CDA 4630 Introduction to Embedded Systems

Credits: 3

Text book, title, author, and year: N/A

Supplemental materials:

vi. McAuliff et al., Effective Technical Communications, Clemson University.

Specific course information

a. Catalog description: A system level software and hardware integration from design concepts to practical implementation covering both analog and digital signal conditioning and interface.

b. Prerequisites: CDA 3331C

c. Required, elective, or selected elective: elective

Specific goals for the course

a. Specific outcomes of instruction: By the end of the course students will be able to: (i) Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability; (ii) Identify, formulate, and solve engineering problems; (iii) Apply design and development principles in the construction of software systems of varying complexity; (iv) Apply design and development principles in the construction of hardware systems of varying complexity.

Brief list of topics to be covered:

- Introduction to embedded systems
- Serial communication with I/O devices
• Parallel communication with I/O devices
• Motor interface
• Robotics interface
• Writing drivers for various peripheral devices