

Module of syllabus				
SEMESTER-1				
	Sub Module	Topics	Teacher's Name	Time Schedule
SH/CSC/ 101/C-1	Programming Fundamentals Using C			September-2022 to January-2023
	1.1. Introduction to C	History of C, Overview of Procedural Programming and Object-Orientation Programming, Using main() function, Compiling and Executing Simple Programs in C.	S.Mahato	
	1.2 Data Types, Variables, Constants, Operators and Basic I/O	Declaring, Defining and Initializing Variables, Scope of Variables, Using Named Constants, Keywords, Data Types, Casting of Data Types, Operators (Arithmetic, Logical and Bitwise), Using Comments in programs, Character I/O (get c, get char, put c, put char etc), Formatted and Console I/O (printf(), scanf()), Using Basic Header Files (stdio.h , conio.h etc).	T.K.Ghosh	
	1.3. Expressions, Conditional Statements and Iterative Statements	Simple Expressions in C (including Unary Operator Expressions, Binary Operator Expressions), Understanding Operators Precedence in Expressions, Conditional Statements (if construct, switch-case construct), Understanding syntax and utility of Iterative Statements (while, do-while, and for loops), Use of break and continue in Loops, Using Nested Statements (Conditional as well as Iterative)	S.Mahato	
	1.4 . Functions and Arrays	Utility of functions, Call by value, Call by Reference, Functions returning value, void functions, Inline Functions, Return data type of functions, Functions parameters, Differentiating between Declaration and Definition of Functions, Command Line Arguments/Parameters in Functions, Functions with variable number of Arguments. Creating and Using One Dimensional Arrays (Declaring and Defining an Array, Initializing an Array, Accessing individual elements in an Array, Manipulating array elements using loops), Use Various types of arrays (integer, float and character arrays / Strings) Two- dimensional Arrays (Declaring, Defining and Initializing Two Dimensional Array, Working with Rows and Columns), Introduction to Multi-dimensional arrays	T.K.Ghosh	
	1.5 .Derived Data Types (Structures and Unions)	Understanding utility of structures and unions, Declaring, initializing and using simple structures and unions, Manipulating individual members of structures and unions, Array of Structures, Individual data members as structures, Passing and returning structures from functions, Structure with union as members, Union with structures as members.	S.Mahato	

	1.6 .Pointers in C	Pointers to simple variables), Pointers to Pointers, Pointers to structures, Problems with Pointers, Passing pointers as function arguments, Returning a pointer from a function, using arrays as pointers, Passing arrays to functions. Pointers vs. References, Declaring and initializing references, Using references as function arguments and function return values	T.K.Ghosh	
	1.7 . Memory Allocation in C	Differentiating between static and dynamic memory allocation, use of malloc , calloc and free functions, storage of variables in static and dynamic memory allocation	T.K.Ghosh	
	1.8 . File I/O, Preprocessor Directives	Opening and closing a file, Reading and writing Text Files, Using put(), get(), read() and write() functions, Random access in files, Understanding the Preprocessor Directives, Macros	S.Mahato	
SH /CSC/ 102/C-2	Computer System Organization and Architecture			
	2.1 . Introduction	Logic gates, Boolean algebra, combinational circuits, circuit simplification, flip-flops and sequential circuits, decoders, multiplexers, registers, counters and memory units.	A.Kar	September-2022 to January-2023
	2.2 Data Representation and Basic Computer Arithmetic	Number systems, complements, fixed and floating point representation, character representation, addition, subtraction, magnitude comparison, multiplication and division algorithms for integers	T.Dey	
	2.3 . Basic Computer Organization and Design	Computer registers, bus system, instruction set, timing and control, instruction cycle, memory reference, input -output and interrupt, Interconnection Structures, Bus Interconnection design of basic computer.	T.Dey	
	2.4 . Central Processing Unit	Register organization, arithmetic and logical micro-operations, stack organization, micro programmed control. Instruction formats, addressing modes, instruction codes, machine language, assembly language, input output programming, RISC, CISC architectures, pipelining and parallel architecture.	A.Kar	
	2.5 . Memory Organization	Cache memory , Associative memory, mapping.	A.Kar	
	2.6 Input-Output Organization	Input / Output: External Devices, I/O Modules, Programmed I/O, Interrupt-Driven I/O, Direct Memory Access, I/O Channels.	A.Kar	
SEMESTER-2				

