Sub. Code**: 24UCT101**

Programme Code : 11	B. Sc Computer Technology

Title of the Paper: **Core Paper 1 – C Programming**				

Batch	**Hours / Week**	**Total Hours**	**Credits**	Employability
2024 - 2025	5	75	4	

Course Objectives

1. To impart adequate knowledge on the need of programming languages and problem solving techniques.

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)

	CO1	Recollect various programming constructs and to develop C programs.
K1 to K5	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.

Sub. Code**: 24UCT101**

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

Sub. Code**: 24UCT1CL**

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
2024 - 2025	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.

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

Sub. Code: **24UCT202**

Programme Code : 11	B. Sc Computer Technology
Title of the Paper : **Core Paper 2 – Data Structures using C++**	

Batch	Hours / Week	Total Hours	Credits	Skill Development
2024 - 2025	5	75	5	

Course Objectives

1. To develop a greater understanding of the issues involved in programming language design and object oriented paradigms and its implementation.

2. To impart adequate knowledge on the need of object oriented programming languages.

3. To impart the basic concepts of data structures and algorithms.

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	Examine different C++ features such as composition of objects, Operator overloading and inheritance.
	CO4	Analyze the efficiency of algorithms and its Paradigms.
	CO5	Evaluate the usage of Sorting ,Searching and Tree Techniques.

Sub. Code: 24UCT202

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

Sub. Code : **24UCT2CM**

Programme Code : 11	B. Sc Computer Technology

Title of the Paper: **Core Practical 2 – Data Structures with C++ Lab**

Batch	Hours / Week	Total Hours	Credits	Employability
2024 - 2025	5	75	2	

Course Objectives

1. To develop the programs for solving the problems using function overloading, constructors, classes and object.

2. To apply the object oriented programming concepts to solve the problems.

Course Outcomes (CO)

K3 to K5	CO1	Implement the concepts of object oriented programming.
	CO2	Apply string functions to perform operator overloading.
	CO3	Analyze virtual functions and inheritance.
	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

		Sub. Code: **24UCT303**

Programme Code : 11	**B. Sc Computer Technology**

| Title of the Paper: **Core Paper 3 – Java Programming** ||||

Batch	**Hours / Week**	**Total Hours**	**Credits**	Skill Development/ Entrepreneurship
2024 - 2025	5	75	5	

Course Objectives

1. To understand the difference between C, C++ and Java programs.

2. To explore the Java Applications and to identify the variations between Standalone java applications 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)

	CO1	Remember the basic concepts of OOPs, Data Types, Control Statements and Tokens.
	CO2	Understand the concepts interface, package and multithreading.
K1 to K5	CO3	Apply the concepts Package, Thread and Applet.
	CO4	Customize AWT components and event handling.
	CO5	Evaluate the usage of Swing and Java Beans.

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

Sub. Code : **24UCT3CN**

Programme Code : 11	B. Sc Computer Technology			
Title of the Paper: **Core Practical 3 – Java Programming Lab**				
Batch	Hours / Week	Total Hours	Credits	Skill Development
2024 - 2025	5	75	3	

Course Objectives

1. To explore the knowledge in stand Alone java applications and web based Applications.

2. To understand the usage of Classes, Package, Interface, Multi Threading, Exception, Applet and AWT.

3. To get the overall idea about java programming structure.

Course Outcomes (CO)

K3 to K5	CO1	Practice the concepts of OOPs, java control statements, data types and Tokens.
	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
2024 - 2025	4	60	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 skills prevailing in the corporate world.

3. To be aimed at preparing young graduates to take up challenging careers in business and industry 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

Sub. Code: **24UCT404**

Programme Code : 11	**B. Sc Computer Technology**
Title of the Paper: **Core Paper 4 – .NET Framework**	

Batch	Hours / Week	Total Hours	Credits	Skill Development
2024 - 2025	4	60	5	

Course Objectives

1. To design and develop the distributed event driven programming in both VB and .Net framework

2. To apply CLR, .NET framework classes and ADO.Net.

3. To analyze the Properties, Events and Methods in .Net Environment.

Course Outcomes (CO)

K1 to K5	CO1	Remember the basic Visual basic concepts and advanced features ofVB.Net.
	CO2	Understand the concepts of .Net framework Technology and summarize the advantages and disadvantages of .Net framework.
	CO3	Apply the web applications using VB.Net.
	CO4	Analyze the distributed event driven programming using .Net framework.
	CO5	Assess the database connectivity in windows and web applications.

MAPPING

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

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

	Sub. Code : **24UCT4CO**
Programme Code : 11	**B. Sc Computer Technology**

Title of the Paper: **Core Practical 4 – .Net Framework Lab**

Batch	**Hours / Week**	**Total Hours**	**Credits**	Employability
2024 - 2025	6	90	3	

Course Objectives

1. To design and develop the applications using ADO.Net and session tracking.
2. To make the students to develop the database projects with a back end concept.
3. To construct .NET applications and to maintain the database.
4. To familiarize the students in crystal report creation.

