#### **Programme Outcomes**

On suc	cessful completion of the B.Sc. Information Technology Students will be able to
PO1	Apply the knowledge of mathematics, information security and computing to the solution of complex computing problems.
PO2	Design solutions for complex problems and design system components or processes that meet the specified needs with appropriate consideration for the environmental considerations and the consequent responsibilities relevant to the professional practice.
PO3	Acquire an ability to prepare for a career in an information technology oriented business or Industry, or for post graduate study in computer science or other scientific or technical fields.
PO4	To expose and develop technical, analytical and creative skills.
PO5	To promote and uphold Self-Discipline, Leadership Qualities, Secular Outlook, National Integration and Civic Responsibility.
PO6	Augment the Acquisition of Micro and Macro Skills of Tamil, Malayalam, Hindi and French Language Usages.
PO7	Enhance Communicative Linguistic Competency and Employability Quotient.
PO8	Exhibit consistent academic excellence and integrated personality towards lifelong learning.

# **Programme Specific Outcomes**

After the successful completion of B.Sc. Information Technology Programme the students are expected to

PSO1	Implement the skills in the areas like programming, Graphical user Interface, Web design and development, information storage & handling to innovative in applications.
PSO2	Have necessary technical knowledge for improving entrepreneur skills in building IT applications.
PSO3	Survive in the society with values and responsibility related to professional practice.

#### **Course Outcomes**

## Course : Part III - Core I C Programming

### Course Outcomes: On completion of the Course the student will be able to

СО	Statement	Bloom's Taxonomy level
CO1	Know the structure of c program, use various operators and write, compile & debug programs in C language	А
CO2	Manage input and output operations in C programming.	U
ÇO3	Design programs involving decision making structures, loops and functions.	А
CO4	Use the structures and unions through which derived data types can be formed.	А
CO5	Handle file management in C with help of error handling function.	А

### Part Course III - Core Practical I - C Programming

#### Course Outcomes: On completion of the Course the student will be able to

CO	Statement	Bloom's Taxonomy level
CO1	Identify the logic for a given problem	А
CO2	Realize the role of constants, variables, identifiers, operators, type conversion and other building blocks of C Language.	А
ÇO3	Use the conditional expressions and looping statements to solve problems associated with conditions and repetitions.	А
CO4	Demonstrate the role of Functions involving the mathematical idea of modularity and create the concept of array and pointers dealing with memory management.	А
CO5	Illustrate the concepts of Structures and File Management.	А

## **Course : Part III – Allied I Digital Principles & Computer Architecture**

СО	Statement	Bloom's Taxonomy level
CO1	Explain the concept of binary systems, Boolean algebra, logic gates, map method and products of sums simplification.	U

CO2	Explain in detail about combinational logic, Combinational Logic with MSI and LSI, Sequential Logic, Register-Transfer Logic and Microcomputer System Design.	U
ÇO3	Interpret the concept of Register Transfer, Micro- operations and Central Processing Unit.	U
CO4	Describe the concept of computer arithmetic, input /output organization.	U
CO5	Extend about the memory organization with study of multiprocessors.	U

Course: Part III - Core II -C++ Programming with Data Structures

## Course Outcomes: On completion of the Course the student will be able to

СО	Statement	Bloom's Taxonomy level
CO1	Define the Object-Oriented Programming concepts such as class, object, operator overloading and usage of constructor and destructor.	R
CO2	Describe the concept of Type conversion, inheritance, pointers, polymorphism and I/O operations.	R
ÇO3	Tell the Virtual functions, file handling and error handling mechanisms and explain the manipulation of string and get knowledge to use strings in C++.	R
CO4	Discuss the Concepts of data structures and choose the algorithmdesign method for a specified application and demonstrate the sorting, searching, linked list and structures such as stacks, queues, lists, trees and graphs.	U
CO5	Summarize the concepts of trees, Graphs, Sequential representation and Use the file structures and storages.	U

## Course: Part III - Core Practical II - C++ Programming with Data Structures

СО	Statement	Bloom's Taxonomy level
CO1	Apply the object-oriented programming Concepts of creating class and objects, function, overloading and constructor.	А
CO2	Apply the programs that make use of the concepts as Inheritance, pointers and the file handling mechanism with I/O Operations.	А
ÇO3	Apply the programs that make use of advanced data structures concepts such as stack, Queue, binary and evaluation of expression.	А