Object Oriented Programming			
1. Object-Oriented Programming Overview	Principles of Object-Oriented Programming, Defining & Using Classes, Controlling Access to Class Members, Class Constructors, Function/Method Overloading, Class Variables & Methods, Objects as parameters, final classes, Object class, Garbage Collection.		
2. Using Classes in C++	Principles of Object-Oriented Programming, Defining & Using Classes, Class Constructors, Constructor Overloading, Function overloading in classes, Class Variables & Functions, Objects as parameters, specifying the Protected and Private Access, Copy Constructors, Overview of Template classes and their use.	T.Dey	February 2023 to June 2023
3. Overview of Function Overloading and Operator Overloading	Need of Overloading functions and operators, Overloading functions by number and type of arguments, looking at an operator as a function call, Overloading Operators (including assignment operators, unary operators)	T.Dey	
4. Inheritance, Polymorphism and Exception Handling	Introduction to Inheritance (Multi-Level Inheritance, Multiple Inheritance), Polymorphism (Virtual Functions, Pure Virtual Functions)	A.Kar	
5. Introduction to Java	Java Architecture and Features, Understanding the semantic and syntax differences between C++ and Java, Compiling and Executing a Java Program, Variables, Constants, Keywords Data Types, Operators (Arithmetic, Logical and Bitwise) and Expressions, Comments, Doing Basic Program Output, Decision Making Constructs (conditional statements and loops) and Nesting, Java Methods (Defining, Scope, Passing and Returning Arguments, Type Conversion and Type and Checking, Built-in Java Class Methods),	A.Kar	
6. Arrays, Strings and I/O	Creating & Using Arrays (One Dimension and Multi-dimensional), Referencing Arrays Dynamically, Java Strings: The Java String class, Creating & Using String Objects, Manipulating Strings, String Immutability & Equality, Passing Strings To & From Methods, String Buffer Classes. Simple I/O using System.out and the Scanner class, Byte and Character streams, Reading/Writing from console and files.	T. Dey	
7. Inheritance, Interfaces, Packages	Inheritance: (Single Level and Multilevel, Method Overriding, Dynamic, Abstract Classes), Interfaces and Packages, Extending interfaces and packages, Package and Class Visibility, Using Standard Java Packages (util, lang, io, net), Wrapper Classes.		
8. Exception Handling, Threading	exceptions; Multi-threading: The Thread class and Runnable interface, creating single and multiple threads, Thread prioritization, synchronization and communication, suspending/resuming threads.		

	9. Applets and Event Handling	Java Applets: Introduction to Applets, Writing Java Applets, Incorporating Images & Sounds. Event Handling Mechanisms, Listener Interfaces, Adapter and Inner Classes.	T. Dey	
SH /CSC/ 102/C-4	Discrete Mathematics			February 2023 to June 2023
	4.1 . Introduction	Finite and infinite sets, uncountably infinite sets, functions, relations, Properties of Binary Relations, Closure, Partial Ordering Relations; counting - Pigeonhole Principle, Permutation and Combination; Mathematical Induction, Principle of Inclusion and Exclusion.	T.K.Ghosh	
	4.2 . Growth of Functions:	Asymptotic Notations, Summation formulas and properties, Bounding Summations, approximation by Integrals	T.K.Ghosh	
	4.3 . Recurrences	Recurrence relations, generating functions, Linear recurrence relations with constant coefficients and their solution, Substitution Method, Recurrence Trees, Master Theorem	T.K.Ghosh	
	4.4. . Graph Theory	Basic Terminology, Models and Types, multigraphs and weighted graphs, Graph Representation, Graph Isomorphism, Connectivity, Euler and Hamiltonian Paths and Circuits, Planar Graphs, Graph Coloring, Trees, Basic Terminology and properties of Trees, Introduction to Spanning Trees	S.Mahato	
	4.5 . Propositional Logic	Logical Connectives, Well-formed Formulas, Tautologies, Equivalences, Inference Theory	S.Mahato	
SEMESTER-3				
SH /CSC/ 101/C-5	Data Structures			January 2023
	5.1.Arrays	Single and Multi-dimensional Arrays, Sparse Matrices (Array and Linked Representation)	T.K.Ghosh	
	5.2.Stacks	Implementing single / multiple stack/s in an Array; Prefix, Infix and Postfix expressions, Utility and conversion of these expressions from one to another; Applications of stack; Limitations of Array representation of stack	T.K.Ghosh	
	5.3.Linked Lists	Singly, Doubly and Circular Lists (Array and Linked representation); Normal and Circular representation of Stack in Lists; Self Organizing Lists; Skip Lists	S.Sen	
	5.4.Queues	Array and Linked representation of Queue, De-queue, Priority Queues	S.Sen	

