ECE 330 - Syllabus

Instructor: Arlen Planting
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Office Hours: Tue/Wed/Thu 4:30-5:30 pm; or by appointment

Course Description: Microprocessor architecture, software development tools, and hardware interfacing. Emphasis is placed on 16 and 32 bit microprocessor systems. Machine and assembly language programming, instructions set, addressing modes, programming techniques, memory systems, I/O interfacing, and interrupt handling are among the topics studied with practical applications in data acquisition, control, and interfacing. Prereq: ECE 230.

Course Meeting Times: Tuesday/Thursday 3:00 PM to 4:15 PM
ENGR 110

Required text: ECE 330 Microprocessors Course Reference, 2016 (note: previous editions do not apply, as the course has been converted to an ARM processor)

Course Webpage: http://ece.boisestate.edu/ECE330/

Topics to be covered:
- General-Purpose & Single-Purpose Processors
- ARM Cortex M3/M4 Processors
- ARM Assembly Language
- GNU ARM Assembler
- GNU gdb debugger
- Interrupts, Timer, Memory Systems
- Processor Bus Cycles
- Direct memory Access
- Interfacing (LEDs, Seven-Segment LEDs, Switch, Button, Parallel, Serial, Wireless, I²C, USB, etc)

Objective: The goal is to learn microprocessors, using commonly available tools.

Grading:
Exercises 20%
Quizzes 20%
Exams (2-3 plus final) 60%

Grade determination: 100%-90% = A, 89%-80% = B, 79%-70% = C, 69%-60% = D, < 60% = F
(+ and – will be used when deemed appropriate)

Final Exam: Tuesday, May 3, 3:00-5:00 PM
**Homework:** Non-graded; however, answers (not solutions) will be provided.

**Exercise Submittals:** See the course website for exercise guidelines and current exercise assignments.
- Exercises are to be submitted electronically.
- Exercises are due no later than 8:00 PM on Mondays.

**Grade Issues:**
- For privacy and practical reasons, all discussions regarding individual student grades must take place in the instructor’s office (not in class or via email).

**Positive Learning Environment:** Providing a positive learning environment for all students is of primary importance. The following policies are intended to promote that goal:
- Questions are encouraged.
- Everyone is expected to be considerate, and not participate in conversations or other activities during the lecture (including bringing your homework to the front after the lecture has started) that disrupt the learning environment for other students.
- No electronic devices can be used during lectures or exams.
- Advanced topics outside the scope of this course should be dealt with off-line on a one-to-one basis with the instructor, not during the lecture.

**Communications:**
- Face-to-face communication with the instructor is recommended, particularly if a response is needed. Special dispensations will be evaluated on a case-by-case basis, and only through face-to-face communication in the instructor’s office (not in class or via email).
- If you must use email, follow email guidelines provided on the course website.

**Code of Conduct:** [http://registrar.boisestate.edu/general-information-and-policies/academic-integrity/](http://registrar.boisestate.edu/general-information-and-policies/academic-integrity/)
Discussing the assignments with other students is one way to understand the materials. However, the work submitted must be your own. Copying from any source (from someone else, old files, or solution manual!) and turning it in is not permitted. Penalties for copying/cheating range from receiving a 0 on the assignment to receiving an F for the course.