# Programme Outcomes

On su	ccessful completion of the B.Sc. Information Technology Students will be able to
PO1	Apply the knowledge of mathematics, science and computing in the core information technologies. (Mathematical and Computing Skills)
PO2	Acquire an ability to prepare for a career in an information technology oriented business or Industry, or for post graduate study in computer science or other scientific or technical fields.(Job Skills)
PO3	An ability to analyze a problem, and identify, formulate and use the appropriate computing and engineering requirements for obtaining its solution. ( <b>problem solving skills</b> ).
PO4	An understanding of professional, ethical, legal, security and social issues and responsibilities( <b>professional integrity</b> ).
PO5	Broaden the education necessary to analyze the local and global impact of computing and engineering solutions on individuals, organizations, and society ( <b>Impact assessment skills</b> ).
PO6	An ability to apply design and development principles in the construction of software and hardware systems of varying complexity ( <b>software hardware interface</b> ).

# **Programme Specific Outcomes**

After the successful completion of B.Sc. Information Technology Programme the students are expected to		
PSO1	Implement the skills in the areas like programming, Graphical user Interface, Web design and development, information storage & handling to innovative in applications.	
PSO2	Have necessary technical knowledge for improving entrepreneur skills in building IT applications.	
PSO3	Survive in the society with values and responsibility related to professional practice.	

## Course: Part III - Core III – Operating System Course Outcomes: On completion of the Course the student will be able to

СО	Statement	Bloom's Taxonomy level
CO1	Enumerate the difference between types of operating systems, virtual machines and their structure of implementation and applications.	R
CO2	Extrapolate monitors for synchronizing multiprogramming with multithreaded systems and implement them in multithreaded programs.	U
ÇO3	Manipulate deadlock in operating systems and how they can be managed / avoided and implement them in multiprogramming system.	А
CO4	Implement the design and management concepts along with issues and challenges of main memory, virtual memory and file system.	А
CO5	Formulate the types of I/O management, disk scheduling, and protection.	А
CO6	Report the use of locks, semaphores, and monitors for synchronizing multiprogramming.	А

## Part III – Core IV C++ Programming

#### Course Outcomes: On completion of the Course the student will be able to

СО	Statement	Bloom's Taxonomy level
C01	Enumerate the basic Object Oriented concepts like class structures as fundamental, modular building blocks	R
CO2	Develop applications using Object Oriented Programming Concepts.	А
ÇO3	Demonstrate the differences between traditional imperative design and object-oriented design	U
CO4	Analyze the role of inheritance, polymorphism, dynamic binding and generic structures in building reusable code	А
CO5	Apply small/medium scale C++ programs with simple graphical user interface.	А
CO6	Analyze the file handling and error handling mechanisms and get knowledge to use strings and Streams in C++.	А

#### Part III- Core V Data Structures and Algorithms

СО	Statement	Bloom's Taxonomy level
CO1	Analyze performance of algorithms and choose the appropriate data structure and algorithm design method for a specified application.	R
CO2	Distinguish which algorithm or data structure to use in different scenarios and be familiar with writing recursive methods.	U
ÇO3	Demonstrate the abstract properties of various data structures such as stacks, queues, lists, trees and graphs and use various data structures effectively in application programs.	U
CO4	Demonstrate various sorting algorithms, including bubble sort, insertion sort, selection sort, heap sort and quick sort.	U
CO5	Generalize the fundamental algorithmic problems including Tree traversals, Graph traversals, and shortest paths.	А
CO6	Develop knowledge about file structures and storages.	А

## Part III - Core Practical III C++ Programming

СО	Statement	Bloom's Taxonomy level
CO1	Analyze and apply object-oriented programming features to program design and implementation	А
CO2	Analyze, use, and create functions, classes, to overload operators	А
ÇO3	Apply inheritance and Pointers when creating or using classes and create templates	А
CO4	Solve Exception handling and file handling mechanism	А
CO5	Apply the programs that make appropriate use of advanced object-oriented facilities common to many object-oriented features such as classes, message passing, overloading and inheritance.	А
CO6	Relate knowledge on the application of data structures(Stack, Queue, Linked list and various sorting techniques)	А

