ELECTRICAL PROGRAM PREPARATION - CERTIFICATE OF COMPLETION

Plan Code: 6036

This program is designed to provide students an orientation into the Electrical Program where expectations and program safety are covered, to provide time to work on math skills until necessary concepts are learned in order to increase success in the program of choice, and to learn specific computer applications needed in order to develop and build an industry standard lab report.

Program Student Learning Outcomes

- Recognize basic safety and technical requirements for the Electrical Technology Program.

Program Requirements

Code Number	Course Title	Hours
REQUIRED COURSES		
ELECT 600	Electrical Program & Safety Preparation	9
ELECT 601	Computer Applications for Tech Reports	54
ELECT 602	Electrical Mathematics	54
Total Hours		**117**

FCC AMATEUR RADIO TECHNICIAN PREPARATION - CERTIFICATE OF COMPLETION

Plan Code: 6050

This program provides the skills and knowledge to successfully pass the Federal Communications Commission (FCC) Amateur Radio Technician Licensing Exam. Students will gain hands-on experience covering basic electronics, electronic assembly, soldering techniques, and kit assembly. They will be introduced to schematic reading, basic circuit analysis, and will learn the elements contained in the licensing exam using the latest test banks as directed by the FCC. Students will learn through lecture topics, computer aided material, hands-on examples, and participation in example exams.

Program Student Learning Outcomes

- Demonstrate the knowledge and skills necessary for a career as an FCC Amateur Radio Technician.

Program Requirements

Code Number	Course Title	Hours
REQUIRED COURSES		
ELECT 630A	Intro to Electronics	27
ELECT 619B	FCC Amateur Radio Technician Lic. Prep.	36
Total Hours		**63**

IPC-620 WIRE HARNESS ASSEMBLY AND INSPECTION - CERTIFICATE OF COMPLETION

Plan Code: 6037

Students enrolling in ELECT 620A and ELECT 620B will be learning cable harness assembly, testing and inspection skills completed per IPC/WHMA-A-620 industry standards. Students will learn the proper use of the requisite tools and assembly methods. Completion of these two classes provides students with an employment pathway in the Aerospace and Electrical Cable Harness Assembly positions. There are no prerequisite skills required to enter ELECT 620A.

Program Student Learning Outcomes

- Demonstrate the ability to assemble, test, and inspect cable harnesses.

Program Requirements

Code Number	Course Title	Hours
REQUIRED COURSES		
ELECT 620A	Electric Cable Termination IPC-620C	72
ELECT 620B	Electric Cable Inspection IPC-620C	36
Total Hours		**108**

POWER GENERATION TECHNICIAN - ELECTRICAL - CERTIFICATE OF COMPLETION

Plan Code: 6051

This program consists of a two-course sequence introducing motor generator power systems, covering operation, electrical control systems. In addition, students are provided with hands-on experience troubleshooting possible faults and operational problems and proper methods of troubleshooting and repair. Test procedures, service schedules and general maintenance are also covered. ELECT 602 Electrical Mathematics is recommended for program preparation.

Program Student Learning Outcomes

- Analyze the operation of a motor generator set to ensure proper function.

Program Requirements

Code Number	Course Title	Hours
REQUIRED COURSES		
ELECT 632A	Electrical Power Generation	72
ELECT 632B	Power Generation Troubleshooting	72
Total Hours		**144**

ROBOTICS EXPLORATION - CERTIFICATE OF COMPLETION

Plan Code: 6052

This program provides hands-on experience covering basic electronics and electronic assembly. Electronic components are covered as well as soldering techniques and kit assembly. Students are introduced to schematic reading, basic circuit analysis as well. Students will also be introduced to the fundamentals of programming Omon Industrial Robots as well as piloting and learning the systems involved with underwater robotics.

Program Student Learning Outcomes

- Demonstrate the ability to program an industrial robot to pick up parts from one location and drop them off at a specified second location.

Program Requirements

Code Number	Course Title	Hours
REQUIRED COURSES		
ELECT 630A	Intro to Electronics	27
ELECT 630B	Introductory Robotics Camp	27
Total Hours		**54**