



## **B.Sc.I.T**

The B.Sc. Information Technology programme was started in 2001 with an aim to make the students employable and impart industry oriented training.

### **EDUCATIONAL OBJECTIVES:**

B.Sc. Information Technology is a three year undergraduate programme. The programme aims to produce graduates who have been exposed to experiences that will prepare them to address the information processing requirements of organizations. The curriculum has been carefully designed in collaboration with our course experts and in consultation with our industrial partners. Students will learn about the concepts of information technology and management of information in organizations by understanding systems concepts, communications and information technologies.

### **THE BROAD OBJECTIVES OF THE PROGRAMME ARE:**

- The graduates will become successful professional by demonstrating logical and analytical thinking abilities in the field of IT.
- The graduates will work and communicate effectively in interdisciplinary environment, either independently or in team, and demonstrate scientific leadership in academia and industry.
- The graduates will engage in lifelong learning and professional development through advanced degrees in information technology, discussion, professional studies and research.

### **PROGRAMME OUTCOMES:**

Upon completion of the B. Sc. Information Technology programme, students will be able to:

1. Develop knowledge of scientific theories and methods, gain experience in working independently with scientific questions and their ability to express clearly on academic issues keeping in view legal, ethical, social security and issues.
2. Communicate effectively in written and oral context with specialized and non-specialized audiences.
3. Identify information technology related problems, analyze them and design the system or provide the solution for the problem.
4. Apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, and web systems and technologies.
5. Function in multidisciplinary teams by working cooperatively, creatively and responsibly as a member of a team.
6. Recognize the need to engage in lifelong learning through continuing education and research.



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## CAREER PROSPRCTS:

The new syllabus is aimed to achieve the objectives. The syllabus spanning three years covers the industry relevant courses. The students will be ready for the jobs available in different fields like:

- Software Development (Programming)
- Website Development
- Mobile app development
- Embedded Systems Programming
- Embedded Systems Development
- Software Testing
- Networking
- Database Administration
- System Administration
- Cyber Law Consultant
- GIS (Geographic Information Systems)
- IT Service Desk
- Security

And many others The students will also be trained in communication skills and green computing.



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## COURSE OUTCOME OF B.Sc.I.T

### Semester I

COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT101 & USIT1P2	Imperative Programming & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
1.The objective of this course is to provide a comprehensive study of the C programming language 2. Stressing upon the strengths of C, which provide the students with the means of writing modular, efficient, maintainable, and portable code.		1) Students should be able to write, compile and debug programs in C language and use different data types in a computer program. 2) Students should be able to design programs involving decision structures, loops and functions. 3) Students should be able to explain the difference between call by value and call by reference and also understand the dynamics of memory by the use of pointers. 4) Students should be able to use different data structures and create/update basic data files.	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1. Project on application of coding standards ,error handling		1.These activity enhance the learning ability, problem solving ,code optimization, & coding standard of learners	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT102 & USIT1P2	Digital Electronics & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
1)To understand the structure and operation of modern processors and their instruction sets		1) To learn about how computer systems work and underlying principles 2) To understand the basics of digital electronics needed for computers 3) To understand the basics of instruction set architecture for reduced and complex instruction sets 4) To understand the basics of processor structure and operation 5) To understand how data is transferred between the processor and I/O devices	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1.Project on digital electronic 2.Survey on digital application		1.Students will understand how software and hardware work together 2. Awareness of new trend in digital marketing	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT103 & USIT1P3	Operating Systems & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	



