

Lectures on Each Topic (assume 15-week instruction and one-hour lectures)	Week 1	Discussion of the course outline, Introduction to problem solving, what is algorithm, how to write pseudo code, programming structures, problem solving with the sequential structures and, Basic Flowchart, IPO and PAC	1	
	Week 2	Problem solving with decisions and iterative structures, Basic Computer Organization, Intro to IDE (compiled program, text editors, debuggers, etc.), Program structure and Execution, First Program with Input and Output	1,2	Project Announcement
	Week 3	1. Constant, Variables, Keywords, Escape sequence 2. Format Specifiers, Data types, Data manipulation 3. Library, Linking, Compiling & Loading	2,3	Quiz no 1 Assignment 1 Friday Release Week 3
	Week 4	1. Decision Control Structures: If statements and if-else statement 2. Basic switch statements 3. Some working examples	2,3	
	Week 5	1. Nested if statements & switch statements 2. Logical & Conditional Operators 3. Working examples	2,3,5	Assignment 1 submission Monday Week 5
	Week 6	MID I Examination		
	Week 7	1. Introduction to Loops Design 2. For, while and do-while loops 3. Some working examples	2,3,5	Assignment 2 Friday Release Week 7
	Week 8	1. Nested Loops 2. Break and Continue Statement 3. Working examples	2,3,4,5	
	Week 9	1. Introduction to 1D Arrays 2. Multiple subscripted arrays 3. Working examples	2,3,4,5	Assignment 2 submission Monday Week 9
				Quiz no 3

	Week 10	1. Functions: Declaration, Definition and 2,3,4,5 Calling, passing values to functions, Passing arrays to functions 2. Standard library string functions 3. 2D array of characters	
	Week 11	MID II Examination	
	Week 12	1. Recursion 2. Introduction to Structures and Structure array 3. Working examples	3,4,5 Assignment 3 Friday Release Week 12
	Week 13	1. Nested structures, Passing structure 3,4,5,6 function 2. Filing in C 3. Introduction to pointers	
	Week 14	1. Pointers and Arrays 2. Dynamic memory allocation 3. Void pointers 4. Examples	2,3,4,5 Assignment 3 submission Monday Week 14
	Week 15	Revision	3,5 Project Submissions in 12th LAB and Finalization of Sessional marks
	Week 16	Final Exam	
Laboratory Projects/Experiments Done in the Course	Week 1	Problem solving with sequential structure using Scratch	
	Week 2	Problem solving with the decision and iterative structures using Scratch	
	Week 3	Introduction to IDE and Basic Programming Constructs	Announce Project
	Week 4	Introduction of operators and math.h library functions	
	Week 5	Basic Decision Structure (if, if- else and Switch Statements)	



	Week 6 Week 7 Nested Decision Structures Week 8 Iterative Statements in C Week 9 Lab Mid Week 10 Nested Iterations, Arrays Multiple Dimension Array (2D,3D) in C Week 11 THEORY MID II Examination Week 12 Functions, Strings and Recursion Week 13 Introduction to Structures & Nested Structure Week 14 Introduction to file processing and basic operations on files and Introduction to Pointers Week 15 Accessing Arrays using pointer Dynamic Memory Management Week 16 Project Submission								
Programming Assignments Done in the Course	Assignment related to Functions, Arrays, Pointers, Structures, Dynamic Memory and File Processing will be done								
Class Time Spent on (in credit hours)	<table border="1"> <thead> <tr> <th>Theory</th> <th>Problem Analysis</th> <th>Solution Design</th> <th>Social</th> </tr> </thead> <tbody> <tr> <td>15%</td> <td>50%</td> <td>30%</td> <td>5%</td> </tr> </tbody> </table>	Theory	Problem Analysis	Solution Design	Social	15%	50%	30%	5%
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Oral and Written Communications	Every student is required to submit at least <u>1</u> written reports of typically <u>2</u> pages and to make <u>1</u> oral presentations of typically <u>10</u> minute's duration. Include only material that is graded for grammar, spelling, style, and so forth, as well as for technical content, completeness, and accuracy.								

Instructor Name _____

Instructor Signature _____

Date _____