

CDA 6316 Embedded Systems Design

Description:

3 Credits, TR 11-12:20 pm, room SE311

Prerequisites: COP2212, CDA3201C and CDA3331C. Or similar classes.

The course is open for both graduate and senior undergraduate students in the Science and Engineering Colleges. This class is project oriented and has two main tracks:

TRACK 1:

Hardware/Software project where you participate in real embedded systems. Your participation could be an overall system integration, a specific hardware subsystem development, sensor interface, computer interface, application design, or software development. You may work in teams to build big projects. Available in the lab is a variety of hardware platforms from various vendors such as Computer Dynamics Pentium SBC with touch LCD screen, Motorola 68000/HC11 SBC, Z-World Compact Controllers, Diamond Systems Corp PC/104 form Data Acquisition Systems, Parallax Stamp Controllers, and others. You may build your own if you wish. Software packages include LabVIEW Visual Basic, Visual C++, C++, and Java.

TRACK 2:

Research oriented students can search the IEEE or other journals, universities or companies web sites, and/or any places on the internet for ideas and recent findings in the area of embedded systems. The final outcome is a publishable report which explores on some of the embedded systems research aspects. The report must include a significant amount of references. Research resources are available in the library or the Internet.

Required Text:

Embedded System Design, A Unified Hardware/Software Introduction. By Frank Vahid and Tony Givargis. John Wiley & Sons, Inc., 2002.

Grading Policy:

Grades will be determined primarily on the completion of the HW/SW project including documentation and presentation, or final research paper with a high publication potential and a class presentation. Attendance and active participation also affect the final grade.