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Learners must understand proper working of operating system. To provide a sound understanding of Computer operating system, its structures, functioning and algorithms		1. To provide a understanding of operating system, its structures and functioning 2. Develop and master understanding of algorithms used by operating systems for various purposes.	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1. Assignment on distributor of operating system		1. Students will understand the working of operating system	
<b>COURSE NUMBER</b>	<b>COURSE NAME</b>	<b>CREDIT POINTS</b>	<b>NUMBER OF HOURS</b>
USIT104 & USIT1P4	Discrete Mathematics & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
1. The purpose of the course is to familiarize the prospective learners with mathematical structures that are fundamentally discrete. 2. This course introduces sets and functions, forming and solving recurrence relations and different counting principles. 3. This concept is useful to study or describe objects or problems in computer algorithms and programming languages		1) To provide overview of theory of discrete objects, starting with relations and partially ordered sets. 2) Study about recurrence relations, generating function and operations on them. 3) Give an understanding of graphs and trees, which are widely used in software. 4) Provide basic knowledge about models of automata theory and the corresponding formal languages.	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1. Project on a topic of any particular mathematical structure 2. Training on SciLAB software		1. Student learn about the techniques for collection of data through various methods. 2. SciLAB help a student to learn various tools used for computer application.	
<b>COURSE NUMBER</b>	<b>COURSE NAME</b>	<b>CREDIT POINTS</b>	<b>NUMBER OF HOURS</b>
USIT105 & USIT1P5	Communication Skills & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
To help learners develop their soft skills and develop their personality together with their technical skills. Developing professional, social and academic skills to harness hidden strengths, capabilities and knowledge equip them to excel in real work environment and corporate life. Understand various issues in personal and profession communication and learn to overcome them		1) To know about various aspects of soft skills and learn ways to develop personality 2) Understand the importance and type of communication in personal and professional environment. 3) To provide insight into much needed technical and non-technical qualities in career planning. 4) Learn about Leadership, team building, decision making and stress management	



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## Semester II

COURSE ACTIVITIES		ACTIVITIES' OUTCOME	
1.Elocution competition 2.Debate competition		1. Defined sentence structure, thought process and enunciation 2. Nurture rational thinking, organization of thought, persuasion and public speaking	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT201 & USIT2P1	Object oriented Programming & Practical	02+02=04	50
COURSE OBJECTIVES		COURSE OUTCOME	
1.The objective of this course is to provide a comprehensive study of the C++ programming language 2.Stressing upon the strengths of C++, which provide the students with the means of writing modular, efficient, maintainable, and portable code.		1) Students should be able to write, compile and debug programs in C++ language. 2) Students should be able to use different data types in a computer program. 3) Students should be able to design programs involving decision structures, loops and functions. 4) Students should be able to explain the difference between call by value and call by reference 5) Students should be able to understand the dynamics of memory by the use of pointers. 6) Students should be able to use different data structures and create/update basic data files.	
COURSE ACTIVITIES		ACTIVITIES' OUTCOME	
1. Project on application of coding standards ,error handling, exception handling mechanism		1. These activity enhanced the learning ability, problem solving ,code optimization, coding standard	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT202 & USIT2P2	Microprocessor Architecture & Practical	02+02=04	50
COURSE OBJECTIVES		COURSE OUTCOME	
To understand the structure and operation of modern processors and their instruction sets.		1) To learn about how computer systems work and reference underlying principles 2) To understand the basics of digital electronics needed for computers 3) To understand the basics of instruction set architecture for reduced and complex instruction sets 4) To understand the basics of processor structure and operation 5) To understand how data is transferred between the processor and I/O devices	
COURSE ACTIVITIES		ACTIVITIES' OUTCOME	
1.Project on Microprocessor and		1.Student will learn how AND ,OR,X-OR gate are	



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Microcontroller 2. Assignment on different types of processor		used. 2. They will learn which type for processor are used machine	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT203 & USIT2P3	Web Programming Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
1. To provide insight into emerging technologies 2. To design and develop state of - the art web applications using client-side scripting, server-side scripting, and database connectivity.		1. To design valid, well-formed, scalable, and meaningful pages using emerging technologies. 2. Understand the various platforms, devices, display resolutions, viewports, and browsers that render websites 3. To develop and implement client-side and server-side scripting language programs. 4. To develop and implement Database Driven Websites. 5. Design and apply XML to create a mark-up language for data and document centric applications.	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1. Project on Server and client side scripting		1. Students will learn how to design web site	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT204 & USIT2P4	Numerical and Statistical Methods & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
The purpose of this course is to familiarize students with basics of Statistics. This will be essential for prospective researchers and professionals to know these basics.		1) Enable learners to know descriptive statistical concepts 2) Enable study of probability concept required for Computer learners	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1. Assignment on different policies of any one of the Insurance Company. 2. Case discussion on Measure of central tendency		1. Case discussion give clear understanding to differentiate between Mean, Median & Mode 2. Learning on any one Insurance company will help the student to know the functional and operational activities of an Insurance company.	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT205 & USIT2P5	Green Computing & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	



