2309 EIE110 Course Outline

Subject Code	:	**EIE110**
Subject Title	:	COMPUTER PROGRAMMING
Course Type	:	Compulsory
Level	:	1
Credits	:	3
Teaching Activity	:	Lecture
	:	Experiment (included in lectures)
Prior Knowledge*	:	High school math
		High school English

Class Schedule :

Class	Week	Time	Classroom	Date
D1	TUE	12:30-15:20	B401	2023/09/04-2023/12/17

Instructor	:	Yuan-Yuan Pan
Contact Number	:	(853) 88973038
E-mail Address	:	yypan@must.edu.mo
Office	:	A306a
Office Hour	:	TUE 09:30- 12:30
		WED 14:30- 17:30
		THU 12:00- 14:00
		FRI 12:00- 14:00

COURSE DESCRIPTION

The course introduces the basic programming concepts to students who learn computer programming for the first time. It also explains the way how programs are executed, how data are stored and processed in computers. The course is based on the C programming language which has features that exposes the most fundamental ideas of computer programming. Students learn the procedures and methods of how programs are constructed progressively, as well as the way that computations are performed.

The C programming language is one of the most widely known and used programming languages and is often the choice to be used to implement the compilers of other programming languages. Learning the language features and runtime environment of C will help the students understand thoroughly language semantics and structure of computer programs. This course also teaches the techniques of computer programming with efficiency and style considerations. The course requires students to

1. Understand and apply the main language features of the C programming language;
2. Write programs for solving computation problems;
3. Operate computers to edit, compile, run, and debug C programs.

The course provides basic understandings and tools for students to pursue further learning in computer science.

TEXT BOOK

Required Text Book:

Book title: C Primer Plus
Author/Editor: Stephen Prata
Edition: 6
Publisher: SAMS
ISBN: 978-0-321-92842-9

Reference Book:

1. C Traps and Pitfalls, Andrew Koenig, Addison-Wesley Professional
2. C Programming Language (2nd edition), Brian W. Kernighan and Dennis Ritchie, Prentice Hall PTR

INTENDED LEARNING OUTCOMES

Upon successful completion of this subject, students will be able to:

1. Understand the basic architecture of computer.
2. Understand the steps in the whole process of building a program.
3. Understand the key features of the C programming language.
4. Analyze different programming solutions of a task.
5. Read, understand C programs, evaluate the correctness of programs and find the fix of errors.
6. Understand basic computation problems and design C programs to solve them.

Weekly Schedule

Index	***Topic***	***Hours***	***Teaching Method***
1	Introduction to computer organizations	3	lecture
2	Introduction to C programming language	3	lecture, experiment
3	Representations of integers and basic formatting input and output	3	lecture
4	Representations of floating point numbers, characters and strings, and basic formatting input and output	3	lecture, experiment
5	Expressions I	3	lecture
6	Expressions II	3	lecture, experiment
7	Flow control statement I	3	lecture
8	Flow control statement II	3	lecture, experiment
9	C functions	3	lecture
10	Midterm exam	3	
11	Arrays	3	lecture
12	Pointers	3	Lecture, experiment

13	C string functions and file	3	lecture
14	Pre-processers and data structures	3	lecture, experiment
15	Review for final exam	3	lecture

ASSESSMENT APPROACH

Assessment method	Weight %
1.Attendance/Participation	10%
2. Lab	30%
3. Midterm exam	10%
4. Final exam	50%
Total	100%

Guideline for Letter Grade:

Marks	Grade
93-100	A+
88-92	A
83-87	A-
78-82	B+
72-77	B
68-71	B-
63-67	C+
59-62	C
56-58	C-
53-55	D+
50-52	D
0-49	F

Notes:

- Students will be assessed on several assessment items (i.e. attendance, lab, midterm exam and final exam).
- The attendance evaluates the student's participation of discussion in the classes.
- The lab, midterm exam and final exam evaluate the student's understanding of the concepts of C programming, the ability to operate computers, and the ability to apply knowledge to solve programming problems.