Capital University of Economics and Business
Overseas Chinese College
Course Syllabus

Year and Semester	2023 Fall					
Course Name	Programming In C					
Course Code	MIS221					
Course Type	☐ General Education (Required) ☐ General Education (Elective) ☐ Basic Disciplinary Course ☑ Professional Course (Required) ☐Professional Course (Elective) ☐Professional Course (Expanded) ☐Professional Course (Advanced)					
Course Credits	3					
Course Hours	Total Class Hours	48	Lecture Hours	48	Experiment (Computer) Hours	0
Applicable object	☐ Freshman ☑ Sophomore ☐ Junior ☐Senior					
	☐ Business Administration (Accounting)					
	☑ Information Management and Information Systems (Finance)					
Prerequisites	None					
Instructor	Prof. Smith					
Contact Information	Office: C217					
	Tele: (010) 83951082					
	Email: skippersmith66@gmail.com (all email correspondence must have in the Subject field: MIS221IT EnglishName ID reason)					
Office Hour	TBD					
Learning Centre	TBD					
Grade/Section	22IT					
Course Time/Place	Mon 9:55 – 12:20					
Textbook	Gary Bronson, A First Book of ANSI C, 4th edition, *Cengage;* ISBN: 978-7-121-34326-1					

Reference Book

Brian W. Kernighan, Dennis M. Ritchie, The C Programming Language, 2nd Edition [C 程序设计语言（第 2 版·新版）]. ISBN 978-7-111-12806-9

Mike Banahan, Declan Brady, Mark Doran, The C Book, 2nd Edition. Addison Wesley. Freely available at https://publications.gbdirect.co.uk/c_book/

Course Description

C programming is the fundamental computer programming language in use today, a multi-paradigm language that is both imperative (procedural) and structured and from which the most common programming languages used today are derived from. Unlike most programming languages, C is a bootstrapping compiled language capable of both high-level and low-level usage, making it suitable to be used in every possible programming environment (though not always the best choice for specific situations). After completing the course, students will be able to understand how to use C language to develop a program, understand how to use the commands to build their

program, and develop an understanding of program design (logic). Students are encouraged to take different approaches to solve a given problem, which promotes creativity as well as problem-solving. No previous programming experience is required, but participants should have an aptitude for logical reasoning and systematic thinking.

Student Learning Objectives

On successful completion of this exam, candidates should be able to:

Knowledge	◆ Understand the 4 forms of flow of control on which all code is based. ◆ Take the concept of variables previously used in math and identify they are used differently and thus how to use them to create flexible programs. ◆ Describe different datatypes and how they are utilized. ◆ Understand the 6 primary standard libraries and identify how to use their common functions.
Capability	◆ Be able to solve simple to intermediate problems using the major functions available. ◆ Be able to read code provided and map its structure. ◆ Identify when to use loops, nested loops, and function calls to simplify code logic. ◆ Utilize arrays for both raw data storage and strings, and being able to identify which is which. ◆ Be prepared to study Data Structures and Algorithm Analysis using C or a similar language.
Mindset	◆Be logical, methodical, consistent and accurate ◆Apply critical thinking in the process of decision making

Website Source

https://www.codeblocks.org (for PC) https://apps.apple.com/us/app/xcode/id497799835?mt=12 (for Mac)

Teaching Methods

This course contains lectures, class discussions, homework, quizzes, presentation and exams. Textbook content will be introduced first. Then real case and practice questions will be delivered to students as a way to test their understanding of the knowledge. This will require individual or group assignment in or after class.

Grade Criterion

Component	Weight	Description
Final Exam	20%	
Mid-Term Test	20%	
Homework	10%	
Quizzes	10%	
Presentation	20%	
Participation	10%	

Attendance	10%	
Total	100%	

Detailed Grade Computation

	Before Midterm	After Midterm
Attendance	5%	5%
Participation	5%	5%
Homework	5%	5%
Quizzes	5%	5%
Presentation		20%
Mid-Term Test	20%	
Final exam		20%
Total	40%	60%

Assessment of Student Performance

☞ ***Self-Study and Reading ability Practice***

Instructor will give out the chapters or the reference books to read and use class hours to have discussion; students should be able to show a proactive attitude and ability for self-study and reading. Knowledge and oral English will be elements of homework or presentation score.

☞ ***Homework***

Students should finish their homework by themselves. Copying from others will be treated as plagiarism and the homework scores will be lowered. Students should hand in all assignments on time. Late assignments will be accepted at the discretion of the instructor (i.e., when the student was ill or had an excused absence). Late assignments without reasonable proof will be reduced in score by 50%.

☞ ***Attendance***

Because the course covers a great deal of material, attending every class session is very important for performing well.