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To familiarize with the concept of Green Computing and Green IT infrastructure for making computing and information system environment sustainable. Encouraging optimized software and hardware designs for development of Green IT Storage, Communication and Services. To highlight useful approaches to embrace green IT initiatives.	1) Learn about green IT can be achieved in and by hardware, software, and network communication and data centre operations. 2) Understand the strategies, frameworks, processes and management of green IT
<b>COURSE ACTIVITIES</b>	<b>ACTIVITIES' OUTCOME</b>
1.Goup Discussion on different Electronic Waste	1.Student will learn how we will reuse wastage product in computer





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## S.Y.B.Sc.(I.T) - Semester III

COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT301 & USIT3P1	Python Programming & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
<p>1)The objective of this paper is to introduce various concepts of programming to the students using Python.</p> <p>2)The objective of this paper is to explore the style of structured programming to give the idea to the students how programming can be used for designing real-life applications by reading/writing to files, GUI programming, interfacing database/networks and various other features.</p>		<p>1) Students should be able to understand the concepts of programming before actually starting to write programs.</p> <p>2) Students should be able to develop logic for Problem Solving.</p> <p>3) Students should be made familiar about the basic constructs of programming such as data, operations, conditions, loops, functions etc.</p> <p>4) Students should be able to apply the problem solving skills using syntactically simple language i.e. Python (version: 3.X or higher)</p>	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
<p>1.Goup Discussion on different programming language</p> <p>2.Project on high level programming language</p>		<p>1.Students will understand which language is easy to develop the project</p> <p>2.Students will learn how to develop GUI based project</p>	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT302 & USIT3P2	Data Structures & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
<p>1.To explore and understand the concepts of Data Structures and its significance in programming.</p> <p>2.Provide and holistic approach to design, use and implement abstract data types.</p> <p>3.Understand the commonly used data structures and various forms of its implementation for different applications using C.</p>		<p>1) Learn about Data structures, its types and significance in computing</p> <p>2) Explore about Abstract Data types and its implementation</p> <p>3) Ability to program various applications using different data structure in C</p>	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
<p>1.Assignment on different data type</p>		<p>1.Student will understand how data will be organised in logical way</p>	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS





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USIT303 & USIT3P3	Computer Networks & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
In this era of Information, its computation and its exchange techniques, Learner should be able to conceptualize and understand the framework and working of communication networks. And on completion, will be able to have a firm grip over this very important segment of Internet.		1. Learner will be able to understand the concepts of networking, which are important for them to be known as a 'networking professionals'. 2. Useful to proceed with industrial requirements and International vendor certifications.	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1.Project on Networking 2.Case study on different topologies		1.They will understand how we will use router, switches and which one is best one among all 2.Which type of network is best and where they are used.	
<b>COURSE NUMBER</b>	<b>COURSE NAME</b>	<b>CREDIT POINTS</b>	<b>NUMBER OF HOURS</b>
USIT304 & USIT3P4	Database Management Systems & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
To develop understanding of concepts and techniques for data management and learn about widely used systems for implementation and usage.		1. Master concepts of stored procedure and triggers and its use. 2. Learn about using PL/SQL for data management 3.Understand concepts and implementations of transaction management and crash recovery	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1.Competition 2.Assignment on different databases.		1.They learn how data will update delete from database and how we will manage data from database 2.Students will learn and understand which one database is useful for our project	
<b>COURSE NUMBER</b>	<b>COURSE NAME</b>	<b>CREDIT POINTS</b>	<b>NUMBER OF HOURS</b>
USIT305 & USIT3P5	Applied Mathematics & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
1. The course is designed to have a grasp of important concepts of Applied Mathematics in a scientific way. 2.It covers topics from as basic as definition of functions to partial derivatives of functions in a gradual		1) Understanding of Mathematical concepts like limit, continuity, derivative, integration of functions. 2) Ability to appreciate real world applications which uses these concepts. 3) Skill to formulate a problem through Mathematical modelling and simulation	



