ETRO 280 : Microprocessor Architecture, Programming, and Interfacing

Credits: 3
Class Hours: 3 lecture
Prerequisites:
Acceptance into Electronics Technology program. Qualified for ENG. Qualified for MATH 103.
Recommended:
ETRO 143/ETRO 143L.
Description:
Microprocessor trainers will be used to introduce microprocessor architecture, interfacing, and machine language programming. Memory, interfaces, I/O devices, and interrupt processed I/O will also be covered.
Semester Offered: Fall, Spring

Course Student Learning Outcomes (CSLOs):

1. Differentiate between binary, octal, decimal, and hexadecimal number systems, codes, and mathematics, and convert from one system to another.
2. Describe the architecture of a microprocessor, microcontroller, and the computer circuits that allow the computer to interface to the analog world.
3. Create flowcharts, develop algorithms, and program a microprocessor using a machine language command set.
4. Design and assemble an interface that inputs and outputs information to and from the microprocessor.
5. Communicate effectively using electronic documentation methods and present a design project using current multi-media technology.
6. Function effectively on teams with all levels of personnel, demonstrating appropriate personal, professional, and social ethics and responsibility, fully participating and adding to the dynamics of the group.