UMass Boston CS 240, Spring 2023
Programming in C

Lectures	Tuesday & Thursday 5:30PM – 6:45AM
Instructor	Haoyu Wang
	Email: haoyu.wang001@umb.edu
	Office hours: Tue/Thur, 6:45-7:45 PM or by appointment
Textbook	Brian Kernighan and Dennis Ritchie, The C Programming Language, 2nd Edition, 1988, Prentice Hall.

Course Description
C programming for programmers already knowledgeable in some high-level language (e.g., having taken one semester of introductory programming in Pascal, Java, Smalltalk, Lisp, etc.). C is presented as both a general-purpose and machine-level language. Topics covered include representation of integer and character data, bitwise operations, masking, memory allocation methods, pointers, dynamic data structures, file I/O, separate compilation, program development tools and use of debuggers.

No courses required by the CS major, minor, or certificate may be taken pass/fail.

Prerequisites
CS 110 Introduction to Computing

Prerequisites C program structures, basic data types, pointers, struct and some come data type implementation in C

Topics
1. Coding environment and tools
2. C program coding structure, basic data types, conditions, and loops, Macro, integer number base system
3. debugging (very important for coding projects)
4. Reading basic data types from file
5. Creating and usage of custom libraries, usage of standard library libc
6. Pointer and memory allocation
7. Struct and common data structure implementation and usage
8. File pointer, union, bit-fields, etc.

Evaluation
The total score consists of the following:
- 40%: (Lowest homework score dropping)
- 56%: Two of three tests, 28% each. (We will have a midterm, a final exam at the last class, and a make-up exam if you need it during the exam week.)
- 4%: Participation

The total score, S, is converted to a letter grade according to the the following table.

$93 \leq S$	A
$90 \leq S < 93$	A-
$87 \leq S < 90$	B+
$83 \leq S < 87$	B
$80 \leq S < 83$	B-
$77 \leq S < 80$	C+
$73 \leq S < 77$	C
$70 \leq S < 73$	C-
$67 \leq S < 70$	D+
$63 \leq S < 67$	D
$60 \leq S < 63$	D-
$S < 60$	F

Homework and Exam

1. All homework and exam will be submitted and graded on the Gradescope
2. First two or three homework will include short answer questions and coding questions and then the rest homework will only be coding questions.
3. Exam will contain multiple choice questions and optional short-answer questions and coding questions.
4. There will be reviews before the first two exams.
5. There will be at least two weeks for each homework, which is more than enough for finishing each homework. **There will not be any homework extensions for any student.**

Coding projects

As a programming class, coding is inevitable. We have two rules below:

1. Don't just send your code to me and ask what's wrong with your code, instead go through and debug your code to come up with a question for a certain case with that code snippet, which can be like for the input of 1 and 1, at the line of 12, it supposed to get 1 + 1 = 2, but I'm getting 1 + 1 = -2, etc.
2. You can go through your code with the instructor or TA during office hours and you have to prepare your program to be ready in your environment.

Accommodation

Section 504 of the Rehabilitation Act of 1973 offers guidelines and support for curriculum modifications and adaptations for students with documented disabilities. If applicable, students may obtain adaptation recommendations from the Ross Center for Disability Services, Campus Center, Upper Level, Room 0211, 617-287-7430. The Students must present these recommendations and discuss them with each professor within a reasonable period, preferably by the end of Drop/Add period.

Code of Conduct

It is the expressed policy of the University that every aspect of academic life – not only formal coursework situations but also all relationships and interactions connected to the educational process – shall be conducted in an absolutely and uncompromisingly honest manner. The University presupposes that any submission of work for academic credit is the students own and is in compliance with University policies, including its policies on appropriate citation and plagiarism. These policies are spelled out in the Code of Conduct http://www.umb.edu/life_on_campus/policies/community/code

Reserve Clause

The instructor reserves the right to make changes in the syllabus when necessary to meet the learning objectives, to compensate for missed classes, schedule changes, or hardware, software, and network failures, or for other legitimate reasons.