- ♦Being late for 15 minutes or more is considered an absence.
- ♦Five hours or above of unexcused absences will result in the lower level of the final grade by one grade band (e.g. from C – to D +). Any excused absence must be discussed directly with the teacher.
- ♦Absence which is more than 1/3 of the total teaching hours will cause an F (a failing grade) directly. but students are welcome to continue attending classes.
- ♦An incomplete grade (I) will be considered in case of medical or family emergencies.

☞ ***Participation***

- ♦Students should participate in classes actively. Half of participation grade is determined by their presentation in class. They are encouraged to ask questions relevant to the subject and express their own opinions. Every student should respect the ideas, opinions, and questions of their classmates.
- ♦ Students should also use office hours to ask questions or talk with the instructor for good communication and effective learning.
- ♦Frequently visiting the instructor and chatting in English during office hours is highly recommended.

- Any misbehavior and non-class related activities in class will result in the lower level of the participation grade, including ringing cell phones.
- All above behaviors will be solely evaluated by the instructor for scoring.

Textbook

Students must bring the textbook, a computer (if possible), USB drive, pen/pencil, and paper to class.

Topical Course Outline（original）

Week	Topics	Platform	Homework
1	● Syllabus	Classroom	——
	● Chapter 1 Introduction to Computer Programming • History and hardware	Classroom	——
	• Programming languages Algorithms • The software development process	Classroom	Install Codeblocks or XCode
2	● Chapter 2 Getting Started in C Programming • Programming style	Classroom	——
	• Data types • Arithmetic operations	Classroom	——
	• Variables and declarations	Classroom	Homework for CH02
3	● Chapter 3 Processing and interactive input • Assignment	Classroom	——
	• Mathematical library functions • Interactive input	Classroom	——
	• Formatted input • Symbolic constants	Classroom	Homework for CH03
4	● Chapter 4 Flow of control • Relational expressions	Classroom	——
	• The if and if-else statements • The if-else chain	Classroom	——
	• The switch statement	Classroom	Homework for CH04
5	● Holiday	Real world	——
	● Still holiday	Real world	——
	● Such a long holiday!	Real world	——
6	● Chapter 5 Repetition part 1 • Basic loop structure • The while statement	Classroom	Homework for CH05 part 1
	● Review	Classroom	——
	● Quiz I	Classroom	——
7	● Chapter 5 Repetition part 2 • Computing sums and averages using a while loop	Classroom	——
	• The for statement • Nested loops	Classroom	——
	• The do-while statement	Classroom	Homework for CH05 part 2

8	● Chapter 6 Modularity using functions Part I • Function and parameter Declarations	Classroom	——
	• Returning a value	Classroom	——
	• Standard library functions	Classroom	Homework for CH06
9	● Review	Classroom	——
	● Mid-term test	Classroom	——
	● Mid-term test	Classroom	——
10	● Chapter 7 Modularity using Functions Part II • Variable scope • Variable storage class	Classroom	——
	• Pass by reference	Classroom	——
	• Recursion	Classroom	Homework for CH07
11	● Chapter 8 Arrays • One-dimensional arrays	Classroom	——
	• Array initialization	Classroom	——
	• Array as function arguments • N-dimensional arrays (self-study)	Classroom	Homework for CH08
12	● Chapter 9 Character strings Part I • String fundamentals	Classroom	——
	• Library functions	Classroom	——
	• Input data validation • Formatting strings	Classroom	Homework for CH09
13	● Chapter 9 Character strings Part II • More on strings as necessary	Classroom	——
	● Review	Classroom	——
	● Review	Classroom	——
14	● Quiz II	Classroom	——
	● Chapter 10 Data files (time permitting), Lecture Only	Classroom	——
	● Presentations	Classroom	——
15	● Presentations	Classroom	——
	● Presentations	Classroom	——
	● Presentations	Classroom	——
16	● Presentations	Classroom	——
	● Presentations	Classroom	——
	● Presentations	Classroom	——
17	Revision/Q&A	Classroom	——
	Revision/Q&A	Classroom	——
	Revision/Q&A	Classroom	——

Teacher's Office Hour

- The instructor's office hour is shown in the front of the office door.
- Students are suggested to use the instructor's office hour and learning center to ask questions or talk with the instructor once at least per week for good communication and effective learning, which is recorded in the students' participation.
- The time can be scheduled by instructors or students, or both.

Cheating and Plagiarism

Cheating is not tolerated. Any student caught cheating on a quiz; test or exam will be given a mark of zero (0) for the particular work. At the beginning of the semester the definition of plagiarism will be carefully explained, when any thoughts or writings of another person are used, they must be clearly identified (usually one uses quotation marks) and the source notes. **If any student is caught cheating on any homework assignment, the highest score the student can earn in that course is a "C".**

Important Dates

Midterm Test	**Week 9 or 10**
Final Exam	**Week 18 or 19（Refer to the notice of the Academic Affairs Office）**

Note: *This syllabus is tentative and may be changed or modified throughout the semester. All students will be notified and a new syllabus will be given.*

Instructor: Prof. Smith **Department Head: Prof. Li**