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and logical way. 3.The learner is expected to solve as many examples as possible to a get compete clarity and understanding of the topics covered.	
<b>COURSE ACTIVITIES</b>	<b>ACTIVITIES' OUTCOME</b>
1Project on a topic of any particular 2.Training on Android Application software	1.Student learns about the techniques for collection of data through various methods. 2.Android software help a student to learn various tools used for computer application.



## Semester IV

COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT401 & USIT4P1	Core Java & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
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.		1. Object oriented programming concepts using Java. 2. Knowledge of input, its processing and getting suitable output. 3. Understand, design, implement and evaluate classes and applets. 4. Knowledge and implementation of AWT package.	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1.Project for java 2.Quiz completion on oops		1.Student will easily develop the project with database 2.This will enhance the programming logic	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT402 & USIT4P2	Introduction to Embedded Systems & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
Students completing this course will be well positioned to: 1. Discuss the major components that constitute an embedded system. 2. Implement small programs to solve well-defined problems on an embedded platform. 3. Develop familiarity with tools used to develop in an embedded environment.		1. Understand what is a microcontroller, microcomputer, embedded system. 2. Understand different components of a micro-controller and their interactions. 3. Become familiar with programming environment used to develop embedded systems 4. Understand key concepts of embedded systems like IO, timers, interrupts, interaction with peripheral devices 5. Learn debugging techniques for an embedded system	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1.Project on Microprocessor and Microcontroller 2.Assignment on different types of processor		1.Student will learn how lift will operated which type of processor use in lift etc 2.They will learn which type for processor are used machine	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT403 & USIT4P3	Computer Oriented Statistical Techniques & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	



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The purpose of this course is to familiarize students with basics of Statistics. This will be essential for prospective researchers and professionals to know these basics.		1) Enable learners to know descriptive statistical concepts 2) Enable study of probability concept required for Computer learners	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1. Project on a topic of any particular		1. Student learns about the techniques for collection of data through various methods.	
<b>COURSE NUMBER</b>	<b>COURSE NAME</b>	<b>CREDIT POINTS</b>	<b>NUMBER OF HOURS</b>
USIT404 & USIT4P4	Software Engineering & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
1. To provide knowledge of software engineering discipline. 2. To analyze risk in software design and quality. 3. To introduce the concept of advance software methodology.		1. Students will demonstrate basic knowledge in software engineering. 2. Students will be able to plan, design, develop and validate the software project. 3. Students will be apply advance software methodology to create high quality WebApps. 4. Students will have an understanding of impact of sound engineering principles.	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1. Case study on different model used in software engineering 2. power point presentation on SE		1. They will understand which model will used for given project 2. They will learn how to complete the project which methodology is best for given project	
<b>COURSE NUMBER</b>	<b>COURSE NAME</b>	<b>CREDIT POINTS</b>	<b>NUMBER OF HOURS</b>
USIT405 & USIT4P5	Computer Graphics and Animation & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
1 To equip students with the fundamental knowledge and basic technical competence in the field of computer graphics. 2 To emphasize on implementation aspect of Computer Graphics Algorithms. 3 To prepare the student for advance areas like Image Processing or Computer Vision or Virtual Reality and professional avenues in the field of Computer Graphics		1 Understand the basic concepts of Computer Graphics. 2 Demonstrate various algorithms for scan conversion and filling of basic objects and their comparative analysis. 3 Apply geometric transformations, viewing and clipping on graphical objects. 4 Explore solid model representation techniques and projections. 5 Understand visible surface detection techniques and illumination models	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1. Project Based on Animation		1. Student will learn how we will compress the video, images and 3D rotation in animation	