Course Outcomes (CO)

K3 to K5	CO1	Apply the decision and control structures in .NET and apply the concepts of queries and creation of console applications.
	CO2	Analyze the concept of windows application and project creation and Oracle functions.
	CO3	Construct web based applications using ASP.NET.
	CO4	Execute the console, window application and crystal reports.
	CO5	Apply the connectivity to retrieve the data from database.

MAPPING

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

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

Sub. Code: **24UCT4A4**

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
2024 - 2025	4	60	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 – PHP**				

Batch 2024 - 2025	**Hours / Week** 6	**Total Hours** 90	**Credits** 5	Skill Development

Course Objectives

1. To understand the basic concept of website requirements and to realize the basic requirements of PHP.

2. To learn the concepts of PHP and Data base through various PHP and SQL Statements.

3. To get the overall idea about PHP and SQL and able to get the knowledge about Website development.

Course Outcomes (CO)

K1 to K5	CO1	Remember the basic web development requirements and PHP concepts.
	CO2	Understand the PHP program flow, arrays, string and functions.
	CO3	Apply classes, Cookies, Sessions, OOPs and File concepts.
	CO4	Review the concepts of SQLite and PHP Statements.
	CO5	Evaluate the usage of various XML Technologies and Databases

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

Sub. Code: **24UCT506**

Programme Code : 11	B. Sc Computer Technology

| Title of the Paper: **Core Paper 6 – Computer Networks** ||||

Batch	Hours / Week	Total Hours	Credits	Skill Development
2024 - 2025	5	75	5	

Course Objectives

1. To provide the concepts and fundamentals of different layers used in computer networking.

2. 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

Sub. Code: **24UCT507**

Programme Code : 11	B. Sc Computer Technology
Title of the Paper: **Core Paper 7 – Operating Systems**	

Batch	Hours / Week	Total Hours	Credits	Employability
2024 - 2025	6	90	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.

Sub. Code: **24UCT507**

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

Sub. Code : **24UCT5CP**

Programme Code : 11	B. Sc Computer Technology

Title of the Paper: **Core Practical 5 – PHP Programming Lab**

Batch	Hours / Week	Total Hours	Credits	Skill Development
2024 - 2025	6	90	2	

Course Objectives

1. To be able to get the knowledge about platform independent language.
2. To get the idea about PHP and backend connectivity concepts.
3. To be able to design their own website.

Course Outcomes (CO)

K3 to K5	CO1	Execute array functions, file and directory functions, date and time functions in PHP Script.
	CO2	Inspect PHP expressions, Cookies and Sessions.
	CO3	Apply various predefined functions.
	CO4	Develop the programs using Tokenizer.
	CO5	Evaluate the database using PHP's with backend extensions

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 – Software Engineering and Testing**	

Batch	Hours / Week	Total Hours	Credits	Employability
2024 - 2025	5	75	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 including requirement 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	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 – Python Programming**

Batch 2024 - 2025	Hours / Week 5	Total Hours 75	Credits 5	Skill Development

Course Objectives

1. To understand the basic concepts of Python Programming.
2. To understand complex data types and tuple.
3. To understand and implement various python packages and Tkinter

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	Demonstrate the use of built-in functions to navigate the file system
	CO5	Appraise the need for working on GUI.

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

Sub. Code : **24UCT6CQ**

Programme Code : 11	**B. Sc Computer Technology**

Title of the Paper: **Core Practical 6 – Python Programming Lab**

Batch 2024 - 2025	**Hours / Week** 5	**Total Hours** 75	**Credits** 2	Skill Development

Course Objectives

1. To gain knowledge about the fundamentals of python programming.
2. To understand the concepts of string, list, tuple.
3. To implement the concept of exception handling, classes and objects.

Course Outcomes (CO)

K3 to K5	CO1	Implement basic operators and function concepts.
	CO2	Review various string and list methods.
	CO3	Execute exception handling.
	CO4	Develop the programs using tuple and dictionaries.
	CO5	Evaluate the usage of classes and attributes in python programs.

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

Sub. Code : **24UCT6CR**

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
2024 - 2025	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**	Employability/ Skill Development/ Entrepreneurship
2024 - 2025	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

Programme Code : 11		B. Sc Computer Technology		
Title of the Paper: **Elective Paper - Cloud Computing**				
Batch 2024 - 2025	**Hours / Week** 5	**Total Hours** 75	**Credits** 5	Employability/ Entrepreneurship

Course Objectives

1. To understand the basic knowledge about the cloud computing techniques and architecture.

2. To gain knowledge of cloud services and cloud security.

3. To be able to understand Cloud Segment, Cloud Deployment models and key cloud companies.

Course Outcomes (CO)

	CO1	Identify the architecture and infrastructure of cloud computing including SaaS, PaaS, IaaS, public cloud, private cloud, and hybrid cloud.
	CO2	Understand the core issues of cloud computing, security, privacy, and interoperability.
K1 to K5	CO3	Apply the appropriate technologies and approaches for the related issues in Cloud Computing.
	CO4	Analyze the suitable cloud computing solutions and recommendations according to the applications used.
	CO5	Evaluate the usage of security tools in clouds.

