

Bhoj Reddy Engineering College for Women: Hyderabad

Department of Computer Science and Engineering

Lesson plan of faculty member for the academic year 2016–17

Class: I B Tech

Branch-Section: ECE-B

Semester: II

Subject: Computer Programming in C

Lectures per week: 4

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Introduction to Computers, C Language		
1	Introduction - Computer Systems	03 January 2017
2	Computer Systems	06 January 2017
3	Computing Environments	07 January 2017
4	Computer Languages	09 January 2017
5	Creating and running programs	10 January 2017
6	Program Development, Algorithms and flowcharts	16 January 2017
7	Number Systems-Binary, Decimal, Hexadecimal and Conversions	17 January 2017
8	Storing integers and real numbers	19 January 2017
9	Introduction to C Language – Background	20 January 2017
10	C Programs, Identifiers, Types, Variables	23 January 2017
11	Constants, Input / Output, Operators	24 January 2017
12	Expressions, Precedence and Associativity	24 January 2017
13	Expression Evaluation, Type conversions	27 January 2017
14	Statements- Selection Statements (making decisions) – if and switch statements	30 January 2017
15	Repetition statements (loops)-while, for, do-while statements	31 January 2017
16	Loop examples, other statements related to looping – break, continue, go to, Simple C Program examples	02 February 2017
UNIT-II: Functions, Arrays		
17	Introduction - Functions	02 February 2017
18	Designing Structured Programs, User defined functions	02 February 2017
19	Inter function communication, Standard functions	02 February 2017
20	Scope, Storage classes-auto, register, static, extern, scope rules	03 February 2017
21	Type qualifiers, recursion- recursive functions, Limitations of recursion	06 February 2017
22	Example C programs, Preprocessor commands	07 February 2017
23	Arrays – Concepts, using arrays in C	09 February 2017
24	Inter function communication	10 February 2017
25	Array applications — linear search, Binary Search	13 February 2017
26	bubble sort, Two-dimensional arrays	14 February 2017
27	multidimensional arrays, C program examples	16 February 2017
UNIT-III: Pointers, Strings		
28	Pointers – Introduction (Basic Concepts)	17 February 2017
29	Pointers for inter function communication, Pointers to pointers	20 February 2017
30	Compatibility, Pointer Applications-Arrays and Pointers	21 February 2017
31	Pointer Arithmetic and arrays	23 February 2017
32	Passing an array to a function	27 February 2017
33	Memory allocation functions	28 February 2017
34	Array of pointers, programming applications	02 March 2017
35	Pointers to void, Pointers to functions	03 March 2017
36	Strings – Concepts, C Strings	09 March 2017
37	String Input / Output functions	10 March 2017
38	Arrays of strings	13 March 2017
39	String manipulation functions	14 March 2017
40	String / Data conversion	16 March 2017
41	C program examples.	17 March 2017

UNIT-IV: Enumerated, Structure and Union Types		
42	The Type Definition (typedef)	20 March 2017
43	Enumerated types	21 March 2017
44	Structures –Declaration, initialization	23 March 2017
45	Accessing structures, operations on structures	24 March 2017
46	Complex structures-Nested structures	27 March 2017
47	Structures containing arrays	28 March 2017
48	Structures containing pointers	30 March 2017
49	Arrays of structures	31 March 2017
50	structures and functions	03 April 2017
51	Passing structures through pointers	04 April 2017
52	Self-referential structures	06 April 2017
53	Unions, bit fields,	07 April 2017
54	C programming examples	10 April 2017
55	Command–line arguments,	11 April 2017
56	Pre-processor commands	13 April 2017
UNIT V: Input and Output		
57	Concept of a file, streams	17 April 2017
58	Text files	18 April 2017
59	Binary files	20 April 2017
60	Differences between text and binary files	21 April 2017
61	State of a file	24 April 2017
62	Opening and Closing files	25 April 2017
63	File input / output functions (standard library input / output functions for files)	27 April 2017
64	C program examples on file input /output functions	28 April 2017
65	File status functions (error handling),	01 May 2017
66	Positioning functions (fseek ,rewind and ftell)	02 May 2017
67	C program examples	04 May 2017
68	C program examples	05 May 2017
69	Revision	08 May 2017
70	Revision	09 May 2017

Text Books:

1. **Computer Science: A Structured Programming Approach Using C, B. A. Forouzan and R. F. Gilberg, Third Edition, Cengage Learning.**
2. **Programming in C. P. Dey and M Ghosh, Second Edition, Oxford University Press.**

Reference Books:

1. **The C Programming Language, B.W. Kernighan and Dennis M. Ritchie, Second Edition, Pearson education.**
2. **Programming with C, B. Gottfried, 3rd edition, Schaum’s outlines, McGraw Hill Education (India) Pvt Ltd.**
3. **C From Theory to Practice, G S. Tselikis and N D. Tselikas, CRC Press.**
4. **Basic computation and Programming with C, Subrata Saha and S. Mukherjee, Cambridge University Press.**

Name and signature of the faculty: **G Swapna**

Name and signature of Head of the Department: **N Satyanandam (HOD CSE)**

N Shribala (HOD ECE)