ELC 343 - LABORATORY #1

INTRODUCTION TO PSOC CREATOR

In this project, the students will become familiar with the operation of the Cypress design package for Programmable System on a Chip (PSoC) architecture/product.

1. Go through the "PSoC® Creator™ Quick Start Guide" supplied through Canvas.

2. Go through the following videos/tutorials available at http://www.cypress.com/?rID=40547

      a. PSoC Videos:

            i. PSoC Creator: Made for Engineers

            ii. PSoC 5LP Analog Design

      b. PSoC On-Demand Training:

            i. PSoC Creator 101 Lesson 1: Introduction to PSoC Creator 101

            ii. PSoC Creator 101 Lesson 2: Introduction to PSoC

            iii. PSoC Creator 101 Lesson 3: Getting to Know PSoC Creator

            iv. PSoC Creator 101 Lesson 4: Let's Get an LED to Blink Part 1

            v. PSoC Creator 101 Lesson 5: Let's Get an LED to Blink Part 2

            vi. PSoC Creator 101 Lesson 8: PSoC Resources

      c. Getting Started

            i. Creating a New Project

            ii. Using Starter Designs

            iii. Exploring the Component Catalog

            iv. Opening Example Projects

            v. Using the Device Selector

      d. Using the UDB Editor Parts 1 through 6

3. Write a report, which will be due by the date announced in class, commenting and discussing:

    a. What are the key features of the PSoC chip architecture?

    b. How is PSoC Creator used in embedded systems design?

    c. What information that can be obtained about a system design by opening the project in PSoC Creator?

    d. Which parts of the embedded system design process can be accomplished with PSoC Creator and which part(s) cannot?

    e. How can a suitable PSoC based board be used to process electrical analog data? Describe your scheme, and give an example.

4. GRADING RUBRIC: Maximum grade is 10 points. Items (a) and (b) under Step 3 above are worth 1 point, items (c) through (e) are worth 2 points, and 2 points represent overall quality.

5. REPORT FORMAT: Free form, but it must be:

    a. One report per team

    b. Have a cover sheet with identification: Title, Class, Your Names, etc.

    c. COMPLETELY word-processed

    d. Professional report – well organized and presented, proper spelling and grammar.