

DEPARTMENT OF COMPUTER SCIENCE
ACADEMIC ACTION PLAN FOR 2012-2013

B.Sc II SEMISTER(Problem Solving Techniques and Programming in 'C')

Month	Topics to be covered as per syllabus	Topics included other than state level common-core syllabus	Beyond syllabus	Guest Lectures/ Seminars	Remarks
December	(i) Problem Solving Techniques: Steps for Problem –Solving Tool, Using Computer as a Problem-Solving Tool. Design of Algorithms: Definition, Features of Algorithm, Criteria to be followed by an Algorithm, Top Down Design Flowcharts: Basic Symbols used in Flowchart Design.	(i) Problem Solving Techniques: Steps for Problem –Solving Tool, Using Computer as a Problem-Solving Tool. Design of Algorithms: Definition, Features of Algorithm, Criteria to be followed by an Algorithm, Top Down Design Flowcharts: Basic Symbols used in Flowchart Design.	Algorithm analysis and its notations		
	(ii) Programming in C: Introduction - Structure of C program – Character Set – Identifiers and Keywords – Data Types and Storage - Data Type Qualifiers - Variables – Declaring Variable – Initializing Variables – Constants - Symbolic Constants.			Objective questions in C	
January	(i) Operators and Expressions: Assignment statements – Arithmetic operators – Relational Operators – Logical Operators – Comma and Conditional Operators – Bit wise operator - Special Operators – Priority of Operators, I/O statements: The scanf Statement – The printf Statement – Other unformatted I/O Statements.			Seminars	
	(ii) Control Statements – Decision Control Statements : The if statement – The switch statement. Loop Control Statements: The while Loop – The do-while Statement – The for Loop – The Nested Loop – The Goto Statement – The Break Statement – The Continue Statement. Programming exercises.				

February	<p>(i) Arrays: Array Declaration – Array Initialization – Subscript – Processing the Arrays – Multi_Dimensional Arrays. Strings: Declaration and Initialization of Strings – Display of Strings Using Different Formatting Techniques – Arrays of Strings – Built_in String Functions and Applications.</p>			Seminars	
	<p>(ii) Functions : Definition of a Function – Declaration of a Function – Function Prototypes – The Return Statement – Types of Variables and Storage Classes – Categories of Functions – Recursion Vs Iteration - Header files - Creating user libraries.</p>				
March	<p>(i) Structures and Unions: Declaration of Structures – Accessing the Members of a Structure – Initializing Structures – Structures as Function Arguments – Structures and Arrays – Unions: Initializing the Members of an Union - Bit fields. Pointers: Pointers and Characteristics – Address and Indirection Operators – Pointer Type Declaration and Assignment – Pointer Arithmetic – Passing pointers to Functions – Arrays and Pointers – Arrays of Pointers – Pointers and Strings – Passing parameters.</p>			Seminars	
	<p>(ii) The C Preprocessor: #define to Implement Constants - #define to Create Functional Macros – Reading from Other Files using #include – Conditional Selection of Code using #ifdef – Other Preprocessor Commands – Predefined Names Defined by Preprocessor – Macros Vs Functions.</p>	<p>(ii) The C Preprocessor: #define to Implement Constants - #define to Create Functional Macros – Reading from Other Files using #include – Conditional Selection of Code using #ifdef – Other Preprocessor Commands – Predefined Names Defined by Preprocessor – Macros Vs Functions.</p>	Objective questions		
April	<p>Files: File Handling in C Using File Pointers – Input and Output using file pointers – Sequential Vs Random Access Files – Positioning the File Pointer.</p>		Graphics in C		