CPEG 222 - Microprocessor Systems
M/W/F 1:25 – 2:15 PM (131 Sharp Laboratory)

1. General information

Instructor
Prof. Chengmo Yang
201C Evans Hall
chengmo@udel.edu
Office Hours: M 2:30-3:30 PM or by appointment

TAs
Furkan Cayci (Evans 114) furkan@udel.edu Tu&Th 2-3:15pm
Chen Liu (Evans 154) liuchen@udel.edu W&F 2:30-3:45pm

Course Topics
1. Introduction to Embedded Systems
2. State Machine vs. Data path
3. Assembly Language
4. Processor Architecture
5. Memory, Bus, and IO
6. Interrupts
7. Embedded System Design Concepts

Textbook

Resources and Assignments
All handouts, lecture notes, homeworks, and project assignments are or will be made available through the Sakai Course Management site. https://sakai.udel.edu/portal

Late Policy
Due to the fact that you work in groups and have a week or more to complete homeworks or projects, NO late homeworks or projects will be accepted. Please check the Student Handbook for valid excused absences, and procedures you are responsible for following to validate these excuses.

Grading
- Projects 40%
- Homeworks 10% Questions selectively graded
- Quizzes 10% Lowest score dropped
- Midterm 15%
- Final 25%
2. Projects

For projects, students are requested to work in groups of size 2 (no more and no less). Each group will receive a lab kit. The project designs will then have to be constructed/tested using the lab kit.

There is no formal laboratory session to build the projects. The laboratory period you’ll sign up for, will be for demonstrating and grading the final, completed project. Sign-up instructions will be provided together with each project assignment. All project demos are scheduled on Thursdays and Fridays, in Evans 134.

There are five projects throughout the semester. The topics and percentages are:

- LED controller 10%
- Simple counter 20%
- Calculator 20%
- Garage door controller 20%
- Robot competition 30%

Each project assignment consists of three parts:

- Flowchart & question answers 20%
- Code & demo 60%
- Project reports 20%

All flowcharts, codes, and lab reports are to be submitted electronically through sakai. No hard copies are accepted. Do not turn in hand-written flowcharts or reports!

3. Collaboration Policy

We do not expect to have any problems with academic dishonesty. Yet in order to avoid any misunderstandings with regard to what is and is not acceptable, we have laid out some specific policies below.

**Homeworks:** Students may find that working on the Homework problems in study groups will help explain topics that may be difficult for a few students. However, students are required to hand in their own work for grading.

**Projects:** While it is acceptable for students to discuss the general aspects of projects, it is NOT acceptable for students to collaborate on the actual design and coding. Each group is required to construct, test, and demonstrate their own projects on their own kit, without assistance from anyone else! We will use tools to check for similarity between codes and other submitted files.

**Quizzes and Exams:** No collaboration whatsoever. You may be asked to show a photoID when turning in exams, please remember to bring one along with you. When you enter the class to take a quiz or exam, leave at least one empty seat between you and your neighbor(s).

*Any student engaging in academic dishonesty will be directed to the Office of Student Conduct, regardless of their performance on any other assignments or exams.*