

Capital University of Economics and Business Overseas Chinese College Course Syllabus

<u>Year and Semester</u> 2020 Fall (August 31, 2020 - Jan 8, 2021)

<u>Course Name</u> Programming In C

Course Code MIS221

Course Type ☐ General Education (Required) ☐ General Education (Elective)

☐ Professional Course (Required) ☐ Professional Course (Elective)

☑ Basic Disciplinary Course

Course Credits3Course Hours48Prerequisite CourseNone

Instructor Prof. Smith

Contact Information Office: C217, Email: skippersmith66@gmail.com (all email correspondence must have

in the Subject field: MIS221Y0X English Name ID reason)

Office Hours Mon: 10:00-12:00; Thu: 10:00-12:00 Fri: 10:00-12:00;

<u>Learning Center Hours</u> Tue: 18:00-20:00; Wed: 10:00-12:00

Grade/Section 2018 Y01/Y02

Course Time/Place Y01 Tue 15:40-17:20 & Thu 10:10-11:00; B211

Y02 Tue 13:30-15:20 & Thu 9:00-9:50; B211

Textbook Gary Bronson, A First Book of ANSI C, 4th edition, Cengage; ISBN: 978-7-121-

34326-1

Course Description

C programming is the fundamental computer programming language. 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 designed. At last, students should finish their project independently.

Student Learning Objectives

Learners are exposed to:

- The process of developing software
- The four major types of coding structures: Sequential/Selection/Repetition/Invocation.
- The use of an IDE (Integrated Development Environment) for writing and debugging code.

After completing the course, students will be able to:

- Understand the steps to designing a program.
- Be able to write a modestly complex program involving multiple functions
- Be able to design and test each function

Teaching methods

This course consists of lectures, individual and group practice, and group presentations. Students must be prepared to discuss the assigned cases before class.



Grade Criterion

| Component | Weight | Description |
|---------------|--------|---|
| Final Exam | 20% | A cumulative final examination will be given based on all of the contents of |
| T mar Exam | 2070 | A cumulative final examination will be given based on all of the contents the class. A minimum of 25% of the exam (5 of the 20%) will consist of questions utilizing the application of critical thinking. A cumulative midterm test will be given based on all of the contents of the first half of the class. A minimum of 25% of the test (5 of the 20%) will consist of questions utilizing the application of critical thinking. Homework assignments will be given throughout the semester, which are at class time on the dates specified by each assignment requirement. You should be very serious about the homework for two reasons. First, you wi get credit if you do not turn in the assignment. Second, problems in the exwill be very similar to those in the assignments. In general, each assignment should take no more than 2-3 hours and should be prepared as described it class. Hand-written assignments will not be accepted. Individuals will be asked to participate in coding during the semester. Stu |
| Mid-Term Test | 20% | |
| Homework | 20% | Homework assignments will be given throughout the semester, which are due at class time on the dates specified by each assignment requirement. You should be very serious about the homework for two reasons. First, you will not get credit if you do not turn in the assignment. Second, problems in the exams will be very similar to those in the assignments. In general, each assignment should take no more than 2-3 hours and should be prepared as described in class. Hand-written assignments will not be accepted. |
| Participation | 10% | Individuals will be asked to participate in coding during the semester. Students are required to meet with their teachers every other week. Their performance should be graded in their participation. |
| Presentation | 20% | Refer to the handouts. |
| Attendance | 10% | Refer to attendance policy listed below. |
| Total | 100% | |

Detailed Grade computation

| | Before Midterm | After Midterm |
|---------------|----------------|---------------|
| Attendance | 5% | 5% |
| Participation | 5% | 5% |
| Homework | 5% | 5% |
| Quiz | 5% | 5% |
| Presentation | | 20% |
| Midterm test | 20% | |
| Final exam | | 20% |
| Total | 40% | 60% |

Grading Policy

A+ 97-100 A 93-96 A- 90–92 B + 87 - 89B 83-86 B-80-82 F 0- 59 C+ 75-79 C 70-74 C- 67-69 D+ 63-66 D 62-60

Exam Schedule

Midterm: Oct.29- Nov.2, 2018; Final Exam: Jan.2-11, 2019

Assessment of student performance

Homework

Students should finish their homework (except for group assignments) by themselves. Copying from others or from any other sources without clear quotation will be treated as cheating. Students should hand in all assignments promptly and on time. Late assignment will be accepted at the discretion of the instructor (i.e., when the student was ill or had an excused absence). Assignments turned in late without proof of illness or with an excused absence will be reduced in score by 50%.



Assignments should be printed out unless email is requested. Printing requirements are as followed: single space between lines, double space between paragraphs, font size is 12 (maximum). Grammar error can reduce 20% of your score.

Attendance

Attendance in class is required for all students taking courses at the Capital University of Economics and Business Overseas Chinese College.

