

Winter 2006

CEG 750-01: Microprocessor

Jack Jean

Wright State University - Main Campus, jack.jean@wright.edu

Follow this and additional works at: https://corescholar.libraries.wright.edu/cecs_syllabi



Part of the [Computer Engineering Commons](#), and the [Computer Sciences Commons](#)

Repository Citation

Jean, J. (2006). CEG 750-01: Microprocessor. .
https://corescholar.libraries.wright.edu/cecs_syllabi/1218

This Syllabus is brought to you for free and open access by the College of Engineering & Computer Science at CORE Scholar. It has been accepted for inclusion in Computer Science & Engineering Syllabi by an authorized administrator of CORE Scholar. For more information, please contact corescholar@www.libraries.wright.edu, library-corescholar@wright.edu.

CEG 750: Microprocessor
Winter 2005, 4:10 – 5:25 T. Thr. at 339 RC

1. **Instructor:** Jack S.N. JEAN

Office Hours: 1:30-2:30 M., W.; 3-4 T. Thr., 334 RC, 775-5106, jack.jean@wright.edu

2. **Course Format:** The course is project-oriented. The scheduled class time is for project preparation/discussion/group meeting.

3. **Textbook:** Han-Way Huang, "MC68HC11: AN INTRODUCTION," 2nd edition, Delmar, 2001.

4. **Course Project:**

Design and implement a computer system that contains a MC6811, SRAM, and EPROM. The system allows the loading of a 6811 application program from a PC so as to reconfigure the system as both an analog waveform storage scope and a digital logic analyzer. The system supports two analog channels and four digital channels, with one of the digital channels providing a sample-triggering signal. You need to write three programs: a 6811 application program, a PC host program, and a 6811 monitor software.

(1) The 6811 application program needs to use the USB port to send data to a PC host program that displays the analog/digital waveforms simultaneously. All channels, whether analog or digital, should be sampled at the same rate. Some waveforms prior to the triggering point should also be displayed. Both the signal sampling period and the data transfer time over the USB port should be as short as possible. (Team competition!)

(2) The 6811 monitor software allows (a) the display of memory contents, (b) the modification of memory contents, and (c) the loading of the 6811 application program at an address to be specified in an S-record file. Interrupt based serial communication should be used between the 6811 and the PC serial port when the monitor software is used.

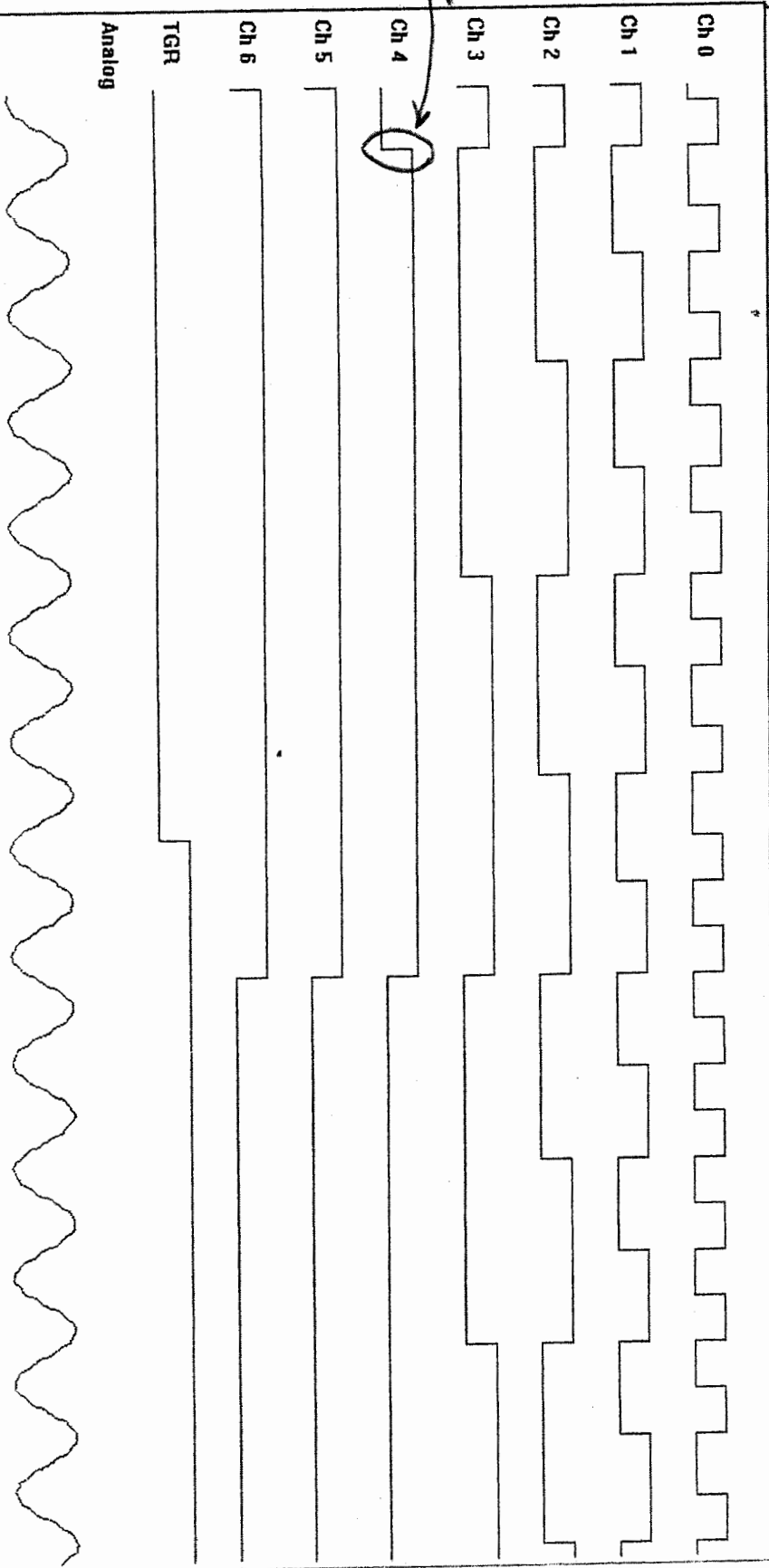
5. **Grading:** [90,100]→A, [80,90) →B, [70, 80) →C, [60, 70) →D, [0, 60) →F

(1) Lab. Project (70%) and Final Report (5%): Around three or four students work as a team, one final report per person. Grading will be based on project result, instructor's (subjective) evaluation and partners' evaluations. Team members do not get the same grade.

- A one to two page development plan (per team) is due on Jan 26. The plan should list the tasks, provide a Gantt chart for the schedule, and describe individual team member's responsibility. The project will be graded later on against the proposed schedule. There will be penalty for missing the proposed deadlines.
- The report should include an introduction section, several sections about the project, and a conclusions section. All circuit diagrams and software listings should be attached. There will be penalty on typos and grammatical errors. The length of the report should be 5 to 10 single spaced pages, excluding attachment. Lessons learned or problems encountered in the project must be documented in the report. The report will not be returned.

(2) Midterm (10%): open book/notes; on Feb 2.

(3) Final (15%): open book/notes; each team member is tested individually in the lab with the team's project board.



Ready

NUM