

# APPLIED ENGINEERING TECHNOLOGY (AET)

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## **AET 102 (4 credit hours)**

### **Introduction to Energy**

Introduces the scientific principles of energy and fuels and investigates specific topics: nature and extent of energy resources, economics and environmental effects, alternative energy, energy technology, health and safety. Lecture/Lab: 4.0 credits (75 contact hours).

**Attributes:** Technical

**Components:** LEC: Lecture

## **AET 110 (4 credit hours)**

### **Introduction to Circuit Analysis**

Covers basic electrical components as well as DC/AC circuit configurations; introduces the theory and operation of solid state devices such as diodes, BJTs, FETs, and operational amplifiers; emphasizes circuit construction, analysis, and troubleshooting. Lecture/Lab: 4.0 credits (75 contact hours).

**Co-requisite:** MT 125 or Consent of Instructor.

**Attributes:** Technical

**Components:** LEC: Lecture

## **AET 114 (4 credit hours)**

### **Solar and Wind Energy Generation**

Introduces the methods and equipment necessary for the production of electrical energy by alternative means to include photovoltaic systems, wind turbines and solar water heating. Lecture/Lab: 4.0 credits (75 contact hours).

**Pre-requisite:** AET 110 or consent of instructor.

**Attributes:** Technical

**Components:** LEC: Lecture

## **AET 190 (4 credit hours)**

### **Industrial Computer Programming Concepts**

Covers programming concepts specifically directed toward industrial programmable devices such as PLCs. Lecture/Lab: 4.0 credits (75 contact hours).

**Pre-requisite:** Consent of instructor.

**Attributes:** Technical

**Components:** LEC: Lecture

## **AET 250 (4 credit hours)**

### **PLC Networking**

Introduces the basic concepts in PLC networking to include networking protocols specific to industrial controllers, ASCII codes, bus topologies, and handling of remote I/O. Lecture/Lab: 4.0 credits (75 contact hours).

**Pre-requisite:** AET 190.

**Attributes:** Technical

**Components:** LEC: Lecture

## **AET 270 (4 credit hours)**

### **Advanced PLC Programming**

Introduces the student to the wide range of capabilities, beyond basic programming needs, which are available to the modern PLC user. Includes data Manipulation; shift register and sequencer instructions; binary, octal and hexadecimal numbering systems; and analog inputs and outputs. Lecture/Lab: 4.0 credits (75 contact hours).

**Pre-requisite:** EET 276 and EET 277.

**Attributes:** Technical

**Components:** LEC: Lecture