# Part III - Core VI .NET Programming

СО	Statement	Bloom's Taxonomy level
CO1	Relate the web application or distributed application very quickly.	R
CO2	Analyze the in-built stand-alone applications in the Visual basic and .NET framework	А

ÇO3	Create distributed data-driven applications using the .NET Framework	А
CO4	Use DirectX libraries in the .NET environment to implement graphic displays and audio.	А
CO5	Utilize XML in the .NET environment to create Web Service-based applications and components	А
<b>CO6</b>	Use appropriate data sources and data bindings in ASP.NET web applications	А

# Core VII Database Management Systems

## Course Outcomes: On completion of the Course the student will be able to

СО	Statement	Bloom's Taxonomy level
C01	Identify the Database design methodology.	R
CO2	Define the fundamentals of Data Base Management System.	R
CO3	Compute PL/SQL exceptions.	U
ÇO4	Manipulate the various queries and concepts in Oracle 9i (RDBMS).	Α
CO5	Design data base and normalize data and understand how queries are being processed and executed	Α
CO6	Manipulate the various database information.	Α

## Part III - Core VIII Computer Networks

СО	Statement	Bloom's Taxonomy level
CO1	Define, use and implement Computer Networks and the basic components of a Network system.	R
CO2	Distinguish the various types of network configurations	U
ÇO3	Examine the layers of OSI and TCP and gain knowledge about congestion control and network security	U
CO4	Generate the different protocols, software and network architectures.	R
CO5	Prepare the concept of local area networks, their topologies, protocols and applications.	R
CO6	Analyze why networks need security and control anticipated errors to avoid network errors.	А

#### Part III – Core Practical IV .Net Programming

СО	Statement	Bloom's Taxonomy level
CO1	Tabulate good programming skills in .Net platform	U
CO2	Develop applications for various devices and platforms like windows application web applications windows services and web services.	А
Ç03	Use all types of data types provided by .Net Framework.	А
CO4	Design web applications using ASP.NET	А
CO5	Organize the features of database management systems and Relational database.	А
CO6	Use SQL- the standard language of relational databases.	А

#### Course Outcomes: On completion of the Course the student will be able to

## Part III – Allied IV- Microprocessor

#### Course Outcomes: On completion of the Course the student will be able to

СО	Statement	Bloom's Taxonomy level
CO1	Recognize the various microprocessor and manufacturer name, year, versions, bit-size.	U
CO2	Demonstrate the basic instructions in the Assembly Language Programs.	А
ÇO3	Recognize the system using memory chips and peripheral chips for 16 bit 8085 microprocessor.	R
CO4	Summarize the device techniques for faster execution of instructions, improve speed of operations and enhance performance of microprocessors	U
CO5	Identify the different types of microprocessor design and interface I/O circuits.	R
CO6	Examine the various products of processors and controllers.	А

#### Part III - Core IX JAVA Programming

СО	Statement	Bloom's Taxonomy level
CO1	Enumerate the OOPs concepts such as class, methods, inheritance, encapsulation and polymorphism etc.,	R
CO2	Extrapolate knowledge about how to use java for internet	U

	applications.	
ÇO3	Manipulate the differences between application programs, applets, applet lifecycle and graphics programming.	А
CO4	Implement programs using Thread, Applet and AWT controls like Text Fields, Buttons, Checkboxes, Radio Buttons and Layouts.	А
CO5	Formulate the java programs using stream classes and files.	А
CO6	Report the differences between application programs and applet Programming.	А

#### Part III - Core X Software Engineering

## Course Outcomes: On completion of the Course the student will be able to

СО	Statement	Bloom's Taxonomy level
C01	Identify the key activities in managing a software project	R
CO2	Discuss different process models.	U
ÇO3	Explain the key concepts in software development such as risk and quality.	U
CO4	Analyze the concepts of requirements engineering and Analysis Modeling	А
CO5	Apply systematic procedure for software design and deployment.	А
CO6	Compare and contrast the various testing and maintenance	U

#### Part III - Core XI Data Mining

СО	Statement	Bloom's Taxonomy
		level
CO1	Identify the basic concepts of data mining	R
CO2	Analyze the concepts and algorithms of clustering	А
Ç03	Enumerate the concepts and algorithms of association	R
CO4	Discuss the knowledge with the concepts and algorithms of classification	U
CO5	Demonstrate the concepts and algorithms of web mining and spatial mining	U
CO6	Ability to apply acquired knowledge for understanding data and select suitable methods for data analysis	A

