

ENGINEERING TECHNOLOGY: SPECIALTY (ETS)

ETS1511 MOTORS AND CONTROLS (3.00 Credits)

This course provides a study of the theory of operation of Direct Current (DC) and Alternating Current (AC) motors. Motor components, forces, NEMA ratings, and nameplate information are identified and defined. Inverter and Pulse Width Modulator (PWM) drives are explained, as well as AC to DC rectifiers and signal regeneration for 3-phase systems.

Total Contact Hrs: 64.00

Lecture Hrs: 64.00

ETS2224C FIBER OPTIC COMMUNICATIONS (3.00 Credits)

This extensive lab experience covers fiber optic communication systems and devices. Topics include electronic and optical devices, splices and fiber optic cables as well as telecommunications applications of fiber optic systems.

Total Contact Hrs: 64.00

Lecture Hrs: 48.00

Lab Hrs: 16.00

Complete all the courses in the following option:

- Prerequisite: EET2142C

ETS2436C BIOMEDICAL INSTRUMENTATION I (3.00 Credits)

Students will acquire proficiency in biomedical equipment maintenance through classroom and laboratory environment and will gain familiarity with, and learn to evaluate, troubleshoot, test, and repair various types of biomedical equipment.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: CET1117C (minimum grade: C) and EET1141C (minimum grade: C)

ETS2527 ELECTROMECHANICAL SYSTEMS (3.00 Credits)

This course covers gears and gearboxes, belts and pulleys, chains and sprockets, alignments and measures found in the industrial environment.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

ETS2542C PROGRAMMABLE LOGIC CONTROLLERS (3.00 Credits)

This course provides students with the basic operational concepts common to programmable controllers, focusing on Programmable Logic Controllers (PLC) principles, programming, and the fundamentals needed for simple process control.

Total Contact Hrs: 64.00

Lecture Hrs: 48.00

Lab Hrs: 16.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: CET1114C (minimum grade: C) and EET1084C (minimum grade: C)

ETS2940 BIOMEDICAL ENGINEERING TECH. INTERNSHIP (3.00 Credits)

The student will participate in a 234-hour internship at a cooperating hospital or other appropriate medical facility. Topics will include orientation, orientation to biomedical engineering medical instrumentation theory, safety standards hands-on preventive maintenance procedures and equipment repair activities. The medical facility staff will directly supervise all aspects of this course.

Total Contact Hrs: 234.00

Clinical Hrs: 234.00

Fees: EDU/ACCIDENT INSURANCE \$4.75, LIABILITY INSURANCE \$8.15

Complete all the courses in the following option:

- Option 1 - Prerequisite: CET1117C (minimum grade: C) and HSC1531 (minimum grade: C)