. Concepts of drawing, sketching, views, plans, schedules, and specifications are presented and then reinforced by current print reading practical exercises that will offer students proper practice in the interpretation and analysis of various prints in different electrical work areas. Students will benefit from experiencing with electrical, mechanical, hydraulic, and specialized communication symbology that will improve their recognition and understanding of other craft symbols likely to be encountered on the jobsites. Topics will also include applications and basic learning to sketch and electronic draft ladder diagrams, schematics, wiring diagrams, low and high voltage prints and others.

Residential Wiring

BCT1630 (L)(L)(L)(L)

This course will provide instruction in wiring methods for single family, two family, and multi-family residences. This course presents basic wiring techniques of electrical devices using schematics and wiring diagrams. In addition, future electricians will be trained to be familiar with electrical installation, operation, and maintenance of residential wiring. It will focus on general knowledge, safety, tools, blueprint reading, equipment, wiring, and the accepted wiring practices in accordance to the current edition of the National Electrical Code.

Prerequisites: EET1011 and EET1021

(L) = 1 semester credit hour

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SCHOOL OF TECHNOLOGY

ELECTRICITY TECHNICIAN

Stats & Fun Facts!



Program Description

The program is designed to instruct students with an entry level of proficiency and prepare them with basic skills for employment in the electrical industry. The curriculum focuses on the combination of theory and practical application necessary for employment and successful problem solving tasks using concepts from electrical technology. Training includes DC/AC circuits with an emphasis on residential wiring.

Employment Statistics

= **5,000** employment number

Texas, California, New York & Florida, were the states with the highest employment numbers in 2011.



Projected growth 2010-2020

Compared to other industries, the percent change in employment for Electricians is greater.



Tech Troopers



Students have the opportunity to put their skills to work in "real world situations," while still acquiring their education, through programs such as Tech Troopers.

Fun Facts



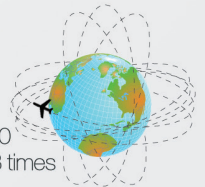
The first windmill was developed in **Persia** in about **600 B.C.**



The first light bulb was invented by **Thomas Edison** in **1879**.



In **15 mins.** the sun radiates as much energy as we use in **1 year.**



Electricity travels at 300,000 km/sec. Which equals to 8 times around the world in 1 sec.

Information Sources

- http://www.hydro.mb.ca/learning_zone/world_fascinating_facts.shtml
- <http://www.bls.gov/ooh/Construction-and-Extraction/Electricians.htm>
- <http://www.bls.gov/oes/current/oes472111.htm>