

GRAPHIC ERA UNIVERSITY, DEHRADUN

First Semester 2016-2017

Model Course Handout

Course Code: TCS 101

Course Title: FUNDAMENTALS OF COMPUTERS AND INTRODUCTION TO C

Instructor-in-Charge: Honorable President Sir

Instructor(s) :

- 1. Mr. Himanshu Rai Goyal**
- 2. Mr. Upendra Aswal**
- 3. Ms. Shuchi Juyal Bhadula**

Course Description:

1. Introduction to basics of computers and general description of the terms used in IT.
2. Flowcharts and Algorithms
3. Basic introduction to C Programming.

OBJECTIVE:

1. Introduction to fundamentals of Computers to learn and understand general architecture of a computer, different units and their utilization.
2. A brief introduction to the general topics like networks, operating system, internet etc to help students to gain basic knowledge of these topics for further studies.
3. Introduction to algorithms and flowcharts to enhance logic building abilities and problem solving
4. Introduction to C till for loops to implement their logics and prepare a foundation for learning advance concepts C.

Text Books:

- TB1. Peter Prinz, Tony Crawford, "C in a Nutshell", 1st Edition, Oreilly Publishers, 2011.
TB2. Peter Norton, "Introduction to computers", 6th Edition, TMH, 2009.

Reference Books:

- R1. Steve Oualline, "Practical C programming", 3rd Edition, Orielly Publishers, 2011.
R2. Brian W Kernighan, Dennis M Ritchie, "The C Programming Language", 2nd Edition, Prentice Hall, 1988.
R3. Herbert Schildt, "C: The Complete Reference", 4th Edition. TMH, 2000.
R4. E. Balagurusamy, "Programming in ANSI C", 6th Edition, McGraw Hill 2015
R5. Yashwant Kanetkar, "Let Us C", 8th Edition, BPB Publication 2007

Course Plan:

Lecture No.	Learning Objective	Topics to be covered	Reference Chap./Sec. (Book)
1	Review of subject	Introduction	
2- 4	Understanding of basics of computer and its components.	Computer: Definition, block diagram, components, IPO Cycle, types of computers, Generations, Applications and features.	TB2A
5	Revision of Concepts	Doubt Clearance Session	
6	Pre-requisite for learning Programming	Compiler/interpreter, HLL,LLL,Assembly language,Application/ system software.	TB2B
7-11	Understanding the basics of logic building and problem solving	Flowcharts: importance and use. Sequential, Control and Iterative flowcharts.	
12-13	Writing stepwise solution for a problem	Algorithm: Properties, Writing algorithm.	
14	Revision of Concepts	Doubt Clearance Session	
15-16	Basic introduction to programming	Programming: Importance, features, data types, variables, identifiers, header files, comments, structure of a program.	R42
17-19	Basic learning of writing programs	Programs based on sequential Problems.	R41
20-22	How understand outside world format	Number System: Decimal, Octal, Hexadecimal and their conversion.	TB24
23	Revision of Concepts	Doubt Clearance Session	

24-26	Implementation of Decision Making Concepts.	Decision Making: If, if else, else if and else if ladder, switch and break statement. Programs based on decision making	R45
27-31	Implementation of Iteration	Loops: While, For, do while, continue statement. Programs based on Iteration.	R53
32	System unit knowledge	Input and Output Devices	TB22/TB23
33	Memory hierarchy and its utilization	Memory and storage	TB25
34	Basic knowledge of OS	Operating System and its functions	TB26
35	Basic knowledge of N/W	Networks & Internet basics and their services	TB27/TB28
36	Revision of Concepts	Doubt Clearance Session	

Evaluation Scheme:

EC No.	Component	Duration	Marks	Weightage (%)	Date & Time	Nature
1.	Mid term	2 Hr	60	30		
2.	End term	3 Hr	100	60		
3.	Class participation		10	10		
4.	Assignments				See Note1*	

***Note1:** A total of three assignments will be given in the entire semester.

Chamber Consultation Hours:

Mr.Himanshu Rai Goyal :Monday 3:30-5 pm

Ms Shuchi Juyal Bhadula: Saturady 9:00-10:30

Mr. Upender aswal : Friday and Saturday 4-5 noon

Notices: All notices concerning this course will be displayed on the B. Tech Ist year web-site.

www.btechgeu.in