Course Outcome of the Curriculum (General)

The students will be able to learn the following after the completion of the course:

Semester - I

	COURSE		COURSE OUTCOME	
	Course Code	**Course Name**		
1.	**CC-1A**	**Problem Solving using Computer**	**CO1**	Acquiring fundamental knowledge about Computers, organization of the Computer System and its components (such as CPU, Memory etc.).
			CO2	Understanding the concept of problem solving and learning the strategies involved in systematic problem solving and documentation.
			CO3	Learning about various techniques of problem solving and programming methodologies (such as top-down, bottom-up).
			CO4	Understanding the fundamental concepts of programming in Python.
			CO5	Developing skills to solve simple problems using problem solving strategies and programming in Python.

Semester - II

	Course		Course Outcome	
	Course Code	**Course Name**		
2.	**CC-1B**	**Database Management Systems**	**CO1**	Realizing the characteristics of database, data models and the architecture of database systems.
			CO2	Learning Entity Relationship Modelling to analyze database by means of visual representation.

			CO3	Learning Relationalmodel concepts, relational constraints and relational algebra.
			CO4	Understanding functional dependencies and normalizing database to understand its internal structure.
			CO5	Developing the ability to store and handle data efficiently by understanding the structure of database storage and various access techniques using SQL.

Semester - III

	Course		**Course Outcome**	
	Course Code	**Course Name**		
3.	**CC-1C**	**Operating Systems**	**CO1**	Understanding the organization of the Operating System and its role in managing the interaction and operation of the various components of a computer system.
			CO2	Understanding the concept of Process in OS and the process management issues handled by the OS such as process scheduling and deadlock.
			CO3	Understanding the concepts associated with memory management strategies of the OS such as paging, segmentation etc. and virtual memory.
			CO4	To be familiar with the basic concepts of Shell and learning Shell programming in order to solve simple problems.
4.	**SEC-1**	**Office Automation Tools**	**CO1**	Getting hands on experience with word processing, data management andpreparing presentations using the MS-Office applications.
			CO2	Learning the use of MS Word for formatting text, pages, lists, tables.

			CO3	Learning the spreadsheets for formatting data, creating charts and graphs, using formulas and functions, macros, pivot table.
			CO4	Learning to create presentations, Adding and formatting text, pictures, graphic objects, including charts, objects, formatting slides, notes, hand-outs, slide shows, using transitions, animations.

Semester - IV

	Course		**Course Outcome**	
	Course Code	**Course Name**		
5.	**CC-1D**	**Computer System Architecture**	**CO1**	Introducing the hardware design and operation of digital circuits (sequential and combinational).
			CO2	Learning the organization and architecture of Central Processing Unit.
			CO3	Learning the organization and architecture of Input/output Unit.
			CO4	Developing the skills to write Assembly Language Programming to perform simple operations.
			CO5	Having the complete understanding of the architecture of a basic computer system and the coordination between its various components.
6.	**SEC-2**	**HTML Programming**	**CO1**	Learning the basics of HTML programming, creating the head and body of a web page and assigning different attributes to it.
			CO2	Learning to incorporate relative and absolute links in a web page and assigning various attributes to it.
			CO3	Learning to incorporate images in a web page and using them as background or links.

			CO4	Learning to create tables, forms and styling them and assigning different attributes.
			CO5	Learning to create web pages and applications using basic HTML programming.

Semester - V

	Course		Course Outcome	
	Course Code	**Course Name**		
7.	**DSE-1A**	**Programming in Java**	**CO1**	Introducing the architecture and features of JAVA in order to differentiate between previously learned Programming languages and Java.
			CO2	Learning the principles of Object-Oriented Programming (such as Classes, Inheritance, Interfaces etc.).
			CO3	Developing the ability to apply Object Oriented Programming concepts to solve problems using JAVA.
			CO4	Learning about various exceptions one might encounter while running a Java program and the techniques used to handle them.
			CO5	Designing Applet and event handling mechanisms in programs.
8.	**SEC-3**	**MySQL/PL-SQL**	**CO1**	Learning SQL Commands and Data types, Operators and Expressions and the differences between SQL and SQL* Plus.
			CO2	Learning to create tables, manipulate the tables (including constraints) and use Data Manipulation Commands.
			CO3	Learning the use of SELECT command using special operators such as IN, ANY, ALL BETWEEN etc.
			CO4	Learning transaction control statements such as Commit, Rollback, Savepoint etc.

			CO5	Learning PL/SQL block structure and Language construct of PL/SQL (Variables, Basic and Composite Data types.

Semester - VI

	Course		Course Outcome	
	Course Code	**Course Name**		
9.	**DSE-1B**	**Computer Networks**	**CO1**	To be familiar with the basic concepts of Computer Networking such as layered network architecture, network topologies, OSI reference model and TCP/IP protocol suite.
			CO2	Learning the fundamental concepts and techniques involved in the transmission of digital data between two machines.
			CO3	Understanding various routing protocols governing the transmission of data across each layer of the network architecture.
			CO4	Understanding various error control protocols that detect or prevent erroneous transmission of data across the layers of the network architecture.
			CO5	Developing the skills to analyze and simulate the aforementioned protocols in any programing language.
10.	**SEC-4**	**PHP Programming**	**CO1**	Learning the basic concepts of PHP Programming such as syntax, variables, operators etc.
			CO2	Learning to handle HTML form with PHP, using GET and POST form methods and dealing with multi value fields.
			CO3	Learning to use conditional control statements and loops (including nested loops) in PHP.

			CO4	Learning to create functions using Default Arguments in Function and Function arguments with call by value, call by reference.
			CO5	Learning String manipulation using various inbuilt functions and using arrays with useful Library function

Program Outcome of the Curriculum

		Program Outcome
1.	**PO1**	**Building foundational knowledge** - Gaining knowledge of the existing theory of Computer Science and various modern tools and resources to build a strong foundational knowledge for solving complex engineering problems.
2.	**PO2**	**Identifying and analyzing problems** - Identifying problems, modelling the problems into logical representations and analyzing them to correctly establish the suitable objectives that must be achieved to solve the problem.
3.	**PO3**	**Formulating and analyzing solutions**- Formulating proper solutions using the foundational knowledge gained from the curriculum and analyzing their feasibility based on the available resources and tools
4.	**PO4**	**Usage of modern tools** – Developing the discretion of identifying the modern tools, resources and techniques that are suitable and effective for solving specific complex problems.
5.	**PO4**	**Developing Employability skills –** Developing core skills in students that caters to the practical needs and requirements of the current society, hence making them employable.
6.	**PO5**	**Benefit the society** – Building students to assess the existing issues faced by the society render their services using the problem-solving skills developed by the curriculum.