

University of Texas at El Paso
Electrical and Computer Engineering Department
EE2372 Software Design I, Spring 2018

INSTRUCTOR:	Hector Erives
OFFICE:	Engineering
PHONE:	
EMAIL:	
OFFICE HOURS:	MW 3:00pm - 4:00 pm or by appointment
TEXT:	<p>Programming in C- <i>A complete introduction to the C programming language</i> by Stephen G. Kochan, 4rd edition, Sam's Publishing. (<u>required</u>).</p> <p>Programmable Microcontrollers with Applications: <i>MSP430 LaunchPad with CSS and Grace</i> by Cem Unsalan and H. Deniz Gurhan, McGraw Hill (<u>not required</u>).</p> <p>Introduction to MATLAB for Engineers by William J Palm III, 3rd edition, McGraw-Hill Education (<u>not required</u>).</p>

Course Description:

An introduction to software design with a structured computer language that focuses on the construction of programs consisting of multiple functions residing in multiple files. The course covers program creation top-down-design, basic elements and operations, modular program construction, and the use of programming tools such as make files. Introduces MATLAB and embedded programming, and object oriented programming techniques (time permitting).

Class Outcomes:

1. Design, implement, and execute programs written in the C language.
2. Define the use of functions, and design multiple module programs.
3. Use a variety of LINUX or PC programming tools for software development like IDE's (Integrated Development Environment), debuggers, and make files.
4. Create and use pointers, data structures, and enumerated data types.
5. Access text files directly in C language programs via I/O functions.

Topics covered:

1. Introduction to MATLAB programming tool.
2. Structure of programming techniques and programming tools.
3. Introduction, structure, compilation and execution of a C program.
4. Variables, data types and arrays.
5. Operators and expressions.
6. Assignment statements and flow of control statements.
7. Function definition and use.
8. Derived data structures.
9. Pointer definition and use.
10. Input and output statements.
11. File I/O.
12. Embedded programming.

Course Policies:

- No late homework will be accepted but under special circumstances will be considered if reported on time.
- Due dates for lab assignments, homework and exams will be notified with at least one week in advance.
- Group quizzes will be given on a weekly basis. Students are allowed to make groups 2 to 3 students.

Grading:

Item	Points (%)
Quizzes	10
Homework	10
Two Midterm Exams	2 × 20
Final Exam	30
Participation/Attendance	10

- Show all the work to receive full credit. Partial credit will be given to incomplete solutions.
- Letter grades are assigned based on the scale: **A:** 90% -100%, **B:** 80% - 90%, **C:** 70% - 80%, **D:** 60% - 70%, **F:** 0% - 60%.

GENERAL COURSE POLICIES

- ❖ You are required to come to class and be on time. You may be dropped after three unjustified absences at the discretion of your professor. However, if you do want to be dropped you must contact the professor.
- ❖ Academic dishonesty will not be tolerated. You must submit your work only. A grade of zero will be given to any assignment that is not your own work. In addition, you will be referred to the Dean of Students for disciplinary action.
- ❖ All cell phones must be turned off before the beginning of the class.
- ❖ The Professor will be available only during the assigned office hours or by appointment.
- ❖ Samples of student work will be collected for quality assurance purposes. Please notify the professor, in writing, if there is any confidentiality requirement.
- ❖ Class attendance is required. There will be quizzes and group assignments that count toward the final grade.
- ❖ Each piece of work must have **name; student ID** (last four digits only); **due date** and **team number** (when applicable). The info must be located at the **upper right corner** of the first page, and the **name** in all remaining pages.
- ❖ All printed work must be stapled, with good presentation. Final results must be emphasized (example red underline or highlighted box).
- ❖ If your performance is not good, please discuss it with the instructor **as soon as possible**. Do not ask after the Final Exam what can be done to improve your grade.

Academic Dishonesty:

As an entity of The University of Texas at El Paso, the Department of Electrical and Computer Engineering is committed to the development of its students and to the promotion of personal integrity and self-responsibility. The assumption that a student's work is a fair representation of the student's ability to perform forms the basis for departmental and institutional quality. All students within the Department are expected to observe appropriate standards of conduct. Acts of scholastic dishonesty such as cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in the 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 will not be tolerated. Any case involving academic dishonesty will be referred to the Office of the Dean of Students. The Dean will assign a Student Judicial Affairs Coordinator who will investigate the charge and alert the student as to its disposition. Consequences of academic dishonesty may be as severe as dismissal from the University. See the Office of the Dean of Students' homepage at <http://sa.utep.edu/osccr/> for more information.

American Disabilities Act:

If you feel you may have a disability that requires accommodations, contact the Center for Accommodations and Support Services at 747-5148, go to Room 106E Union, or email cass@utep.edu.