#### Core Practical V – JAVA Programming Course Outcomes: On completion of the Course the student will be able to

СО	Statement	Bloom's Taxonomy level
CO1	Identify the basic concepts of Java such as class, methods, constructors, arrays and interfaces to solve the problems.	R
CO2	Examine the usage of packages, exceptions, thread, OOPs concepts in program.	U
ÇO3	Compute the programs using method overloading, method overriding, packages and threads.	U
CO4	Utilize the working of applications using frames and applet.	А
CO5	Investigate the programs using event handling, applets, AWT controls and files.	А
CO6	Review the knowledge about how to use java for internet applications	А

#### **Part III - Elective I Compiler Design**

## Course Outcomes: On completion of the Course the student will be able to

СО	Statement	Bloom's Taxono my level
CO1	To acquire the concept areas of language translation and compiler design	R
CO2	To gain the knowledge of lexical analysis.	R
ÇO3	To extend the knowledge of parser by parsing LR parser	U
CO4	To define the syntax, translator and use symbol table	Α
CO5	To learn the code optimization techniques to improve the performance of a program in terms of speed & space.	Α
CO6	To acquire the knowledge of compiler & its features	U

## Part III - Core XII PHP and MySQL

СО	Statement	Bloom's Taxonomy level
CO1	Enumerate the basic knowledge of PHP Syntax and Variables.	R
CO2	Demonstrate the control structures and functions.	U
ÇO3	Discuss the String handling function, Array handling and Mathematical operators.	U
CO4	Tabulate the knowledge in databases and MySQL	R
CO5	Generalize the File System, Table and to manipulate the database.	А
CO6	Implement code- rich case studies of PHP/MySQL interactions and to implement Cookies and Sessions.	А

#### Part III - Core XIII Cloud Computing

СО	Statement	Bloom's Taxonomy level
CO1	State the concepts of storage virtualization, network virtualization and its management	R
CO2	Apply the concept of virtualization in the cloud computing.	А
ÇO3	Classify the architecture, infrastructure and delivery models of cloud computing.	U
CO4	Identify the services using Cloud computing.	R
CO5	Apply the security models in the cloud environment.	А
CO6	Apply the risks and benefits of implementing cloud computing	А

#### Course Outcomes: On completion of the Course the student will be able to

#### Part III – Core Practical VI PHP and MySQL Programming

#### Course Outcomes: On completion of the Course the student will be able to

СО	Statement	Bloom's Taxonomy level
CO1	Enumerate the knowledge about the basic concepts.	R
CO2	Discuss the role of constants, variables, identifiers, and operators.	U
ÇO3	Use the conditional expressions and looping statements to solve problems associated with conditions and repetitions	A
CO4	Demonstrate the role GET and POST method.	U
CO5	Execute the concept of Array.	А
CO6	Implement the String function.	А

#### Part III - Elective II Mobile Computing

СО	Statement	Bloom's Taxonomy
		level
CO1	Express the concepts and features of mobile computing	U
	technologies and its applications with cellular networks design.	
CO2	Recognize the capabilities of next-generation networks and the	R
	role of wireless technologies in network design and operation.	
ÇO3	Evaluate wireless network topologies, wireless connectivity and	А
_	characteristics, with the impact of wireless networks on security	
	and Internet communications.	
CO4	Explain the structure and components for Mobile IP and	U

	Mobility Management	
CO5	Create an awareness of professional and ethical issues, in particular those relating to security and privacy of user data and user behavior.	А
CO6	Predict the important issues of developing mobile computing systems and applications.	А

# Part III Project and Viva Voce

СО	Statement	Bloom's Taxonomy level
C01	Identify and Finalize problem statement by surveying variety of domains.	А
CO2	Define the problem statement and carryout design for it.	А
ÇO3	Analyze, Design, Implement and process the experimental information using open source software.	А
CO4	Present technical report by applying different visualization tools and Evaluation metrics.	А
CO5	Write technical report and deliver presentation	А
CO6	Apply engineering and management principles to achieve project goal.	А