

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING (INTERDISCIPLINARY)

Semester – I

Subject Code : **320016**

(w.e.f 4th August,2011)

Subject Name : **Programming in C**

RATIONALE:

This course gives fundamentals of programming language which is useful in developing applications in various fields & gives knowledge of latest concept of 'C' language. The fundamental concepts of learning a computer programming language have been covered in this course which will enhance their ability to suitably use it in their respective field of applications.

OBJECTIVES :

The students should be able to

- a) Write high level & low level programs
- b) Understands concepts of structure.
- c) Apply basic programming concepts in relevant

Sr. No.	Subject Content	Hrs.
1	PROGRAMMING LANGUAGE CONCEPTS 1.1 Concepts of programming methodology. 1.2 Flowchart 1.3 Algorithm	2
2	CONSTANTS, VARIABLES & DATA TYPES 2.1 Character set 2.2 'C' token 2.3 Keywords & Identifiers 2.4 Constant, Variables 2.5 Data types 2.6 Storage Classes	4
3	OPERATORS & EXPRESSIONS 3.1 Arithmetic, logical, Assignment operators 3.2 Increment & Decrement, Conditional operator 3.3 Bit-wise special operators 3.4 Formatted & Unformatted input & output 3.5 Arithmetic, Evaluation of the types of expressions	4
4	BRANCHING & LOOPING 4.1 Decision making with IF statement 4.2 Switch Statement 4.3 The ? : Operator 4.4 Goto Statement 4.5 While, For Statement	4
5	ARRAYS : 5.1 Introductions 5.2 One dimensional arrays 5.3 Initiating two dimensional arrays	4
6	USER DEFINED FUNCTIONS : 6.1 Introduction 6.2 Call by value & Call by reference	2

	6.3 Nesting of functions 6.4 Recursions Functions with arrays	
7	POINTERS : 7.1 Introduction 7.2 Understanding Pointers 7.3 Pointers & Arrays 7.4 Pointers & Structures 7.5 Pointer to Pointer	4
8	STRUCTURES, UNIONS : 8.1 Introduction 8.2 Structure definition & initialization 8.3 Arrays of Structures 8.4 Structures with Structures 8.5 Structures & functions	2
9	FILE MANAGEMENT : 9.1 Introduction 9.2 Defining, Opening and Closing file. 9.3 Input/Output operations on file	2
Total		28

Guideline for Paper Setter:

1. Question paper should contain program- maximum upto 40% of total marks.

LABORATORY EXPERIENCE :

Students should write programmes on the basis of prescribed curriculum of this course. (minimum 20 programmes are required)

REFERENCES :

- | | | |
|----------------------------|----------------|------------|
| 1. Programming in ANSI 'C' | Lagurusamy | TMH |
| 2. Let us 'C' | Etkar | Tech Media |
| 3. Programming in 'C' | U Gopal | TMH |
| 4. Programming in 'C' | Nigham & Richi | TMH |
| 5. Program with 'C' | Gottfried | |