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## T.Y.B.Sc.(I.T) - Semester V

COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT501 & USIT5P1	Software Project Management & Project Dissertationl	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
<p>1. To familiarize the students with the use of a structured methodology/approach for each and every unique project undertaken, including utilizing project management concepts, tools and techniques.</p> <p>2. To appraise the students with the project management life cycle and make them knowledgeable about the various phases from project initiation through closure.</p>		<p>1. Apply selection criteria and select an appropriate project from different options.</p> <p>2. Write work break down structure for a project and develop a schedule based on it.</p> <p>3. Identify opportunities and threats to the project and decide an approach to deal with them strategically.</p> <p>4. Use Earned value technique and determine &amp; predict status of the project.</p> <p>5. Capture lessons learned during project phases and document them for future reference</p>	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
<p>1. Case study on different model used in software engineering</p> <p>2. power point presentation on Project Implementation</p>		<p>1. They will understand which model will be used for given project</p> <p>2. They will learn how to complete the project which methodology is best for given project</p>	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT502 & USIT5P2	Internet of Things & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
<p>To learn about SoC architectures; Learn how Raspberry Pi. Learn to program Raspberry Pi. Implementation of internet of Things and Protocols.</p>		<p>1. Enable learners to understand System On Chip Architectures.</p> <p>2. Introduction and preparing Raspberry Pi with hardware and installation.</p> <p>3. Learn physical interfaces and electronics of Raspberry Pi and program them using practical's</p> <p>4. Learn how to make consumer grade IoT safe and secure with proper use of protocols.</p>	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
<p>1. Project on SOC architecture</p>		<p>1. To make learners able to develop the program Raspberry Pi</p>	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT503 & USIT5P3	Advanced Web Programming	02+02=04	50



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		& Practical	
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
To explore .NET technologies for designing and developing dynamic, interactive and responsive web applications.		1. Understand the .NET framework 2. Develop a proficiency in the C# programming language 3. Proficiently develop ASP.NET web applications using C# 4. Use ADO.NET for data persistence in a web application	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1.Project in Visual Studio 2.Quiz completion on oops		1.Student will easily develop the project with database 2.This will enhance the programming logic	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT505 & USIT5P5	Linux System Administration & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
Demonstrate proficiency with the Linux command line interface, directory & file management techniques, file system organization, and tools commonly found on most Linux distributions. Effectively operate a Linux system inside of a network environment to integrate with existing service solutions. Demonstrate the ability to troubleshoot challenging technical problems typically encountered when operating and administering Linux systems.		Learner will be able to develop Linux based systems and maintain. Learner will be able to install appropriate service on Linux server as per requirement. Learner will have proficiency in Linux server administration.	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1.Project on Managing System Administration		1.Student will learn which type of policy used in system and how to configure	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT506 & USIT5P6	Enterprise Java & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
Explore advanced topic of Java programming for solving problems		1) Understand the concepts related to Java Technology 2) Explore and understand use of Java Server Programming	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1.Project for Enterprise java 2.Quiz completion on oops		1.Student will easily develop the project with database 2.This will enhance the programming logic	



