CMPE 3437/ELEE 3435  Microprocessor Systems  Fall 2017  
Class 12:15 pm - 1:30 pm  MW  EENGR 1.236

Instructor: Dr. Jun Peng  
Office: EENGR 3.232  
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Laboratory: CMPE 3437-A/ELEE 3435-A:  4:30 pm – 7:10 pm R EENGR 2.238  
CMPE 3437-B/ELEE 3435-B:  10:40 am - 1:10 pm F EENGR 2.238

Course Description and Prerequisites: Basic microprocessor programming and principles of assembly language programming; microprocessor organization and interfacing; applications, including data acquisition, control and communication. CSCI-1380 or CMPE-1370; and a minimum grade of C for ELEE 2330 or CMPE-2330


Topics and Preliminary Schedule:

- Week 1: Introduction and number systems
- Week 2: Micro-architecture, software model, and memory address space
- Week 3: Data types, memory segmentation, and registers
- Week 4: Generating a memory address and the stack
- Week 5: Assembly language program development and addressing modes
- Week 6: Review class, midterm exam I, and addressing modes
- Week 7: The debug program and data transfer instructions
- Week 8: Arithmetic instructions
- Week 9: Logic instructions
- Week 10: Midterm exam II, review class, and shift instructions
- Week 11: Shift instructions and rotate instructions
- Week 12: Flag control instructions, compare instructions, and control flow
- Week 13: Subroutines, loops, and assembler directives
- Week 14: Minimum mode interface signals, system clock, and bus cycle
- Week 15: Memory control signals and read/write bus cycles
- Week 16: Input/output data transfers, interrupt, and review class

Grading:

Homework 10%  Lab 20%  Midterm Exams 35%  Final Exam 35%

1. Coursework will be graded on both final results/conclusions and their derivation processes.
2. If copying is found among students’ turned-in coursework, all involved parties will get zero credit.
3. Any re-grading request must be submitted within one week.
Assignment:
1. Late submission will not be accepted except arranged in advance.
2. Homework is due right before class Wednesday the next week following the assignment, if not notified otherwise.
3. Homework should be handwritten, and presented in a clear, readable form. For clarity of presentation, the homework should be written on only one side and on a standard size paper. The homework pages must be stapled in the upper left-hand corner.
4. No make-up for any missed exam or homework will be permitted unless arranged in advance.

Attendance:
Attendance is required. If a student is absent for three or more classes without the instructor’s approval, the instructor may drop the student from the course. If a student misses the quiz at the beginning of a class, the student is counted as being absent for the class. For potential extra attendance credits, a student is accounted as being present only if the student is in class when the class roll is taken.

Email communication:
Students must use their official UTRGV email accounts for any correspondence with the instructor. Otherwise, the email may not be replied.

Outcomes:
At the end of the semester, it is expected that students should be able to understand the software and hardware architectures of microprocessor systems and know how to construct and program a microprocessor system.

UTRGV Policy Statements

STUDENTS WITH DISABILITIES:
If you have a documented disability (physical, psychological, learning, or other disability which affects your academic performance) and would like to receive academic accommodations, please inform your instructor and contact Student Accessibility Services to schedule an appointment to initiate services. It is recommended that you schedule an appointment with Student Accessibility Services before classes start. However, accommodations can be provided at any time. Brownsville Campus: Student Accessibility Services is located in Cortez Hall Room 129 and can be contacted by phone at (956) 882-7374 (Voice) or via email at accessibility@utrgv.edu. Edinburg Campus: Student Accessibility
Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), or via email at accessibility@utrgv.edu.

MANDATORY COURSE EVALUATION PERIOD:
Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account ([http://my.utrgv.edu](http://my.utrgv.edu)); you will be contacted through email with further instructions. Online evaluations will be available Nov. 18 – Dec. 9, 2015. Students who complete their evaluations will have priority access to their grades.

SCHOLASTIC INTEGRITY:
As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism, and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to the Dean of Students.

SEXUAL HARASSMENT, DISCRIMINATION, and VIOLENCE:
In accordance with UT System regulations, your instructor is a “responsible employee” for reporting purposes under Title IX regulations and so must report any instance, occurring during a student's time in college, of sexual assault, stalking, dating violence, domestic violence, or sexual harassment about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at [www.utrgv.edu/equity](http://www.utrgv.edu/equity), including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect in an environment free from sexual misconduct and discrimination.

COURSE DROPS:
According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that
dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.