

CPTR 1000 INTRODUCTION TO COMPUTERS (1-1-2)

An introductory study of computer system components, operating system environments. Internet concepts, and security issues. Includes a hands-on study emphasizing computer hardware and various operating systems features.

PREREQUISITES: None

IMEL 1020 INTRODUCTION TO DIRECT CURRENT CIRCUITS (1-2-3)

An introduction to the concepts of DC electricity including Ohm's Law.

PREREQUISITES: None

IMEL 1030 INTRODUCTION TO ALTERNATING CURRENT CIRCUITS (1-2-3)

An introduction to the concepts of inductance, inductive reactance, capacitance, capacitive reactance, and reactive circuits; time constants; alternating current terms and principles; transformers; calculation of AC circuit values; identification of principles of motors and generators. Construction and troubleshooting are also included. Prerequisite:

PREREQUISITES: IMEL 1020

IMEL 1100 INDUSTRIAL MARINE HYDRAULICS I (1-2-3)

This course covers basic industrial hydraulics fundamentals, principles of pressure, hydraulic fluids, hydraulic seals and conductors, fluid reservoirs, contamination control, schematics, actuators, and special valves.

PREREQUISITES: NONE

IMEL 1120 INDUSTRIAL MARINE HYDRAULIC II (1-2-3)

This course is the second in a series of three on basic industrial marine hydraulics. Students will become familiar with electrical fundamentals, pressure controls, flow controls, cartridge and stack valves, proportional valves, servo valves, hydraulic pumps, basic digital electro hydraulic components and devices, hydraulics accessories, and hydraulic systems.

PREREQUISITES: IMEL 1100

IMEL 1130 INDUSTRIAL MARINE ELECTRONICS I (1-2-3)

This course will introduce students to standard industrial electrical and mechanical systems. Students will learn about industrial AC/DC electric motors and their controls, AC power transformers, three phase and single phase power systems. National electrical codes standards and high voltage safety requirements will also be addressed in this course. Students will learn how to troubleshoot the aforementioned systems with the proper instruments.

PREREQUISITES: IMEL 1100 and IMEL 1120

IMEL 1140 INDUSTRIAL MARINE ELECTRONICS II (1-2-3)

This course will introduce students to standard industrial electrical and mechanical systems, protocols, process variable, process loops, electromechanical controls, programmable logic controllers, and calibrating electrical process devices.

PREREQUISITES: IMEL 1130

IMEL 1150 REMOTELY OPERATED VEHICLES (ROV) I (1-2-3)

This course will introduce students to remotely operated vehicles and the logistics and operations applicable to the marine industry. Upon completion of the ROV series of courses (IMEL 1150, 1160 & 1170), the student may be employed as an entry-level ROV Apprentice Technician.

PREREQUISITES: None

Student must have completed the following in order to enroll in IMEL 1150 Remotely Operated Vehicles I:

- CTS: Apprentice Electronics Technician
- CTS: Industrial Electronics Technician

IMEL 1160 REMOTELY OPERATED VEHICLES (ROV) II (1-2-3)

This course will introduce students to remotely operated vehicle electrical and mechanical systems. Upon completion of the ROV series of courses (IMEL 1150, 1160 & 1170), the student may be employed as an entry-level ROV Apprentice Technician.

PREREQUISITES: IMEL 1150

IMEL 1170 REMOTELY OPERATED VEHICLES (ROV) III (1-2-3)

This course will introduce students to remotely operated vehicle, operation, navigation, maintenance, mobilization, and demobilization. Upon completion of the ROV series of courses (IMEL 1150, 1160 & 1170), the student may be employed as an entry-level ROV Apprentice Technician.

PREREQUISITES: IMEL 1160

IMEL 1210 Introduction to SEMICONDUCTORS

An introduction to solid-state devices, diodes, transistors, special purpose diode thyristors, FET devices, VDRs, and optical devices. Includes testing, analyzing, troubleshooting, and repairing using technical manuals.

PREREQUISITES: IMEL 1020 and 1030

IMEL 1220 FUNDAMENTALS OF TRANSISTOR CIRCUITS (1-2-3)

This course covers half-wave, full-wave and bridge rectifier circuits. Also covers regulated and switched power supplies, amplifier fundamentals, and the theory of oscillation. Includes component testing and analyzing

PREREQUISITES: IMEL 1020, 1030, and 1210

IMEL 1230 BASIC DIGITAL CIRCUITS (1-2-3)

An introduction to numbering systems, logic gates, digital integrated circuits, Boolean logic operations.

PREREQUISITES: IMEL 1020, 1030, and 1210

IMEL 1240 ADVANCED DIGITAL CIRCUITS (1-2-3)

Covers flip-flops, counters, registers, combinational/sequential logic, encoders, decoders, display devices, digital to analog conversion, analog to digital conversion, multiplexers, and demultiplexers. Includes construction, troubleshooting, and repair of circuits while demonstrating safety procedures.

PREREQUISITES: IMEL 1020, 1030, 1140, 1150, 1210, 1220, and 1230

JOBS 2450 JOB SEEKING SKILLS (2-0-2)

This course is required of all Technical Diploma and Associate Degree students and should be taken during their last semester of enrollment prior to completion of diploma/degree requirements. This course assists students in making immediate and future decisions concerning job choices and educational growth by compiling résumés, evaluating job offers, and outlining information essential to finding, applying for, and terminating a job.

Prerequisites: Successful completion of 15 Hours in a major program.

ORNT 1000 STUDENT COLLEGE/CAREER SUCCESS SEMINAR (1-0-1)

This course is designed to introduce newly enrolled students to college life and career development through a variety of activities. It is recommended that this course be scheduled during the first semester of enrollment. An overview of college policies, procedures, and resources as well as study skills and time management strategies will introduce the student to the college experience. Also included is an introduction to electronic learning and the use of online resources. Career development including career research and personal/career assessments are also activities included in this course.

PREREQUISITES: None