

University of Texas At El Paso
Department of Electrical and Computer Engineering
ECE 2304/ECE 2104 Microprocessor Systems I/Lab for ECE 2304
Spring 2024 Syllabus

Course Description:

Study of microprocessor programming models, assembly language, macro assemblers, and an introduction to system integration and interfacing.

Prerequisites: EE 2369 (Digital System Design I), EE 2372 (Software Design I), and EE 2350 (Electric Circuits I), each with a "C" or better

Prerequisites by Topic: Computer Programming Skills, Digital Circuits, and Passive RLC Circuits.

Corequisite: ECE 2104 Laboratory

This course prepares you for: EE 4342 Digital System Design II, EE 4356 Real Time Signal Processing, EE 4372 Microcontroller Applications, and EE 4378 Microprocessor Systems II

Course Outcomes: Students completing ECE 2304 and the ECE 2104 lab will be able to:

1. Write assembly language programs.
2. Explain program organization and general software environment of a microprocessor system.
3. Understand the basic features of computer hardware.
4. Understand system integration and interfacing at a basic level.
5. Demonstrate competence in written technical communication.

Instructor: Hector Erives, Ph.D.
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Phone: 747-7950
Email: herivescon@utep.edu
Office hours: By appointment
Required text: Embedded Systems: Introduction to the MSP432 Microcontroller (Volume 1) 1st Edition, 6th Printing, ISBN-13: 978-1512185676, ISBN-10: 1512185671, by Jonathan W. Valvano
Lab Kit: Buy MSP432 lab kit from Eta Kappa Nu
IDE: Code Composer Studio Release 10.3.1.00003 or newer
Download and install MSP432 family components from TI's
Lab TA: TBA

Lecture Grading:

Element	Weight & Comment
Midterm Exams:	Two exams, 20% each.
Quizzes:	10%.
Homework & assignments:	20%. Will not be accepted late work. If accepted late homework will be penalized 30%.
Final Exam:	30%. Comprehensive.

Attendance:

Attendance in the lab and lecture is required. Students must attend each session at least 90% of the time or they will be considered as absent from the session and at that point the instructor reserves the right to drop the student from the class. No exceptions. When absent, the student is responsible for obtaining notes, handouts, and assignments and will be required to meet the same deadlines as the rest of the class. Excused absences are limited to documented religious holidays and UTEP sponsored activities only. If you do have an emergency, please notify the instructor as soon as possible. Emergencies happen, unexpected situations arise, and you should use common sense and safe precautions when trying to get to lecture and/or lab.

General Policies:

American Disabilities Act: If you feel you may have a disability that requires accommodations, contact the Disabled Student Services Office at 747-5148 or go to room 106E of the Union.

Final lab project in ECE 2104 must be done from scratch. Discussions about concepts between students is permitted but code suspected of being copied may be reported to the Dean of Students. No exceptions.

Academic Dishonesty - See course website for details.

Late homework is not accepted (see exceptions below). If you miss class, contact the professor or a classmate to find out what work was assigned or if any important announcements were made. The only exceptions for accepting late assignments include a medical emergency requiring hospitalization, jury duty, attendance of a funeral of an immediate member of you family, or official UTEP business. Documentary proof of any of the above must be provided before or immediately after the fact.

Grading:

There are no make-up exams except for documented unavoidable urgent circumstances.

Incompletes or “I” grades will be considered for students completing satisfactory or better work and having serious legitimate situations beyond their control requiring additional time to complete the course requirements. Withdrawals must be completed by students on or before the final date to drop a course with a “W”. After that date, grades of W may only be assigned in exceptional circumstances after a written petition from a student and with the approval of the faculty member and the academic dean.

COVID-19 PRECAUTION STATEMENT

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, the Student Health Center is equipped to provide COVID-19 testing. If you have tested positive for COVID-19, please report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of our community is to get the vaccine, which is widely available in the El Paso region. The vaccine will be available at no charge on campus during the first week of classes - this is the most convenient way to get vaccinated. For more information vaccinations, please visit epstrong.org.