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	M	M
CO4	S	H	S	H	M
CO5	S	H	S	H	M

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

Programme Code : 11	B. Sc Computer Technology
Title of the Paper: **Elective Paper – Internet of Things**	

Batch	Hours / Week	Total Hours	Credits	Employability/ Entrepreneurship
2024 - 2025	5	75	5	

Course Objectives

1. To learn the concepts of IoT and its protocols.

2. To learn how to analysis the data in IoT.

3. To develop IOT infrastructure for popular applications.

Course Outcomes (CO)

K1 to K5	CO1	Analyzing and evaluate the data received through sensors in IoT.
	CO2	Design and develop smart city in IoT.
	CO3	Analyze various communication protocols for IoT.
	CO4	Analyze applications of IoT in real time scenario.
	CO5	Evaluate appropriate protocol for communication between IoT.

MAPPING

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

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

Programme Code : 11	**B. Sc Computer Technology**

Title of the Paper: **Elective Paper – Data Mining and Warehousing**

Batch 2024 - 2025	Hours / Week 5	Total Hours 75	Credits 5	Employability/ Entrepreneurship

Course Objectives

1. To understand the different techniques in Data Mining and to develop the knowledge about Data Warehousing, Data Mining and KDD process.
2. To study the methodology of data warehousing and data mining to derive business rulesfor decision support systems.
3. To describe and demonstrate the data mining algorithms and methods.

Course Outcomes (CO)

K1 to K5	CO1	Remember the basic concepts in database management system and understand the discovery of knowledge in databases.
	CO2	Understand the techniques of genetic algorithms, neural networks and decision trees.
	CO3	Apply various classification algorithms in data mining.
	CO4	Analyse the clustering algorithms and rule generation algorithms.
	CO5	Evaluate the process flow within a data warehouse, Extract and load process, clean and transform data, Backup and archive process.

MAPPING

PSO / CO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	M	H	M	H
CO2	S	H	M	H	H
CO3	S	S	H	H	M
CO4	S	H	S	M	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: **Elective Paper - Big Data Analytics and Data Science**	

Batch	Hours / Week	Total Hours	Credits	Employability/ Entrepreneurship
2024 - 2025	5	75	5	

Course Objectives

1. To provide the fundamental concepts in Big data & Data science.

2. To understand Data Classification, Sources of Data, Data Science user- roles and skills.

3. To get the knowledge in basics of R and statistical measures.

Course Outcomes (CO)

	CO1	Remember the fundamental concepts and techniques of Big data and data science in 360 view of Customer.
	CO2	Understand data and its types.
K1 to K5	CO3	Apply the methodologies of data science.
	CO4	Analyse the basics of R tool and data visualization using R.
	CO5	Evaluate data Visualization in Big Data.

MAPPING

PSO / CO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	H	S	S	H
CO2	S	S	M	H	H
CO3	S	H	M	S	H
CO4	S	H	H	S	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: **Elective Paper - Artificial Intelligence**

Batch	Hours / Week	Total Hours	Credits	Employability/ Entrepreneurship
2024 - 2025	5	75	5	

Course Objectives

1. To understand the basic concepts of Artificial Intelligence (AI) and identify the AI problems and domains.
2. To provide search techniques to solve the problems.
3. To represent and access the domain specific knowledge.

Course Outcomes (CO)

K1 to K5	CO1	Recollect various AI techniques.
	CO2	Understand the nature of AI problems and task domains of AI.
	CO3	Apply the appropriate search procedures to solve the problems by using best algorithms.
	CO4	Analyze and select the suitable knowledge representation method.
	CO5	Manipulate the acquired knowledge and infer new knowledge.

MAPPING

PSO CO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	H	M	H	M	H
CO2	S	H	S	M	H
CO3	H	S	H	H	M
CO4	H	S	H	S	M
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: **Elective Paper - Virtual Reality and Augmented Reality**

Batch	Hours / Week	Total Hours	Credits	Employability/ Entrepreneurship
2024 - 2025	5	75	5	

Course Objectives

1. To gain the knowledge of historical and modern overviews and perspectives on virtual reality

2. To learn the fundamentals of sensation, perception, and perceptual training.

3. To learn the Evaluation of virtual reality from the lens of design.

Course Outcomes (CO)

K1 to K5	CO1	Identify, examine, and develop software that reflects fundamental techniques for the design and deployment of VR and AR experiences.
	CO2	Describe how VR and AR systems work.
	CO3	Choose, develop, explain, and defend the use of particular designs for AR and VR experiences
	CO4	Evaluate the benefits and drawbacks of specific AR and VR techniques on the human body.
	CO5	Identify and examine state of the art AR and VR design problems and solutions from the industry and academia.

MAPPING

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

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