Programme Code: 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Paper 1 – C Programming**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Employability
2025-2028	5	75	4	

Course Objectives

1. To impart adequate knowledge on the need of programming languages and problem solvingtechniques.
2. To develop an in-depth understanding of functional and logical concepts of C Programming.
3. To provide exposure to problem-solving through C programming.
4. To familiarize the basic syntax and semantics of C Language

Course Outcomes (CO)

K1 to K5	CO1	Recollect various programming constructs and to develop C programs.
	CO2	Understand the fundamentals of C programming.
	CO3	Choose the right data representation formats based on the requirements of the problem.
	CO4	Analyze different Operations on arrays, functions, and pointers,
	CO5	Evaluate the usage of structures, unions and files.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	S	S	H	H
CO2	S	S	H	S	S
CO3	S	M	H	H	H
CO4	S	S	S	S	M
CO5	S	M	S	S	S

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Practical 1 – C Programming Lab**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development / Employability
2025-2028	5	75	2	

Course Objectives

1. To introduce the field of programming using C language.
2. To enhance the analyzing and problem solving skills and use the same for writing programs in C.
3. Encourage students to approach programming challenges methodically, from problem analysis and algorithm design to coding, debugging, and testing.

Course Outcomes (CO)

K3 to K5	CO1	Develop logical and programming skills using the fundamentals and basics of C Language.
	CO2	Apply effective usage of arrays and strings.
	CO3	Implement functions to arranging set of values using different sorting techniques.
	CO4	Apply pointers to perform memory management.
	CO5	Implement files and command line arguments.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	S	S	S	S
CO2	S	S	S	S	S
CO3	S	H	H	H	H
CO4	S	S	M	H	H
CO5	S	H	S	H	H

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper : **Core Paper 2 – Python with Data Structures**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development
2025-2028	5	75	5	

Course Objectives

1. To understand the basic concepts of Python Programming.
2. To understand complex data types and tuple.
3. To impart the basic concepts of data structures and algorithms.

Course Outcomes (CO)

K1 to K5	CO1	Remember the basic of python data types and variables.
	CO2	Understand the concepts of python control statements and operators.
	CO3	Illustrate the process of structuring the data using lists, tuples and dictionaries.
	CO4	Analyze the efficiency of algorithms and its Paradigms.
	CO5	Evaluate the usage of Sorting ,Searching and Tree Techniques.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	H	S	M	H
CO2	S	H	S	S	S
CO3	S	S	H	M	M
CO4	S	M	H	H	M
CO5	S	S	M	S	S

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Practical 2 – Python with Data Structures Lab**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development / Employability
2025-2028	5	75	2	

Course Objectives

1. To gain knowledge about the fundamentals of python programming.
2. To implement the concepts of Data Structures.
3. To Work with lists, tuples, stacks, queues, and linked lists using Python

Course Outcomes (CO)

K3 to K5	CO1	Implement the concepts of python fundamentals.
	CO2	Apply various python operations in list and tuples.
	CO3	Analyze python dictionaries.
	CO4	Apply Stack and Queue operations.
	CO5	Evaluate the implementation of Data structure sorting and searching operations.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	S	S	S	S
CO2	S	S	M	S	S
CO3	S	H	H	H	H
CO4	S	S	S	H	H
CO5	S	H	S	S	S

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Paper 3 – OOPs with Java Programming**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development/ Entrepreneurship
2025-2028	3	45	5	

Course Objectives

1. To develop a greater understanding of the issues involved in programming language designand object-oriented paradigms and its implementation.
2. To explore the Java Applications and to identify the variations between Standalone javaapplications and Web based applications.
3. To provide the advanced concepts in java programming like Package, Multi Thread, Applet,interface and AWT Components.