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5.5.Recursion	Developing Recursive Definition of Simple Problems and their implementation; Advantages and Limitations of Recursion; Understanding what goes behind Recursion (Internal Stack Implementation)	S.Sen
5.6.Trees	Introduction to Tree as a data structure; Binary Trees (Insertion, Deletion , Recursive and Iterative Traversals on Binary Search Trees); Threaded Binary Trees (Insertion, Deletion, Traversals); Height-Balanced Trees (Various operations on AVL Trees).	T.K.Ghosh
5.7.Searching and Sorting	Linear Search, Binary Search, Comparison of Linear and Binary Search, Selection Sort, Insertion Sort, Insertion Sort, Shell Sort, Comparison of Sorting Techniques	S.Sen
5.8.Hashing	Introduction to Hashing, Deleting from Hash Table, Efficiency of Rehash Methods, Hash Table Reordering, Resolving collusion by Open Addressing, Coalesced Hashing, Separate Chaining, Dynamic and Extendible Hashing, Choosing a Hash Function, Perfect Hashing Function	S.Sen

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SH /CSC/ 302/ C-6

Operating Systems		
6.1.Introduction	Basic OS functions, resource abstraction, types of operating systems–multiprogramming systems, batch systems, time sharing systems; operating systems for personal computers & workstations, process control & real time systems.	T.K.Ghosh
6.2.Operating System Organization	Processor and user modes, kernels, system calls and system-programs.	A.Kar
6.3.Process Management	System view of the process and resources, process abstraction, process hierarchy, threads, threading issues, thread libraries; Process Scheduling, non-pre-emptive and pre-emptive scheduling algorithms; concurrent and processes, critical section, semaphores, methods for inter- process communication; deadlocks.	A.Kar
6.4.Memory Management	Physical and virtual address space; memory allocation strategies –fixed and variable partitions, paging, segmentation, virtual memory	A.Kar
6.5.File and I/O Management	Directory structure, file operations, file allocation methods, device management.	T.K.Ghosh

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	6.6. Protection and Security	Policy mechanism, Authentication, Internal access Authorization.	T.K.Ghosh	
SH/CSC/303/C-7	Communications and Computer Networks			
	1. Introduction to Computer Networks	Network definition; network topologies; network classifications; network protocol; layered network architecture; overview of OSI reference model; overview of TCP/IP protocol suite.	S.Mahato	August 2022 to January 2023
	2. Data Communication Fundamentals and Techniques	Analog and digital signal; data-rate limits; digital to digital line encoding schemes; pulse code modulation; parallel and serial transmission; digital to analog modulation-; multiplexing techniques- FDM, TDM; transmission media.	S.Mahato	
	3. Networks Switching Techniques and Access mechanisms	Circuit switching; packet switching- connectionless datagram switching, connection-oriented virtual circuit switching; dial-up modems; digital subscriber line; cable TV for data transfer.	S.Mahato	
	4. Data Link Layer Functions and Protocol	Error detection and error correction techniques; data-link control- framing and flow control; error recovery protocols- stop and wait ARQ, go-back-n ARQ; Point to Point Protocol on Internet.	T.Dey	
	5. Multiple Access Protocol and Networks	CSMA/CD protocols; Ethernet LANS; connecting LAN and back-bone networks- repeaters, hubs, switches, bridges, router and gateways;	T.Dey	
	6. Networks Layer Functions and Protocols	Routing; routing algorithms; network layer protocol of Internet- IP protocol, Internet control protocols.	T.Dey	
	7. Transport Layer Functions and Protocols	Transport services- error and flow control, Connection establishment and release- three way handshake;	S.Mahato	
	8. Overview of Application layer protocol	Overview of DNS protocol; overview of WWW & HTTP protocol.	S.Mahato	
Programming in Python				
1. Planning the Computer Program	Concept of problem solving, Problem definition, Program design, Debugging, Types of errors in programming, Documentation.	T.Dey		

