

CC 112- Structured Programming

CREDIT HOURS

3 Hours

CONTACT HOURS (Hours/week)

Lecture: 2; Tutorial/ Lab: 2

COURSE COORDINATOR

Dr Sherif Fadel

TEXT BOOK:

J.Hanly and E. Koffman, "C Program Design for Engineers", Addison Wesley, latest edition

COURSE DESCRIPTION:

An introduction to C-language Programming is provided in this course, Variable/Constant definitions, Basic Programmes, Sequential Programming, Conditional Programming, Looping and repetitions, Functions, Arrays as well as searching and sorting techniques.

PREREQUISITE:

CC111

RELATION OF COURSE TO PROGRAM:

Required

COURSE INSTRUCTION OUTCOMES:

The student gains knowledge on structured programming techniques associated with the C-Language, used to program most nowadays systems. The student studies their application to practical problems with special emphasis on some practical applications concerning different disciplines.

TOPICS COVERED:

- Overview of Programming and Problem Solving
- C Syntax and Semantics
- I/O Formatting and Arithmetic
- Conditions and Logical Expressions
- Selection Control Structures
- Repetitions (Part 1)
- Repetitions (Part 2)
- Functions (Part 1)

- Functions (Part 2)
- Arrays (Part 1)
- Arrays (Part 2)
- Programming applications – problem solving Tech (Part 1)
- Programming applications – problem solving Tech(Part 2)

CONTRIBUTION OF COURSE TO MEET THE REQUIREMENTS OF CRITERION 5:

Professional Component Content			
Math and Basic Sciences	Engineering Topics	General Education	Engineering Design
	✓	✓	

RELATIONSHIP OF COURSE TO STUDENT OUTCOMES:

Student Outcomes		Course Outcomes
a.	An ability to apply knowledge of mathematics, science, and engineering.	✓
b.	An ability to design and conduct experiments, analyze and interpret data.	✓
c.	An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	
d.	An ability to function on multi-disciplinary teams.	✓
e.	An ability to identify, formulate, and solve engineering problems.	
f.	An understanding of professional and ethical responsibility.	
g.	An ability to communicate effectively.	✓
h.	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, a	
i.	A recognition of the need for, and an ability to engage in life-long learning.	✓
j.	A knowledge of contemporary issues within and outside the electrical engineering profession.	
k.	An ability to use the techniques, skills, and modern engineering tools necessary for electrical engineering practice.	