



Thakur Educational Trust's (Regd.)

**THAKUR RAMNARAYAN
COLLEGE OF ARTS & COMMERCE**
ISO 21001:2018 Certified

Thakur Ramnarayan Educational Campus, S. V. Road,
Dahisar (East), Mumbai - 400 068
Mob.: +91 902 902 6799 • Fax : 022 - 2828 1300
E-mail : admin@trcac.org.in • Website : www.trcac.org.in



Outcomes Based Education (OBE) Document

Programme: B.Sc. (I.T.)

Program Educational Objectives

PEO 1: To prepare students for career in Information Technology and its applications such as the design, development, implementation, testing and maintenance of computer software/hardware in professional career.

PEO 2: To develop the skill sets of students to be at par with the advancements in Information Technology domain.

PEO 3: To prepare the student for entry into a program of postgraduate study in Information Technology and related domain/ fields.

Program Outcomes

On successful completion, graduates of B.Sc. (I.T.) programme will be able to:

PO 1: Disciplinary Knowledge: Apply the knowledge of mathematics, computer science and Information Technology fundamentals to find of solutions of real time problems with different applications.

PO 2: Effective Communication Skills: Communicate effectively on complex activities with the end users and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO 3: Critical thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, testing out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

PO 4: Problem Solving: Identify, formulate, research literature, and analyse various research and real time application scenarios reaching substantiated conclusions using first principles of mathematics, computer sciences, and information technology.

PO 5: Analytical Reasoning: Develop ability to analyse a problem, identify and define applications that resolves the end user requirement with respect to real time problems with appropriate consideration for the societal, and environmental considerations.

PO 6: Research Related Skills: Use research-based knowledge and research methods to investigate the problems that cannot be solved by straightforward application of knowledge, theories and techniques; that may not have a unique solution, which need to be defined (modelled) within appropriate mathematical framework/ scientific derivation/ global technological evolutions.

PO 7: Environment and Sustainability: Understand the impact of the scientific applications and solutions in societal and environmental contexts, and demonstrate the knowledge of green computing and need for sustainable development.

PO 8: Cooperation/ Teamwork: Function effectively as an individual, and as a member or team leader in diverse cross functional groups and in multidisciplinary settings.

PO 9: Information/Digital Literacy: Create, select, and apply appropriate techniques, resources, and modern tools including prediction and modelling to complex activities with an understanding of the limitations.

PO 10: Ethics: Apply ethical principles and commit to professional ethics & responsibilities and norms of the technological and sustainable development.

PO 11: Self-directed and Life-long Learning: Recognize the need for and have the preparation and ability to engage independent and lifelong learning in the broadest context of global technological evolution.

PO 12: Leadership Readiness/Qualities: Demonstrate knowledge and understanding of the Computer Science, Information Technology and management principles and apply these to one's own work, as a member and leader in a team, to manage research and application projects and in multidisciplinary environments.

Program Specific Outcomes

On successful completion, graduates of B.Sc. (I.T.) programme will be able to:

PSO 1: Demonstrate technical knowledge and illustrate the required skills for software development with the help of basic hardware components. Apply standard software engineering practices and strategies in the development using open-source programming environment.

PSO 2: Develop the skills of logical thinking, analytical thinking & acquire essential skills of both verbal as well as non-verbal communication.

PSO 3: Apply concepts of wired, wireless, embedded and IoT systems for demonstrating innovative solutions with consideration to real-time applications. Develop knowledge of basic concepts of computer network, security and software testing.

PSO 4: Acquaint with contemporary issues, latest trends in technological evolution and there by develop new ideas and design new solutions to existing problems.

