

CEG 411/611 Microprocessor-Based System Design

Winter 2011, 2:15-3:30 PM, Tue., Thr., at 153RC

Instructor: Jack Jean

Office Hours: 1:00-2:10 PM & 3:40-4:10 PM, Tue, Thr; 334 RC, 775-5106, jean.jean@wright.edu

Textbook: **The HCS12/9S12: AN INTRODUCTION**, Han-Way Huang, 2nd edition, Delmar Cengage Learning, 2009.

Course Prerequisites: EE301, EE302, EE260 (or CEG260), CEG220 (or CS240)

Weekly Schedule:

Week	Contents	Chapters to Read
1	Overview, Lab Preparation, C Language	1.3, 5
2	Timer, Output Compare	8
3	Simple Parallel I/O	7
4	Simple Parallel I/O, Interrupts and Resets	7, 6
5	Interrupts and Resets	6
6	MIDTERM ; ADC	12
7	68HCS12 Assembly Programming	1, 2
8	Assembly Programming, Stack	2, 4
9	Subroutine Calls, More Timer Functions	4, 8
10	Parallel I/O, SCI and SPI	7, 9, 10

Grading: Final letter grade: 90+ (A), 80+ (B), 70+ (C), 60+ (D), otherwise (F).

- Lab. - 30%. **You must attain at least 60% in Laboratory to pass this course.** Quizzes (20% of the lab grade) will be given in the lab to test your preparation and understanding of the lab assignments.
- HW - 10%. All HW assignments should be done individually. Discussion with friends should be limited to clarification of problems and approaches. Sharing or copying of the solutions will be considered as academic dishonesty and be treated according to the corresponding WSU policy.
- Quiz - 10%. Unannounced quizzes (closed book and notes) will be given at the beginning of classes.
- Midterm - 25%; Feb. 8, Tue., open book and notes.
- Final - 25%; March 17, Thur, 3:15-4:45 PM, not comprehensive, open book and notes.

Schedule of Laboratory Experiments:

Week	Lab No.	Experiment
1		No Lab
2	1	Laboratory Familiarization (5%)
3		No Lab (MLK Birthday on Monday)
4	2	6812 Control in C (50%)
5	2	
6	2	
7	2	
8	2	
9	3	6812 Assembly Programming (25%)
10	3	

Unannounced quizzes (20%) will be given in the lab to test your preparation and understanding of lab assignments.

Section	Lab Time
5	12:20-2 Thr
6	11-12:40 Fri
7	4:10-5:50 Mon
8	4:10-5:50 Wed

Everyone is required to attend weekly 2-hour Labs in Room 339, Russ Center (RC). If you need more time, you will have 24-hour ID-card access to 339 RC to work on your own. Both Theory and practical Laboratory experience are important. You must attain a passing grade in Laboratory to pass this course.

For each lab (except Lab 1), you need to turn in your prelab answers two days (excluding weekends) before your scheduled lab section for grading. You may turn in the prelab answers either in person to the lab instructor or simply slide them under the door of RC339A (the office at the left hand side right after you enter the lab). For Lab 1, bring your prelab answers to your scheduled lab section for grading. Each team needs to turn in only one set of prelab answers.

The lab instructor, his office, office hours, and email address are as follows.

- Mr. Shiva Bhupathiraju Naga
- Office: RC 339A (inside the lab)
- Office Hours: to be arranged
- Email: bhupathiraju.2@wright.edu