

ENERGY TECHNOLOGIES (EGY)

EGY 120 (4 credit hours)

Outside Plant Communications

Introduces students to fiber optic communication systems and up-to-date fiber techniques including how to design, install, test and maintain fiber optic single mode networks. Emphasizes Single Mode fiber optic installation with the associated international standards, theory, and practices. Prepares the student to work with fiber optic splicing, testing and troubleshooting equipment that is found in the workplace. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

Pre-requisite: (ELT 110 and ETT 110) or (electrical experience and consent of instructor).

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

EGY 170 (4 credit hours)

Energy Utility Technologies

Introduces students to the technologies used in energy utility companies, including line maintenance, underground operations, substations and switchyards and transmission operations. Gives students the opportunity to climb a utility pole and conduct basic maneuvers. Addresses types of underground systems, substation and switchyard equipment and transmission structures. Emphasizes electrical, underground, line maintenance and transmission safety. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

Pre-requisite: (ELT 110 and EET 150 and EET 151) or (electrical experience and consent of instructor).

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

EGY 220 (4 credit hours)

Energy Efficiency Electrical Controls

Designed for Electrical Technology students and Apprentice, Journeyman, Master, and Contractor Electricians as a foundation into the studies of green technology relating to electrical energy. Focuses on the assessment of electrical energy usage in commercial buildings with the understanding that the electrical energy technician will install and maintain efficient electrical controls and equipment. Prepares students to assist in the design of efficient electrical energy systems under the supervision of a Certified Energy Manager or licensed Professional Engineer. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

Pre-requisite: (ELT 110 and EET 154 and EET 155 and EET 252 and EET 253 and EET 250) or (electrical experience and consent of instructor).

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

EGY 230 (4 credit hours)

Solar / Photovoltaic Technologies

Covers the design and installation of grid connected, stand-alone, and hybrid photovoltaic (PV) systems, and involves hands-on work with PV systems and equipment. Intended for electrical technology students, apprentices, contractors, electricians, and other practitioners, with an overall goal of developing "system knowledgeable" professionals to help ensure the safety and quality of PV system installations. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

Pre-requisite: (ELT 110 and EET 154 and EET 155 and EET 252 and EET 253 and EET 250) or (electrical experience and consent of instructor).

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

EGY 240 (4 credit hours)

Energy Efficiency and Analysis

Discusses the basic principles of how energy flows into and out of a residential building, using the "House as a System" approach. Develops the skills needed to perform a home energy audit. Gives students hands-on experiences with a blower door, thermal imaging camera as well as other auditing tools. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

Pre-requisite: Consent of instructor.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture

EGY 250 (4 credit hours)

Wind/ Turbine Technologies

Introduces the theory and practices of wind power and how it is used and connected as a renewable energy source for the home, farm and business. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

Pre-requisite: ELT110 or consent of instructor.

Attributes: Technical

Components: LAB: Laboratory, LEC: Lecture