F.Y.B.Sc. (I.T.) (Semester - I)
Programming Principle with C (USIT101)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the concept of algorithms, program characteristics, compiler, linker and pre-processor.		✓				
CO2	Describe the types of operators, block structure and flow control of C program.	✓					
CO3	Identify the functions, program structure and discuss various techniques to work on them.		✓				
CO4	Analyse the concept of pointers & arrays and use these concepts for different programming aspects.			✓			
CO5	Describe the structures & functions, arrays of structures, pointers to structures and file management.		✓				

F.Y.B.Sc. (I.T.) (Semester - I)
Digital Logic and Applications (USIT102)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the concept of number system and conversion of number system.		✓				
CO2	Equate Boolean expression and reduce the expression by using various Boolean laws. To equate and simplify the Boolean expression using K map.			✓			
CO3	Realize the concept of Combinational Logic and various types of Combinational circuits.		✓				
CO4	Realize the working of latches and various types of flip flops.		✓				
CO5	Design the circuit based on the concept of registers and counters.		✓				

F.Y.B.Sc. (I.T.) (Semester - I)

Fundamentals of Database Management Systems (USIT103)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Identify the basic concepts and various data models used in database design ER modelling concepts and architecture use and design queries using SQL.		✓				
CO2	Apply relational database theory and be able to describe relational algebra expression, tuple and domain relational expression for queries.	✓					
CO3	Recognize the use of normalization and identify functional dependency, indexing and hashing techniques used in database design.		✓				
CO4	Recognize the purpose of query processing and identify optimization and also demonstrate the basics of query evaluation.		✓				
CO5	Apply and relate the concept of transaction, concurrency control and recovery in the database and Discuss recovery system.			✓			

F.Y.B.Sc. (I.T.) (Semester - I)

Computational Logic and Discrete Structure (USIT104)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Describe various concepts of set theory, identify and explain various forms of relations		✓				
CO2	Classify various types of functions, explain their properties, describe various concepts of probability, define random variables and implement the concept to describe binomial distribution.			✓			
CO3	Explain and apply Techniques of Counting, interpret recurrence relations and solve them.			✓			
CO4	Interpret various concepts of graphs and directed graphs, explain various algorithms and apply them to solve the problems.			✓			
CO5	Illustrate various types of Binary Trees and use them to explain other concepts of binary trees, Ordered Sets and lattices.		✓				

F.Y.B.Sc. (I.T.) (Semester - I)
Technical Communication Skills (USIT105)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Demonstrate the process and theory of communication, Identify its forms and their barriers		✓				
CO2	Strategize to communicate effectively and apply communication in the workplace and design their own emails.			✓			
CO3	Classify types of listening, process of job interviews and develop presentation skills		✓				
CO4	Build letters, reports and proposals and create resume.			✓			
CO5	Explain the importance of ethics in business communication and create visual aids.		✓				

F.Y.B.Sc. (I.T.) (Semester - II)

Object Oriented Programming with C++ (USIT201)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the concept of OOP and classify OOP and POP.		✓				
CO2	Apply the concept of constructor and destructor. Construct and organize the concept of overloading of function, operator and constructor.			✓			
CO3	Identify and apply the concept of inheritance, virtualization and I/O manipulators.			✓			
CO4	Categorize the logical aspects of exceptions and streams.				✓		
CO5	Categorize the new concepts of Standard Template Library			✓			

F.Y.B.Sc. (I.T.) (Semester - II)

Fundamentals of Micro Processor and Microcontrollers (USIT202)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the basic concepts of Microprocessor and Microcomputer Systems.		✓				
CO2	Describe the architecture and hardware aspects of 8085 and Classify 8085 instructions.			✓			
CO3	Write assembly language programs in 8085.			✓			
CO4	Describe the peripheral devices and interfacing to 8051 Micro Controller and Write 8051 C programs.			✓			
CO5	Design Embedded Systems with 8051 Microcontroller						✓

F.Y.B.Sc. (I.T.) (Semester - II)
Web Applications Development (USIT203)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Identify the emerging web technologies and apply this knowledge to create static/dynamic web page.			✓			
CO2	Memorize and explain the implementation of HTML5, CSS and other HTML5 styling elements.		✓				
CO3	Memorize, classify and use different elements of HTML5 page layout, navigation, table, forms and media.			✓			
CO4	Memorize JavaScript operators, statements, properties, methods along with events.	✓					
CO5	Explain and illustrate multiple PHP concepts like variable declaration, use of control statements, branching, looping, regular expression and many more.		✓				

F.Y.B.Sc. (I.T.) (Semester - II)