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## Semester VI

COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT601 & USIT6P1	Software Quality Assurance & Project Implementation	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
I. Basic software debugging methods. II. White box and Black box testing methods III. Writing the testing plans IV. Different testing tools		1: Identify the reasons for bugs and analyze the principles in software testing to prevent and remove bugs. 2: Implement various test processes for quality improvement 3: Apply the software testing techniques in commercial environments 4: Provides practical knowledge of a variety of ways to test software and an understanding of some of the trade-offs between testing techniques.	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1. Case study on different model used in software engineering 2. power point presentation on SE		1. They will understand which model will be used for given project 2. They will learn how to complete the project which methodology is best for given project	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT602 & USIT6P2	Security in Computing & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
To provide students with knowledge of basic concepts of computer security including network security and cryptography.		Understand the principles and practices of cryptographic techniques. Understand a variety of generic security threats and vulnerabilities, and identify & analyze particular security problems for a given application. Understand various protocols for network security to protect against the threats in a network	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
1. Project on Networking 2. Case study on different topologies		1. They will understand how we will use router, switches and which one is best one among all 2. Which type of network is best and where they are used.	
COURSE NUMBER	COURSE NAME	CREDIT POINTS	NUMBER OF HOURS
USIT603 & USIT6P3	Business Intelligence & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
1. To introduce the concept of data Mining as an important tool for enterprise		1. Demonstrate an understanding of the importance of data mining and the principles of	





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<p>data management and as a cutting edge technology for building competitive advantage.</p> <p>2. To enable students to effectively identify sources of data and process it for data mining</p> <p>3. To make students well versed in all data mining algorithms, methods of evaluation.</p> <p>4. To impart knowledge of tools used for data mining</p> <p>5. To provide knowledge on how to gather and analyze large sets of data to gain useful business understanding.</p>		<p>business intelligence</p> <p>2. Organize and Prepare the data needed for data mining using pre preprocessing techniques</p> <p>3. Perform exploratory analysis of the data to be used for mining.</p> <p>4. Implement the appropriate data mining methods like classification, clustering or Frequent Pattern mining on large data sets.</p> <p>5. Define and apply metrics to measure the performance of various data mining algorithms.</p>	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
<p>1.Competition</p> <p>2.Assignment on Data mining</p>		<p>1.They learn how data will update delete from database and how we will manage data from database</p> <p>2.Students will learn and understand which one database is useful for our project</p>	
<b>COURSE NUMBER</b>	<b>COURSE NAME</b>	<b>CREDIT POINTS</b>	<b>NUMBER OF HOURS</b>
USIT604 & USIT6P4	Principles of Geographic Information Systems & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
<p>It introduces participant to the fundamentals of GIS, GPS, data models, data sources, databases, cartography, introduction to Global Positioning Systems (GPS) and geospatial metadata. It prepares the candidate for the geospatial modelling and analysis.</p>		<p>1. describe what GIS is; name the major GIS software available; know where to find more information;</p> <p>2. explain the components and functionality of a GIS and the differences between GIS and other information systems;</p> <p>3. understand the nature of geographic information and explain how it is stored in computer (including map projection) and the two types of GIS data structure;</p>	
<b>COURSE ACTIVITIES</b>		<b>ACTIVITIES' OUTCOME</b>	
<p>1.Project on usages of GPS</p>		<p>1.student will get exposure to current trends and futures innovation</p>	
<b>COURSE NUMBER</b>	<b>COURSE NAME</b>	<b>CREDIT POINTS</b>	<b>NUMBER OF HOURS</b>
USIT606 & USIT6P6	IT Service Management & Practical	02+02=04	50
<b>COURSE OBJECTIVES</b>		<b>COURSE OUTCOME</b>	
<p>The course is designed as an introduction</p>		<p>1.Ability to understand the value of a service</p>	



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<p>and practical implementation of Information Technology Service Management (ITSM) and enables the students to understand how an integrated ITSM framework can be utilized to achieve IT business integration, cost reductions and increased productivity.</p>	<p>management framework as a means to help consultants and firms to establish a common understanding to ground a service management approach.</p> <ol style="list-style-type: none"> <li>2.Ability to understand the service management processes</li> <li>3.Ability to specify the service management system for given customers</li> <li>4. Ability to select the appropriate tools to support a given designed service management solution</li> </ol>
<p><b>COURSE ACTIVITIES</b></p>	<p><b>ACTIVITIES' OUTCOME</b></p>
<p>1.Assignment on IT Service Management in different Company</p>	<p>1.Student will learn which type of service and technology used in IT company</p>

