2309 SE110/LP102 Course Outline

Subject Code   :   SE110/LP102
Subject Title   :   Computer Programming
Course Type   :   Compulsory
Level   :   1
Credits   :   3
Teaching Activity   :   Lecture   Lecture
Prior Knowledge*   :   None
Class Schedule   :

Class	Week	Time	Classroom	Date
D1	TUE	12:30-15:20	C408	2023/09/04-2023/12/17

Instructor   :   Rubing Huang
Contact Number   :   (853) 88973035
E-mail Address   :   rbhuang@must.edu.mo
Office   :   A209
Office Hour   :   Monday (10:00-12:00)
         Tuesday (10:00-12:00)
         Wednesday (14:30-17:30)
         Thursday (9:00-12:00)

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 process of computer computations.

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 ides a concise introduction to the design and analysis of algorithms for undergraduate students.

TEXTBOOKS

Suggested Textbook:

Book title：C Primer Plus;

Author/Editor：Stephen Prata

Edition：6 ;

ISBN：978-0321928429

Publisher：Addison-Wesley Professional;

Date：2013

Reference Books:

1. Kenneth A. Reek. *Pointers on C*, 1st Edition, Pearson, 1997, ISBN: 978-0673999863.

2.   Brian W. Kernighan, Dennis Ritchie. *C Programming Language*, 2nd edition, Prentice Hall, 1988, ISBN: 978-0131193710.

INTENDED LEARNING OUTCOMES

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

1.   Appreciate the good style and habits in programming.
2.   Appreciate the art and importance of algorithms.
3.   Understand the basic architecture of computer.
4.   Understand the steps in the whole process of building a program.
5.   Evaluate the correctness of a programs and find the fix of errors.
6.   Analyze different programming solutions of a task.
7.   Understand the key features of the C programming language.
8.   Write complete C programs.
9.   Read and understand C programs.
10. Understand and implement modular design and code reusing techniques.
11. Understand basic computation problems and design C programs to solve them.
12. Experience working and communication in groups for projects.

Weekly Schedule

Week	Topics	Hours	Teaching Method
1	Introduction to computer, C, programming environment, tools, course arrangments	3	Lecture & exercise
2	Integer data, input and output, basic programs.	3	Lecture & exercise
3	Floating-point data, input and output, basic programs.	3	Lecture & exercise
4	Expressions	3	Lecture & exercise
5	Flow control statements	3	Lecture & exercise
6	Flow control statements	3	Lecture & exercise
7	Functions		Lecture & exercise
8	Functions	3	Lecture & exercise
9	Arrays	3	Lecture & exercise
10	Pointers and C string functions	3	Lecture & exercise
11	Pointers, addresses	3	Lecture & exercise
12	File operations, input and output	3	Lecture & exercise
13	Pre-processers, data structures	3	Lecture & exercise
14	Data structures	3	Lecture & exercise
15	Review	3	Lecture & exercise

ASSESSMENT APPROACH

No.	Approach	Weighting
1	Homework Assignments	30%
2	Mid-term Exam	10%
3	Final Exam	40%
4	Final Project	20%

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+
58-62	C
53-57	C-
50-52	D
0-49	F

Students will be assessed based on the continuous assessment (i.e. coursework in the form of individual written assignments, quizzes) and by the end of the semester one final examination.