SH /CSC/ 305/SEC-I	2. Techniques of Problem Solving	Flow charting, decision table, algorithms, Structured programming concepts, Programming methodologies viz. top-down and bottom-up programming.	T.Dey	August 2022 to January 2023
	3. Overview of Programming	Structure of a Python Program, Elements of Python	T.Dey	
	4. Introduction to Python	Python Interpreter, Using Python as calculator, Python shell, Indentation. Atoms, Identifiers and keywords, Literals, Strings, Operators(Arithmetic operator, Relational operator, Logical or Boolean operator, Assignment, Operator, Ternary operator, Bit wise operator, Increment/Decrement Operator	T.Dey	
	5. Creating Python Programs	Input and Output Statements, Control statements(Branching, Looping, Conditional Statement, Exit function, Difference between break, continue and pass.), Defining Functions, default arguments.	T.Dey	
SEMESTER-4				
SH/CSC/401/C-8	Algorithm Analysis and Design			February 2023 to June 2023
	1. Introduction	Basic Design and Analysis techniques of Algorithms, Correctness of Algorithm. Iterative techniques, Divide and Conquer, Dynamic Programming, Greedy Algorithms.	S.Mahato	
	2. Sorting and Searching Techniques	Elementary sorting techniques–Bubble Sort, Insertion Sort, Merge Sort, Advanced Sorting techniques - Heap Sort, Quick Sort, Sorting in Linear Time - Bucket Sort, Radix Sort and Count Sort, Searching Techniques, Medians & Order Statistics, complexity analysis;	T.K.Ghosh	
	3. Balanced Trees	Decision Trees, Red-Black Trees	T.K.Ghosh	
	4. Advanced Analysis Technique	Amortized analysis	T.K.Ghosh	
	5. Graphs	Graph Algorithms–Breadth First Search, Depth First Search and its Applications, Minimum Spanning Trees.	S.Mahato	
	6. String Processing	String Matching, KMP Technique	S.Mahato	
Software Engineering Concepts				

SH/CSC/402/C-9	9.1.Introduction	The Evolving Role of Software, Software Characteristics, Changing Nature of Software, Software Engineering as a Layered Technology, Software Process Framework, Framework and Umbrella Activities, Process Models, Capability Maturity Model Integration (CMMI).	S.Sen	February 2023 to June 2023
	9.2.Requirement Analysis	Software Requirement Analysis, Initiating Requirement Engineering Process, Requirement Analysis and Modeling Techniques, Flow Oriented Modeling, Need for SRS, Characteristics and Components for SRS	S.Sen	
	9.3.Software Project Management	Estimation in Project Planning Process, Project Scheduling	A.Kar	
	9.4.Risk Management	Software Risks, Risk Identification, Risk Projection and Risk Refinement, RMMM Plan	A.Kar	
	9.5.Quality Management	Quality Concepts, Software Quality Assurance, Software Review, Metrics for Process and Project	S.Sen	
	9.6.Design Engineering	Design Concepts, Architectural Design Elements, Software Architecture, Design at the Architectural Level and Component Level, Mapping of Data Flow into Software Architecture, Modeling Component Level Design.	S.Sen	
	9.7.Testing Strategies & Tactics	Software Testing Fundamentals, Strategic Approach to Software Testing, Test Strategies for Conventional Software, Validation Testing, System testing, Black-Box Testing, White-Box Testing and their type, Basis Path Testing.	A.Kar	
SC/403/C-10	Database Management Systems			13 to June 2023
	10.1.Introduction	Characteristics of Database Approach, Data Models, Database System Architecture and Data Independence	T.K.Ghosh	
	10.2.Entity Relationship (ER) Modeling	Entity Types, Relations, Constraints	T.K.Ghosh	
	10.3.Relational Data Model	Relational Model Concepts, Relational Constraints, Relational Algebra, SQL Queries	T.K.Ghosh	

