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Department of Computer Engineering	
Computer Programming (66111)	
Total Credits	**3**
major compulsory	
Prerequisites	-

Course Contents

Introduction to computer HW , SW and programming language, Numbering system, Variables, data types, expressions, program control, arrays, pointers, strings, functions, structure.

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	Apply the basic concepts on C programming which include the ability to write and compile computer C programs, understand numbering system , the basic data types, decelerating variables, expressions, selection statements, iterations (loops) and use built-in and user defined functions	C	50 %
2	Apply the intermediate concepts on C programming which include static and dynamic one dimension array, static two dimension array, pointers to array , pointers.	E	30 %
3	Apply advanced concepts on C programming which include passing parameters to functions ,strings and data structure.	K	20 %

Textbook and/ or Refrences

1. C++ How to Program (7th Edition) Prentice Hall | 2009 | ISBN: 0136117260, Harvey M. Deitel and Paul J. Deitel, 2.www.cplusplus.com/

Assessment Criteria	Percent (%)
First Exam	20 %
Second Exam	20 %
Homeworks	10 %
Final Exam	50 %

Course Plan

Week	Topic
1	1 Introduction 1.1 Computer Components: Hardware and Software 1.2 Programming Languages: High Level and Low Level Languages 1.3 Source Code and Executable code 2. Numbering systems 2.1 Decimal system 2.2 Binary system 2.3 Concept of Bit and Byte and Word 2.4 Character codes: ASCII and Unicode
2	3. Variables, Values, Types 3.1 Data Types: Integers, characters, and floating point numbers 3.2 Variables and constants 3.3 Declaring variables : int, char, float, long, double 3.4 Assignment statement 3.5 Introduction to Reading and writing variables: printf, scanf 3.6 Example of first C program
3-4	4. Expressions 4.1 Operator Overview: Binary and Unary operators 4.2 Precedence and Associatively 4.3 Integer division, modulus operator, floating point division 4.4 Explicit type conversion 4.5 Main and functions 4.6 Library functions
5-6	5. Program control 5.1 if statement 5.2 Loops: for loop, while loop, and do-while loop 5.3 switch statement
7-8	6. Arrays 6.1 Declaring arrays 6.2 One dimensional array(static and dynamic) 6.3 Strings as arras, to be visited again 6.4 Two dimensional arrays(static only)
9-10	7. Pointers 7.1 What is a pointer? 7.2 Addresses and pointer variables 7.3 Relating

	pointers to arrays 7.4 Dynamic memory allocation: new and delete 7.5 Arrays of pointers 7.6 Passing parameters: passing by value, by reference, and by pointer
11-12	8. Functions 8.1 Functions prototype and definition 8.2 Parameters 8.3 Passing parameters 8.4 Local and Global variable Exam
13-14	9. Strings 9.1 String and pointers 9.2 Dynamic string 9.3 arrays of strings 9.4 String functions
15-16	10. Structures 10.1 Definition of structures 10.2 Structure fields 10.3 Structures and pointers 10.4 Arrays of structures and arrays of pointers to structures