Course Outcomes (CO)

K1 to K5	CO1	Remember the characteristics of Procedure and Object-Oriented Programming Languages.
	CO2	Understand the fundamentals of C++ programming structure, function overloading and constructors.
	CO3	Apply the concepts Package, Thread and Applet.
	CO4	Customize AWT components and event handling.
	CO5	Evaluate the usage of Swing concepts.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	S	S	S	H
CO2	S	H	H	M	S
CO3	S	M	S	M	S
CO4	S	M	M	H	M
CO5	S	S	S	H	S

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Practical 3 – OOPs with Java Programming Lab**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development
2025-2028	5	75	3	

Course Objectives

1. To develop the programs for solving the problems using function overloading, constructors,classes and object.
2. To understand the usage of Classes, Package, Interface, Multi Threading, Exception, Appletand AWT.
3. To get the overall idea about java programming structure.

Course Outcomes (CO)

K3 to K5	CO1	Implement the concepts of object-oriented programming.
	CO2	Review the java package, interface, applet and AWT Components.
	CO3	Work out all the java unique statements through the programs.
	CO4	Explore the usage of event handling mechanisms.
	CO5	Implement the concepts Java swing and Beans.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	H	H	S	H
CO2	S	S	H	M	H
CO3	S	H	H	S	H
CO4	S	S	S	S	H
CO5	S	S	S	S	S

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Allied Paper 3 - Organizational Behavior and Communication Skills**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Employability
2025-2028	6	90	5	

Course Objectives

1. To specify the intellectual and behavioral competencies that graduates should process.
2. To enable the students to insight in to the management techniques and communication skillsprevailing in the corporate world.
3. To be aimed at preparing young graduates to take up challenging careers in business andindustry and enables them to pursue higher studies thereafter.

Course Outcomes (CO)

K1 to K5	CO1	Preparing and delivering effective role of business communication.
	CO2	Identifying and analyzing product life cycle and developing new products and product characteristics.
	CO3	Applying knowledge of pricing kinds of pricing and factors affecting changes in price.
	CO4	Applying motivational theories to improve the leadership qualities.
	CO5	Analyzing the business communication skills.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	S	S	H	H
CO2	S	S	M	S	S
CO3	S	H	H	H	H
CO4	S	S	S	S	M
CO5	S	H	M	S	M

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Paper 4 – Internet of Things**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development
2025-2028	3	45	4	

Course Objectives

1. Identify the different IoT components suitable for the applications.
2. Create a portable IoT system using Arduino/Raspberry Pi that integrates cloud computing and analytics.
3. Implement IoT applications for real-time environment.

Course Outcomes (CO)

K1 to K5	CO1	Gain a solid foundation in the principles of IoT, including its architecture, components, and communication protocols.
	CO2	Learn to design and implement IoT systems using platforms like Arduino and Raspberry Pi.
	CO3	Understand how to connect IoT devices to cloud platforms for data storage, management, and analysis.
	CO4	Apply knowledge to create end-to-end IoT solutions, from device setup to cloud integration and analytics.
	CO5	Develop practical IoT applications in areas like smart homes, healthcare, agriculture, and industry.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	H	S	M	M	H
CO2	M	S	S	S	S
CO3	S	H	H	M	M
CO4	M	H	H	H	M
CO5	S	S	S	H	H

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Allied Paper 4 – Digital Logic and Circuit Designs**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development
2025-2028	6	90	5	

Course Objectives

1. The students should get the Knowledge about the Number System, Number representationand Number Conversion.
2. To learn the concept of Digital Circuits, Circuit Constructions and Simplifications ofBoolean functions.
3. To know the concept of Arithmetic Circuits, Combination Circuits, Counters and Registers.

Course Outcomes (CO)

K1 to K5	CO1	Retain the information about the Computer Number systems and conversions in Digital Computer System.
	CO2	Understand the concepts of Boolean expressions, Logic Gates and to apply the methods to simplifying the Boolean expression.
	CO3	Apply the knowledge to perform arithmetical operations using various logical circuits and to design various Synchronous and Asynchronous.
	CO4	Analyse the function of Counters and Registers.
	CO5	Evaluate the working nature of various Flip-Flops and Circuits.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	H	S	M	H
CO2	S	H	S	S	S
CO3	S	S	H	M	M
CO4	S	M	H	H	M
CO5	S	S	M	S	S

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Paper 5 – Web Technologies**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development
2025-2028	6	90	5	

Course Objectives

1. To familiarize students with front-end development tools, including HTML**,** CSS**,** and JavaScript, for building responsive and interactive web pages.
2. To explore popular JavaScript frameworks for building modern web applications.
3. To help students understand DOM manipulation to create engaging user experiences.
4. To enable students to apply their knowledge by working on practical projects that require building and deploying web applications.