SH/C	10.4.Database Design	Mapping ER/EER model to relational database, functional dependencies, Lossless decomposition, Normal forms(upto BCNF).	T.K.Ghosh	February 202
	10.5.Transaction Processing	ACID properties, concurrency control	A.Kar	
	10.6.File Structure and Indexing	Operations on File, Unordered and Ordered Records, Overview of File Organizations, Indexing Structures for Files, B and B+ Trees	A.Kar	
SH /CSC/ 405/SEC-2	HTML Programming			February 2023 to June 2023
	UNIT I	Introduction	T.Dey	
	UNIT II: Basics	Head, Body, Colors, Attributes Lists, Ordered, Unordered	T.Dey	
	UNIT III: Links	Introduction Relative and Absolute Links Link Attributes Using the ID Attribute to Link within a Document	T.Dey	
	UNIT IV: Images	Putting an Image on a Page Using Images as Links Putting an Image in the Background	T.Dey	
	UNIT V: Tables	Creating a Table Table Headers Captions Spanning Multiple Columns Styling Table	T.Dey	
	UNIT VI: Forms	Basic Input and Attributes Other Kind of Inputs Styling Forms with CSS Where to Go from Here	T.Dey	
SEMESTER-5				
501/C-11	Web Technologies			January 2023
	11.1. Java	Use of Objects, Array and ArrayList class.	T.Dey	
	11.2.JavaScript	Data types, operators, functions, control structures, events and event handling.	T.Dey	
	11.3.JDBC	JDBC Fundamentals, Establishing Connectivity and working with connection interface, Working with statements, Creating and Executing SQL Statements, Working with Result Set Objects.	T.Dey	

SH/CSC/1	11.4.JSP	Introduction to Java Server Pages, HTTP and Servlet Basics, The Problem with Servlets, The Anatomy of a JSP Page, JSP Processing, JSP Application Design with MVC, Setting Up the JSP Environment, Implicit JSP Objects, Conditional Processing, Displaying Values, Using an expression to Set an Attribute, Declaring Variables and Methods, Error Handling and Debugging, Sharing Data Between JSP Pages, Requests, and Users, Database Access.	S.Sen	August 2022 to Ja
	11.5.Java Beans	Java Beans Fundamentals, JAR files, Introspection, Developing a simple Bean, Connecting to DB	S.Sen	
SH/CSC/502/C-12	Computating Theory			August 2022 to January 2023
	12.1 . Languages:	Alphabets, String, Language, Basic Operations on Language, Concatenation, KleeneStar	T.K.Ghosh	
	12.2 . Finite Automata and Regular Languages	Regular Expressions, Transition Graphs, Deterministic and non-deterministic finite automata, NFA to DFA Conversion, Regular languages and their relationship with finite automata, Pumping lemma and closure properties of regular languages.	T.K.Ghosh	
	12.3 . Context free languages	Context free grammars, parse trees, ambiguities in grammars and languages, Pushdown automata (Deterministic and Non-deterministic), Pumping Lemma, Properties of context free languages, normal forms.	T.K.Ghosh	
	12.4. Turing Machines and Models of Computations	RAM, Turing Machine as a model of computation, Universal Turing Machine, Language acceptability, decidability, halting problem, Recursively enumerable and recursive languages, un-solvability problems.	T.K.Ghosh	
H/CSC/503/DSE-1	Numerical Methods			2022 to January 2023
	DSE-1.1. Representation of a Number & Errors	Floating point representation and computer arithmetic, Significant digits. Errors: Round-off error, Local truncation error, Global truncation error, Order of a method, Convergence and terminal conditions, Efficient computations.	T.K.Ghosh	
	DSE-1.2. Root finding Methods.	Bisection method, Secant method, Regula-Falsi method Newton-Raphson method, Newton's method for solving nonlinear systems Gauss elimination method (with row pivoting) and Gauss-Jordan method, Gauss Thomas method for tridiagonal systems.	T.K.Ghosh	
	DSE-1.3. Iterative Methods.	Jacobi and Gauss-Seidel iterative methods	S.Mahato	
	DSE-1.4. Interpolation	Lagrange's form and Newton's form Finite difference operators, Gregory Newton forward and backward differences Interpolation Piecewise polynomial interpolation: Linear interpolation, Cubic spline interpolation (only	S.Mahato	

