

CC 213- Programming Applications

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 advanced C-language Programming is provided in this course: two dimensional arrays, strings, pointers, recursion, structures, bitwise-operators, input-output interfacing as well as text and binary files are covered in details. Projects are required from students to increase their skills in C programming.

PREREQUISITE:

CC 112

RELATION OF COURSE TO PROGRAM:

Required

COURSE INSTRUCTION OUTCOMES:

The student is able to use C-language programming techniques, files, pointers, structure, string, and array.

TOPICS COVERED:

- Revision of structured programming constructs: selection, repetition, and Functions.
- Revision of one dimensional array.
- Searching and sorting.
- Two dimensional arrays.
- Pointers.
- Strings.
- Structures.
- Structures/Unions.
- Recursion.

- Text Files.
- Binary Files.
- Bitwise Operators/ I/O Interfacing.
- Advanced Applications.

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.	