Numerical Methods (USIT204)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Demonstrate the Mathematical Model, Engineering Problem Solving, Taylor series and classify the types of errors.		✓				
CO2	Develop the solutions of Algebraic and Transcendental Equations and apply Interpolation methods.			✓			
CO3	Build the solution of simultaneous algebraic equations (linear) using iterative methods and Analyse Numerical differentiation and Integration.				✓		
CO4	Identify the numerical solution of 1st and 2nd order differential equations and apply the Least-Squares Regression.			✓			
CO5	Simplify the Linear Programming and solve Numerical Solutions of Partial Differential Equations.				✓		

F.Y.B.Sc. (I.T.) (Semester - II)

Green IT (USIT205)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the concept of green technology, different standards of Regulation Green IT.		✓				
CO2	Demonstrate the concept of minimizing power utilization in technology.		✓				
CO3	Illustrate and apply the concepts about Green PC, notebook, server and green datacentre.			✓			
CO4	Explain and apply the concept of recycling			✓			
CO5	Classify and analyse the metrics for green IT				✓		

S.Y.B.Sc. (I.T.) (Semester - III)
Python Programming (USIT301)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Describe the variables & expressions in Python, recognize the Python Programming Constructs, experimental debugging and select the proper programming paradigms using conditional statements, control statements and looping.		✓				
CO2	Demonstrate basic concepts of Python Functions and Strings.			✓			
CO3	Analyze the concept of Lists, Tuples, Dictionaries, File and Exception Handling.				✓		
CO4	Explain the various design applications of Regular Expression, Class and objects using OOP.		✓				
CO5	Develop the design of Multithreaded Programming, Modules and Layout management, Storing Data in Database.			✓			

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

Data Structures (USIT302)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Classify the importance of Algorithms and data structures in becoming a more productive programmer. Select the suitable array structure for a real-world problem.		✓				
CO2	Analyse the performance characteristics of Linked List using mathematical and measurement techniques.		✓				
CO3	Identify the advantages and disadvantages of stack/queue implementations. Apply different operations of stack/queue for a real-world problem.	✓					
CO4	Describe the usage of various sorting, searching techniques and tree structures along with different operations respectively.		✓				
CO5	Choose, explain and apply various hashing and collision resolution techniques on data. Memorize terms associated with graphs and apply different graph operations and traversals.		✓				

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

Computer Networks (USIT303)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain data communication, network models and Categorise Digital to analog transmission		✓				
CO2	Summarize bandwidth utilization, name different transmission media, error detection techniques like checksum, cyclic redundancy check and parity check, switching techniques.		✓				
CO3	Apply the concepts of data link control, media access control, wireless LANs, connecting devices and virtual LANs.			✓			
CO4	Explain network layer, unicast routing protocols and next generation IP.		✓				
CO5	Demonstrate the functionality of transport layer and standard client server protocols.		✓				

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

Database Management Systems (USIT304)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain Database and its purpose along with its advantages and disadvantages. Summarize data models Identify attributes, relationships and many other components to draw ER diagrams.			✓			
CO2	Describe Normalization and its types also Explain relational algebra, domain and tuple relational calculus.		✓				
CO3	Apply the concepts of SQL, identify various types of constraints and use these concepts in fetching and manipulating the databases.			✓			
CO4	Explain transaction management, concurrency control, Lock based protocol, timestamp-based protocol.		✓				
CO5	Describe PL/SQL and use different operators, control structures, methods for data management. Differentiate between types of cursors and summarize the concept of triggers.			✓			

S.Y.B.Sc. (I.T.) (Semester - III)
Applied Mathematics (USIT305)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Identify different types of matrices, Explain the concept of matrices and apply this knowledge to solve the linear equations.			✓			
CO2	Describe the algebra of complex numbers, interpret the concept of the hyperbolic functions and solve logarithms of a complex number.			✓			
CO3	Identify and distinguish various types of first order and first degree, first order and higher degree, and higher order differential equations and demonstrate various methods to solve them.				✓		
CO4	Describe Laplace and inverse Laplace transform, explain their properties and apply them to solve the differential equations.			✓			
CO5	Describe various methods to solve multiple integrals and use the concept to sketch the region and find area and volume of a solid. Explain gamma function, beta function, error function, differentiation under integral sign			✓			

S.Y.B.Sc. (I.T.) (Semester - IV)