- o Being late for 15 minutes or more is considered an unexcused absence.
- \circ Five hours or above of unexcused absences will result in the lowering of the mid-term and/or final grade by one grade band (e.g. from C to D +). Any excused absence must be discussed directly with the teacher.
- 16 class hours of any kind of absences will result in a failing grade (F), but students are welcome to continue attending classes.
- o An incomplete grade (I) will be considered in case of medical or family emergencies.

• Participation

- Students should participate in classes actively. <u>Half of participation grade is determined by their presentation in class.</u> 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 hour to ask questions or talk with the instructor for good communication and effective learning. Any
 misbehavior and non-class related activities in class will result in the lowering of the participation grade, including ringing beepers
 and cell phones.
- o All above behaviors will be solely evaluated by the instructor for scoring.

Topical Course Outline

| Week | Date | Topics |
|------|-----------|--|
| 1 | 0831-0904 | Syllabus |
| | | Chapter 1 Introduction to Computer Programming |
| | | History and hardware |
| | | Programming languages |
| | | Algorithms |
| | | The software development process |
| 2 | 0907-0911 | Chapter 2 Getting Started in C Programming |
| | | Programming style |
| | | Data types |
| | | Arithmetic operations |
| | | Variables and declarations |
| 3 | 0914-0918 | Chapter 3 Processing and interactive input |
| | | Assignment |
| | | Mathematical library functions |
| | | Interactive input |
| | | Formatted input |
| | | Symbolic constants |
| 4 | 0921-0925 | Chapter 4 Flow of control |
| | | Relational expressions |
| | | The if and if-else statements |
| | | The if-else chain |



| Social Content | | | The switch statement |
|--|----|-----------|-----------------------------|
| Chapter 5 Repetition | | | The switch statement |
| Basic loop structure The while statement | 5 | 0928-1002 | National Holiday? Quiz I |
| The while statement | 6 | 1005-1009 | Chapter 5 Repetition |
| 1012-1016 Computing sums and averages using a while loop | | | Basic loop structure |
| The for statement | | | The while statement |
| Nested loops The do-while statement | 7 | 1012-1016 | |
| The do-while statement | | | |
| Section Chapter 6 Modularity using functions Part I | | | |
| Function and parameter Declarations | | 1010 1022 | |
| Returning a value Standard library functions | 8 | 1019-1023 | |
| Standard library functions | | | |
| 10 | | | |
| 10 | 9 | 1026-1031 | |
| Variable scope Variable storage class Pass by reference Recursion | - | | |
| Variable storage class Pass by reference Recursion | 10 | 1102-1106 | |
| Pass by reference Recursion 11 1109-1113 | | | |
| Recursion | | | · · |
| 11 | | | |
| • One-dimensional arrays • Array initialization • Array as function arguments • N-dimensional arrays* 12 1116-1120 Chapter 9 Character strings • String fundamentals • Library functions • Input data validation • Formatting strings 13 1123-1127 Quiz II 14 1131-1204 Review and Chapter 10 Data files* • Declaration * • Reading from and writing to text files* • Random file access * • Passing and returning filenames * • Chapter 11 Arrays, addresses, and pointers * • Random file access • Passing and returning filenames • Chapter 11 Arrays, addresses, and pointers * • Or Presentations 15 1207-1211 Presentations Presentations Presentations | 11 | 1109-1113 | |
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| Presentations | 15 | 1207-1211 | |
| 17 1221-1225 Final Exam | 16 | 1214-1218 | Presentations |
| | 17 | 1221-1225 | Final Exam |



Teacher's Office Hours

- The instructor's office hours are shown at the front of the office door.
- Students are required to use the instructor's office hours to ask questions or talk with the instructor at least once 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.

Study Group:

• Students are encouraged to form the study group in order to help doing the self-study and review the knowledge points, teacher may use group as unit to do the assessment and other study tasks distribution.

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. Cheating on the final exam will result in a mark of zero (0) for the course.
- 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.

Presentations:

Developing presentation skills is important for everyone, plus it's a good way to share information. Each student will prepare and present one individual presentation and help with the group project presentations. The individual presentations must include at least three outside references, noted in footnotes and a reference page. Hand in a hard copy of your presentation notes, including a bibliography, or include the information in your handouts/visuals, if you plan to use any. We will brainstorm potential topics in class. Presentations will be evaluated based on content, delivery, and audience response.

Important Dates

| Fall Semester, 2019 | August 30, 2019— January 13, 2020 |
|---------------------|------------------------------------|
| Aug. 30 | Registration |
| Sep.2 | Classes Begin |
| Sep.7 – 20 | Freshmen's Military Training |
| Sep.13 | Mid-Autumn Festival (tentative) |
| Sep.23 | Classes Begin (Freshmen) |
| Sept.30 – Oct 4 | National Day Holiday (tentative) |
| Oct. 28 - Nov. 1 | Mid-term Test |
| Jan.1, 2020 | New Year's Day Holiday (tentative) |
| Jan.2-10 | Final Exam Period |
| Jan.13 | Winter Vacation Begins |

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. Skipper Smith | Department Head: | Prof. Jingning Li |
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