SI		method)		August 2022
	DSE-1.5 Numerical Differentiation and Integration	Numerical differentiation: First derivatives and second order derivatives, Richardson extrapolation. Numerical integration: Trapezoid rule, Simpson's rule (only method), Newton-Cotes open formulas	S.Mahato	
	DSE-1.6. Extrapolation methods:	Romberg integration, Gaussian quadrature, Ordinary differential equation: Euler's method, Modified Euler's methods: Heun method and Mid- point method, Runge-Kutta second methods: Heun method without iteration, Mid-point method and Ralston's method. Classical 4th order Runge-Kutta method, Finite difference method for linear ODE	T.K.Ghosh	
SH/CSC/504/DSE-2	Microprocessor			
	DSE-2.1. Microprocessor architecture	Internal architecture, system bus architecture, memory and I/O interfaces	A.Kar	August 2022 to January 2023
	DSE-2.2. Microprocessor programming	Register Organization, instruction formats, assembly language programming	A.Kar	
	DSE-2.3. Interfacing	Memory address decoding, cache memory and cache controllers, I/O interface, keyboard, display, timer, interrupt controller, DMA controller, video controllers, communication interfaces.	T.K.Ghosh	
SEMESTER-6				
SH/CSC/601/C-13	Artificial Intelligence			
	13.1. Introduction	Introduction to Artificial Intelligence, Background and Applications, Turing Test and Rational Agent approaches to AI, Introduction to Intelligent Agents, their structure, behavior and environment.	A.Kar	February 2023 to June 2023
	13.2. Problem Solving and Searching Techniques	Problem Characteristics, Production Systems, Control Strategies, Breadth First Search, Depth First Search, Hill climbing and its Variations, Heuristics Search Techniques: Best First Search, A* algorithm, Constraint Satisfaction Problem, Means-End Analysis, Introduction to Game Playing, Min-Max and Alpha-Beta pruning algorithms.	A.Kar	
	13.3. Knowledge Representation	Introduction to First Order Predicate Logic, Resolution Principle, Unification, Semantic Nets, Conceptual Dependencies, Frames, and Scripts, Production Rules, Conceptual Graphs. Programming in Logic (PROLOG)	A.Kar	
	13.4. Dealing with Uncertainty and Inconsistencies	Truth Maintenance System, Default Reasoning, Probabilistic Reasoning, Bayesian Probabilistic Inference, Possible World Representations.	S.Sen	

	13.5. Understanding Natural Languages	Parsing Techniques, Context-Free and Transformational Grammars, Recursive and Augmented Transition Nets.	S.Sen	
SH/CSC/602/C-14	Computer Graphics			
	14.1. Introduction	Basic elements of Computer graphics, Applications of Computer Graphics.	S.Mahato	February 2023 to June 2023
	14.2. Graphics Hardware	Architecture of Raster and Random scan display devices, input/output devices.	S.Mahato	
	14.3. Fundamental Techniques in Graphics	Raster scan line, circle and ellipse drawing, thick primitives, Polygon filling, line and polygon clipping algorithms, 2D and 3D Geometric Transformations, 2D and 3D Viewing Transformations (Projections- Parallel and Perspective), Vanishing points.	S.Mahato	
	14.4. Geometric Modeling	Representing curves & Surfaces.	T.Dey	
	14.5. Visible Surface determination	Hidden surface elimination.	T.Dey	
	14.6. Surface rendering	Illumination and shading models. Basic color models and Computer Animation.	T.Dey	
SH/CSC/603/DSE-3	Cryptographic Applications			
	DSE-3.1. Introduction	Security, Attacks, Computer Criminals, Security Services, Security Mechanisms.	T.K.Ghosh	February 2023 to June 2023
	DSE-3.2. Cryptography	Substitution ciphers, Transpositions Cipher, Confusion, diffusion, Symmetric, Asymmetric Encryption. DES Modes of DES, Uses of Encryption, Hash function, key exchange, Digital Signatures, Digital Certificates.	T.K.Ghosh	
	DSE-3.3. Program Security	Secure programs, Non malicious Program errors, Malicious codes virus, Trap doors, Salami attacks, Covert channels, Control against program	T.K.Ghosh	
	DSE-3.4. Threats	Protection in OS: Memory and Address Protection, Access control, File Protection, User Authentication.	S.Sen	
	DSE-3.5. Database Security	Requirements, Reliability, Integrity, Sensitive data, Inference, Multilevel Security.	S.Sen	
	DSE-3.6. Security in Networks	Threats in Networks, Security Controls, firewalls, Intrusion detection systems, Secure e-mails	T.K.Ghosh	
	DSE-3.7. Administrating Security	Security Planning, Risk Analysis, Organisational Security Policy, Physical Security. Ethical issues in Security: Protecting Programs and data. Information and law.	T.K.Ghosh	

SH/CSC/604/ DSE-4	PROJECT WORK			
		Any one Project from entire syllabus	All Teachers of the Department	February 2023 to June 2023