Core Java (USIT401)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Demonstrate the concept of Java, JVM, Java architecture & Java API, data types and illustrate their programming constructs and select the proper programming paradigms.		✓				
CO2	Classify basic concepts of flow control iterations, Java classes and interpret the program logic.		✓				
CO3	Identify and apply the concept of inheritance and Java packages.			✓			
CO4	Construct and organize the concept of enumeration, arrays and multithreading.			✓			
CO5	Categorize the logical aspects of exceptions and byte streams.				✓		

S.Y.B.Sc. (I.T.) (Semester - IV)

Introduction to Embedded Systems (USIT402)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Demonstrate Embedded systems and explain the core of embedded systems.		✓				
CO2	Describe the hardware of Embedded systems.		✓				
CO3	Apply the concepts of Microcontroller and develop 8051 programs in C.			✓			
CO4	Analyse Embedded Systems with 8051 Microcontroller.				✓		
CO5	Describe Real Time Operating System.		✓				

S.Y.B.Sc. (I.T.) (Semester - IV)

Computer Oriented Statistical Techniques (USIT403)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Demonstrate the Mean, Median, Mode, and Other Measures of Central Tendency and explain the Standard Deviation and Other Measures of Dispersion.		✓				
CO2	Explain the Moments, Skewness, and Kurtosis and solve the Elementary Probability Theory & Elementary Sampling Theory.			✓			
CO3	Apply and categorize the Statistical Estimation Theory, Statistical Decision Theory, Statistics in R.				✓		
CO4	Illustrate the Small Sampling Theory and The Chi-Square Test.		✓				
CO5	Solve the concepts of Curve Fitting, the Method of Least Squares and explain the Correlation Theory.			✓			

S.Y.B.Sc. (I.T.) (Semester - IV)
Software Engineering (USIT404)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Demonstrate the concept of software engineering and illustrate functional and non-functional requirements and software methodologies.		✓				
CO2	Determine requirement engineering process and illustrate the concept of object model, behavioural model and data model			✓			
CO3	Distinguish between architectural and user interface design and identify the concept of project and quality management process				✓		
CO4	Illustrate and categorize the difference between validation and verification and identify the concept of software testing and software measurement				✓		
CO5	Identify and illustrate the process improvement process and software reuse				✓		

S.Y.B.Sc. (I.T.) (Semester - IV)

Computer Graphics and Animation (USIT405)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the basic knowledge of Computer Graphics.				✓		
CO2	Determine the graphic pipeline such as: 2d and 3d transformation, clipping, hidden surface removal etc.			✓			
CO3	Implement various algorithms to scan, convert the basic geometrical primitives, Area filling.			✓			
CO4	Express the understanding of mapping from world coordinates to device coordinates and projections.		✓				
CO5	Explain the basic principles of animation.		✓				

T.Y.B.Sc. (I.T.) (Semester - V)
Software Project Management (USIT501)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the concept of project management and apply this knowledge to implement projects.			✓			
CO2	Describe the appropriate Project selection and interpret the concept of software effort estimation.			✓			
CO3	Identify various types of activity planning and demonstrate risk management.		✓				
CO4	Describe the monitoring and control of a project and use the concept to manage contracts.		✓				
CO5	Explain software quality in project planning and identify techniques to help enhance software quality.		✓				

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

Internet of Things (USIT502)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Apply IoT knowledge to implement small-scale IoT projects.			✓			
CO2	Explain the concepts of prototyping, prototyping embedded devices and general concepts of Internet of Things.		✓				
CO3	Recognize various mobile devices, sensors, and applications.		✓				
CO4	Execute various business models and learn the techniques and write embedded code.			✓			
CO5	Explain the interconnection and integration of the physical world and the cyber space.		✓				

T.Y.B.Sc. (I.T.) (Semester - V)
Advanced Web Programming (USIT503)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Describe the concept of .NET Framework, C# language, types, objects and namespaces.		✓				
CO2	Demonstrate web form fundamentals, server controls, ASP.NET Application and form controls.			✓			
CO3	Explain the concept of error handling, logging, tracing, state management, styles, themes and master pages.		✓				
CO4	Analyse the ADO.NET objects and data controls & binding.				✓		
CO5	Apply the XML classes, XML validation, XML display, transforms and fundamentals and ASP.NET AJAX.			✓			

