ETRO 118 : General Electronics

Credits: 3
Class Hours: 3 lecture
Prerequisites: Qualified for ENG 75.
Description: This introduction to DC, AC, semi-conductor, and digital electronics includes characteristics, applications, power supplies, and amplifiers. The course also includes the use of the oscilloscope and meters.
Semester Offered: Fall, Spring
Course Student Learning Outcomes (CSLOs):

1. Apply safety regulations and practices common to the electricity and electronics fields.
2. Describe the physical nature of matter and electron flow in conductors, semiconductors, and insulators.
3. Analyze basic DC and AC analog and digital circuits by calculating and measuring electrical parameters using multimeters and oscilloscopes.
4. Describe the relationship between magnetism, electrical currents and voltages, and how is it used in the generation of power.
5. Assemble, test, and electronically document electronic and electrical circuits, using both breadboards and PCBS, complying with the program's quality soldering standards.
6. Communicate effectively using digital documentation methods and presentation technology.
7. Demonstrate appropriate personal, professional, and social ethics and responsibility by fully participating and adding to the dynamics of the group.
8. Demonstrate awareness of the contemporary professional, societal, and global issues relevant to the fields of electricity and electronics technologies.