Course Outcomes (CO)

K1 to K5	CO1	Ability to design and develop responsive and interactive web pages using HTML**,** CSS3 and JavaScript**.**
	CO2	Understand the client side and server-side scripting.
	CO3	Ability to manipulate the DOM, handle events, and build modern, single-page applications using popular JavaScript libraries and frameworks.
	CO4	Review the concepts of MySQL and PHP Statements.
	CO5	Evaluate the usage of various XML Technologies.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	S	H	M	S
CO2	H	H	H	M	H
CO3	H	M	H	S	M
CO4	S	S	S	H	H
CO5	S	S	S	S	H

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Paper 6 – Computer Networks**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development
2025-2028	5	75	5	

Course Objectives

1. To provide the concepts and fundamentals of different layers used in computer networking.
2. To understand the technology, functionality and usage of the different computer network layers.
3. To understand a basic knowledge of the use of cryptography and different techniques keysused for Encryption and Decryption.

Course Outcomes (CO)

K1 to K5	CO1	Recollect OSI reference Model and knowledge of using different Layers in the networking model.
	CO2	Understand about the use of cryptography.
	CO3	Apply the techniques used in the devices like switches, repeaters, hubs. Bridges and gateways.
	CO4	Analyse different routing algorithms.
	CO5	Evaluate the usage of Symmetric-Key Signatures and Public – Key signatures.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	M	H	S	H
CO2	S	S	M	S	H
CO3	S	S	H	H	M
CO4	S	H	S	M	M
CO5	S	H	S	M	M

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Paper 7 – Software Engineering and Testing**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Employability
2025-2028	6	90	5	

Course Objectives

1. To remember the methods and technologies involved in building complex software.
2. To understand the various steps involved in developing software includingrequirement elicitation, System design, object design and testing.
3. To implement the Software testing techniques in the projects.

Course Outcomes (CO)

K1 to K5	CO1	Remember the steps involved in developing the software.
	CO2	Understand the roles and responsibilities of various persons involved in development cycle.
	CO3	Implement the methods and techniques to develop a small project.
	CO4	Analyze the problems that may occur in each and every phase of software development cycle.
	CO5	Evaluate the usage of Integration and Acceptance testing.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	M	H	S	H
CO2	S	H	M	S	H
CO3	S	S	H	H	M
CO4	S	H	S	S	S
CO5	S	H	H	M	H

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Practical 5 – Web Technologies Lab**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development/ Entrepreneurship
2025-2028	6	90	2	

Course Objectives

1. Learn to structure Web pages using HTML,CSS ,Java Script
2. Understand the technique for creating dynamic and interactive web applications.
3. To be able to design their own website.

Course Outcomes (CO)

K3 to K5	CO1	Create well-structured static web pages using HTML and CSS.
	CO2	Build interactive and dynamic web pages using client-side scripting languages like JavaScript.
	CO3	Develop Server- side and Client -side applications
	CO4	Connect web applications to databases and perform basic data operations
	CO5	Understand and work with XML documents and schemas

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	H	S	H	S
CO2	S	M	M	H	H
CO3	S	H	S	H	H
CO4	S	S	S	H	H
CO5	S	S	H	H	H

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Paper 8 – Operating System**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Employability
2025-2028	5	75	5	

Course Objectives

1. To learn the fundamentals of Operating Systems.
2. To understand the structure and organization of the file system, process management, CPU Scheduling and Memory Management.
3. To provide the design principles of Android operating system.