T.Y.B.Sc. (I.T.) (Semester - V)
Artificial Intelligence (USIT504)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the concept of AI, its history and state of the art AI and describe the various types of agents used in AI		✓				
CO2	Demonstrate the performance of various problem-solving search techniques		✓				
CO3	Illustrate about the concept of adversarial search, logical agents and propositional logic.		✓				
CO4	Apply First order logic and build knowledge-based agents and discuss about the inference in First order logic			✓			
CO5	Build the various types of planning systems in AI and understand about knowledge representation concept			✓			

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

Enterprise Java (USIT506)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Describe the concept of Enterprise Application, Java EE Technologies and programming for Glassfish server, Java EE Architecture and demonstrate basic concepts of Java Servlet API and Servlet Lifecycle.		✓				
CO2	Explain the concept of Request dispatcher Interface, Methods and Application, cookies, sessions, files and non-blocking I/O.		✓				
CO3	Explain the concept of Java Server Pages, Disadvantages of JSP, JSP v/s Servlets, Life Cycle of a JSP Page, JSP function, JSP Implicit Objects.			✓			
CO4	Apply the concepts of Enterprise Java beans, Architecture, Benefits of Enterprise Bean, Types of Enterprise Bean, and demonstrate the working with Session Beans, Java Naming and Directory Interface			✓			
CO5	Explain the various design applications of Persistence, Object/Relational Mapping And JPA, Persistence in Java, Current Persistence Standards in Java, Architecture and Components of Hibernate, Creating and Running Hibernate Application.		✓				

T.Y.B.Sc. (I.T.) (Semester - VI)
Software Quality Assurance (USIT601)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the concept of software quality and its important aspects.		✓				
CO2	Develop the test policy, test strategy, test methodology/ approach.			✓			
CO3	Identify and apply different types of unit testing methods.			✓			
CO4	Construct the validation and verification workbench.				✓		
CO5	Explain testing levels. and apply special tests, testing.			✓			

T.Y.B.Sc. (I.T.) (Semester - VI)
Security in Computing (USIT602)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the concept of Information Security and Risk associated with Information.		✓				
CO2	Illustrate various concepts of Information Security Techniques and Types like Encryption, Decryption, Storage and Database Security etc.			✓			
CO3	Demonstrate and apply the concept of Network Device Security and Wireless Network.			✓			
CO4	Illustrate the concept of Intrusion detection and OS Model for Information Security.			✓			
CO5	Explain the concepts of Application Design physical Security.		✓				

T.Y.B.Sc. (I.T.) (Semester - VI)
Business Intelligence (USIT603)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the concept of business intelligence and decision support system in business decision making.		✓				
CO2	Illustrate the role of mathematical models in decision making and describe data mining and data preparation methods.		✓				
CO3	Demonstrate about the concept of classification and clustering in business intelligence.		✓				
CO4	Apply marketing models, logistic and production models and elaborate data envelopment analysis measures.			✓			
CO5	Explain the concept of knowledge management, Artificial intelligence and expert systems.		✓				

T.Y.B.Sc. (I.T.) (Semester - VI)

Principles of Geographic Information Systems (USIT604)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Explain the basic concept of GIS and its applications, know different types of data representation in GIS		✓				
CO2	Illustrate spatial and non-spatial data features in GIS and understand the map projections and coordinates systems		✓				
CO3	Identify prepare maps and perform analysis on existing maps.			✓			
CO4	Compare raster and vector data structures and concepts.		✓				
CO5	Explain satellite positioning systems and explain different GPS.		✓				

T.Y.B.Sc. (I.T.) (Semester - VI)
IT Service Management (USIT606)

Course Outcomes

After completing this course, students will be able to:

CO	Course Outcomes	Revised Bloom's Taxonomy Learning Levels					
		R	U	A	N	E	C
CO1	Demonstrate the concept of IT service management and its principles.		✓				
CO2	Classify then service design, goals, principles, balanced design and business service management.		✓				
CO3	Identify and apply the concept of service transition, it's polices, transition planning and support.			✓			
CO4	Construct and organize the concept of service operation principles, providing services, event management and incident management.			✓			
CO5	Categorize the continual service improvement principles, process and technology considerations.				✓		