

**A. Program outcome and Program specific outcomes offered by the Department**

**Name of the Programme specialization : B.Sc. Information Technology**

<b>Program</b>	<b>Program outcomes</b>	<b>Program specific outcomes</b>
Under graduate B.ScInformation Technology	1. Student will be able to select appropriate data structures as applied to specified problem definition and can recognize objectives of Green Network Protocols for Data communication and use Green IT Strategies and metrics for ICT development.	1.Student will be able to describe the functions of each layer in OSI and TCP/IP model and can justify role of SDLC-Software Development Lifecycle in Software Project Development and they can evaluate importance of Software.
	2. Student can describe the architecture of 8051 microcontroller and write embedded program for 8051 microcontroller and can demonstrate knowledge of the building blocks of AI as presented in terms of intelligent agents.	2. Explain the functions of Application layer and Presentation layer paradigms and Protocols and will able to Implement interactive web page(s) using HTML, CSS and JavaScript,design a responsive web site using HTML5 and CSS3.
	3. Explain needs for software specifications also they can classify different types of software requirements and their gathering techniques.	3.Students can distinguish among SCM-Supply Chain Management and SQA-Software Quality Assurance and can classify different testing strategies and tactics and compare them
	4. Design the interfacing for 8051 microcontrollerand advance data structure using Non-Linear data structure.	Identify classes, objects, members of a class and the relationships among them needed for a finding the solution to specific problem and Identify, Design & develop complex Graphical user interfaces using principal Java Swing classes based on MVC - Model View and Controller architecture.
	5. Determine and analyze the complexity of given Algorithms, analyze and apply concepts of normalization to design an optimal database.	Students will be able to Implement Object Oriented programming concept using basic syntaxes of control Structures, strings and function for developing skills of logic building activity..

**Course outcomes for all the courses offered by the department****Name of the course: B.ScInformation technology****Academic year 2018-2019**

<b>FYBSC-IT (SEM II) Paper I</b>	Object oriented Programming	The purpose of OOP is to organize a program's structure so that one can build programs using these abstract models called "objects" that encapsulate data and behavior into one unit.
Paper II	Microprocessor Architecture	To understand the concepts and architecture of embedded systems, basic of microcontroller 8051 and the concepts of microcontroller interface
Paper III	Web Programming	To provide insight into emerging technologies to design and develop state of - the art web applications using client-side scripting, server-side scripting, and database connectivity.
Paper IV	Numerical and Statistical Methods	To understand the theory of probability, concept of random variable, some special distributions, some interpolation methods, and some methods of numerical integration and differentiation.
Paper V	Green Computing	To understand what Green IT is and How it can help improve environmental Sustainability.
<b>SYBSC-IT (SEM III)  Paper I</b>	Python Programming	Describe the Numbers, Math functions, Strings, List, Tuples and Dictionaries in Python, express different Decision Making statements and Function and interpret Object oriented programming in Python.
Paper II	Data Structures	To impart the basic concepts of data structures and algorithms, understand concepts about searching and sorting techniques, understand basic concepts about stacks, queues, lists, trees and graphs, understanding about writing algorithms and step by step approach in solving problems with the help of fundamental data structures.
Paper III	Computer Networks	To provide the comprehensive insight into developing wired network running on live internet. Briefly study on different network devices their configuration and how to address IP to host on network. Protocols and their usage with

		different application browsing on internet
Paper IV	Database Management Systems	To describe a sound introduction to the discipline of database management systems, give a good formal foundation on the relational model of data and usage of Relational Algebra, to introduce the concepts of basic SQL as a universal Database language and to enhance knowledge to advanced SQL topics like embedded SQL.
Paper V	Applied Mathematics	The course is aimed to develop the basic Mathematical skills of students that are imperative for effective understanding of engineering subjects. The topics introduced will serve as basic tools for specialized studies in many fields of engineering and technology.
<b>SYBSC-IT (SEM IV)</b> Paper I	Core Java	The objective of this course is to teach the learner how to use Object Oriented paradigm to develop code and understand the concepts of Core Java and to cover-up with the pre-requisites of Core java.
Paper II	Introduction to Embedded Systems	To introduce the use of the components of a Electronic devices along with inbuilt memory .with building approach of Embedded products in market with the concept of software as well as hardware along with application specific Operating System, along with introduction on Embedded C language.
Paper III	Computer Oriented Statistical Techniques	The purpose of this course is to familiarize students with basics of Statistics and R coding on basic topic of Statistics. This will be essential for prospective researchers and professionals to know these basics.
Paper IV	Software Engineering	To understand the nature of software development and software life cycle process models, agile software development, SCRUM and other agile practices.
Paper V	Computer Graphics and Animation	To introduce the use of the components of a graphics system and become familiar with building approach of graphics system components and algorithms related with them.

<b>TYBSC-IT (SEM V)</b>		
Paper I	Software Project Management	To understand need of project management and project management life cycle , project scheduling concept and risk management associated to various type of projects
Paper II	Internet of Things	To learn different protocols used in IOT and to learn the concepts of smart city development in IOT.
Paper III	Advanced Web Programming	This course is designed to give students the opportunity to enhance and enrich their skills in Web programming. Students will learn to develop Web applications that use three-tier architecture, session management, object-oriented techniques, and advance database interactions. Concepts such as advanced CSS concepts, rich interactive Web environments, authentication, and security will also be explored.
Paper IV	Artificial Intelligence	This subject enable computers to perform such intellectual tasks as decision making, problem solving, perception, understanding human communication.To impart basic proficiency in representing difficult real life problems in a state space representation so as to solve them using AI techniques like searching and game playing.
Paper V	Enterprise Java	The objective is to provide knowledge of advanced feature of contemporary java which would enable them to handle complex programs relating to managing data and processes over the network. The major objective of this course is to provide a sound foundation to the students on the concepts, precepts and practices, in a field that is of immense concern to the industry and business.
<b>TYBSC-IT (SEM VI)</b>		
Paper I	Software Quality Assurance	To understand basic software debugging methods, White box and Black box testing methods and techniques.
Paper II	Security in Computing	To analyze and determine the present IT infrastructure, services and processes, of how to manage different attacks on data

		over internet while communicating with outside world or while doing different transactions on internet ,Also helps us to overcome the hacking issue with the help of different tools.
Paper III	Business Intelligence	To introduce the concept of data Mining as an important tool for enterprise data management and as a cutting edge technology for building competitive advantage ,to enable students to effectively identify sources of data and process it for data mining and to make students well versed in all data mining algorithms, methods of evaluation and to impart knowledge of tools used for data mining.
Paper IV	Principles of Geographic Information Systems	Maximize the efficiency of decision making and planning. Provide efficient means for data distribution and handling. Elimination of redundant database-minimize duplication
Paper V	IT Service Management	To analyze and determine the present IT infrastructure, services and processes, create management practices which are futuristic in nature, formulate a roadmap to elevate the state of the business,create steps for the roadmap.