Course Outcomes (CO)

K1 to K5	CO1	Recollect the basic functionality of the salient features of operating systems like DOS history, Processing states, Interrupts and Switching concepts.
	CO2	Understand the concepts of storage management, paging and page replacement concepts.
	CO3	Apply various optimization techniques in operating systems.
	CO4	Analyse the implementation and avoidance of Deadlock in multiprogramming systems.
	CO5	Evaluate the functionalities of Android operating system.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	H	S	M	H
CO2	S	H	S	S	S
CO3	S	S	H	M	M
CO4	S	M	H	H	M
CO5	S	H	S	S	S

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Paper 9 – Distributed Computing and Cloud Computing**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development
2025-2028	5	75	5	

Course Objectives

1. Understanding Distributed Systems and cloud computing Systems.
2. Gain knowledge of algorithms used in distributed systems
3. Learn about Network protocols and Technologies relevant to distributed and cloud systems.

Course Outcomes (CO)

K1 to K5	CO1	Ability to Design and Implement Distributed Systems.
	CO2	Ability to Understand Cloud Technologies.
	CO3	Ability to Apply Distributed Algorithms.
	CO4	Ability to Analyze and Optimize Performance.
	CO5	Ability to Solve Real-World Problems in distributed and cloud computing.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	H	S	M	H
CO2	S	S	H	S	S
CO3	S	S	H	M	M
CO4	S	M	H	H	M
CO5	S	H	S	S	S

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Practical 6 – Operating System with Networking Lab**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development
2025-2028	5	75	2	

Course Objectives

1. Learn how to implement system calls and manage processes.
2. Gain practical experience with process scheduling algorithms and memory allocation techniques.
3. Develop skills in networking concepts with TCP/UDP

Course Outcomes (CO)

K3 to K5	CO1	Ability to implement and manage processes, threads and memory
	CO2	Ability to understand and implement system calls.
	CO3	Ability to understand and implement Network protocol.
	CO4	Ability to apply scheduling and page replacement algorithms.
	CO5	Ability to apply Operating and Networking knowledge to solve Real -world problems.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	H	S	H	S
CO2	S	M	M	H	H
CO3	S	H	S	H	H
CO4	S	S	S	H	H
CO5	S	S	H	H	H

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Practical 7 – Case Study Lab**				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development
2025-2028	4	60	2	

Course Objectives

1. To gain knowledge about the fundamentals of programming languages.
2. To understand the concepts of various languages.
3. To gain and implement knowledge on real time applications.

Course Outcomes (CO)

K3 to K5	CO1	Develop skill in problem solving and Decision making.
	CO2	Recollect various programming structures and its methods
	CO3	Learn to think critically and solve the problems in real world situations.
	CO4	Able to differentiate ambiguities among programming languages.
	CO5	Learn to apply analytical and testing tools for real time applications.

MAPPING

PSO / CO	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**
CO1	S	H	S	H	S
CO2	S	M	M	H	H
CO3	S	H	S	H	H
CO4	S	S	S	H	H
CO5	S	S	H	H	H

S – Strong **H** – High **M** – Medium **L** – Low

Programme Code : 11		**B. Sc Computer Technology**		
Title of the Paper: **Core Project – Project and Viva - Voce *****				
Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development
2025-2028	4	60	5	

Course Objectives

On successful completion of all the above courses

1. To be able to get the knowledge about selecting the task based on their course skills.
2. To get the knowledge about analytical skill for solving the selected task.
3. To get confident for implementing the task.

Course Outcomes (CO)

K3 to K5	CO1	Apply the programming skills for solving the project.
	CO2	Analyze the task and to collect the necessary information about the software.
	CO3	Evaluate the task based on the software.
	CO4	Test the project for its successful implementation
	CO5	Implement and maintain the developed system.

MAPPING

PSO / CO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	H	S	H	S
CO2	S	M	M	H	H
CO3	S	H	S	H	H
CO4	S	S	S	H	H
CO5	S	S	H	H	H

S – Strong **H** – High **M** – Medium **L** – Low