نـموذج (هــ)

Summarized Course Description

Course number: ECE 201	Course name: Programming Applications For Engineers
لغة تدريس المقرر : English	Pre-requisites: CS 110T
Credit hours: 3 (2+ 2+ 0)	Course level: Level - 6

Course Description   وصف المقرر :

Fundamental principles, concepts and methods of programming (C and MATLAB), with emphasis on applications in the physical sciences and engineering. Basic problem solving and programming techniques; use of programming logic in solving engineering problems.

Course objectives   أهداف المقرر :

1. Give students an introduction to the uses of computer languages in the analysis of contemporary scientific problems covering the basic syntax and structure with examples drawn from real applications.

2. Covers both conceptual areas of converting a problem to be solved into a computer-based solution, and specific aspects of individual languages and the types of problems they are best suited to solve.

3. Emphasis is placed on the importance of structure, documentation, major toolboxes and libraries, interfacing techniques and platform specific issues.

Course Outcomes   مخرجات التعليم:

Upon completing the course, the student should be able to:

1. Demonstrate competency in the fundamental principles, concepts and methods of programming (C and MATLAB), with emphasis on developing solutions in the domains of physical sciences, mathematics, and engineering.

2. Demonstrate the ability to function as part of a technical team to generate the solution to a programming problem.

3. Explore common programming concepts in various computing environments and implement those concepts across more than one language.

4. Analyze alternative algorithm designs to implement a solution designed to make efficient use of limited resources of the computer.

Textbook and references	الكتاب المقرر والمراجع المساندة:

Text Book:
Forouzan and Gilberg, Computer Science, A Structured   Programming Approach Using C, 3rd ed.

References:
1. Problem Solving and Program Design in C, 8th edition, Jeri Hanly and Elliot Koffman, Prentice Hall, 2016.

2. The C Programming Language. 2nd ed. Kernighan, Brian, and Dennis Ritchie. Upper Saddle River, NJ: Prentice Hall, 1988. ISBN: 9780131103627.

3. Matlab, Fourth Edition: A Practical Introduction to Programming and Problem Solving, 4th Edition , Stormy Attaway, Todd Green, ISBN-13: 978-0128045251 ISBN-10: 0128045256.