Shree Santkrupa Institute of Engineering and Technology

Department of Computer Science and Engineering

Academic Year: 2021-22

Semester: III

Sr. No.	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
1	BTBS301	Engineering Mathematics – III	3	1	-	4
2	BTCOC302	Discrete Mathematics	3	1	-	4
3	BTCOC303	Data Structures	3	1	-	4
4	BTCOC304	Computer Architecture & Organizatior	3	1	-	4
5	BTCOC305-B	Object Oriented Programming in Java	3	1	-	4
6	BTCOL306	Data Structures Lab & Object Oriented Programming Lab	-	-	4	2
7	BTCOS307	Seminar – I	-	-	4	2
8	BTES211P	Internship	-	-	-	Audit

Semester: IV

Sr. No.	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
1	BTCOC401	Design & Analysis of Algorithms	3	1	-	4
2	BTCOC402	Operating Systems	3	1	-	4
3	BTHM403	Basic Human Rights	3	-	-	3
4	BTBS404	Probability Theory and Random Proces	3	-	-	3
5	BTES405	Digital Logic Design & Microprocesso	3	1	-	4
6	BTCOL406	Operating Systems & Python Programn	1	-	4	3
7	BTCOS407	Seminar – II	-	-	4	2
8	BTCOF408	Internship	-	-	-	Audit

Semester: V

Sr. No.	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
1	BTCOC501	Database Systems	3	1	-	4
2	BTCOC502	Theory of Computations	3	1	-	4
3	BTCOC503	Machine Learning	3	1	-	4
4	BTCOE504 -A	Introduction to Research	2	-	-	2
5	BTCOE505 - B	Business Communication	2	-	-	2
6	BTCOC506	Competitive Programming-I	1	-	2	2
7	BTCOL507	Database System Laboratory	-	-	2	1
8	BTCOL508	Machine Learning Laboratory	-	-	2	1
9	BTCOS509	Seminar	-	-	2	1
10	BTCOF411	Internship	-	-	-	1

Semester: VI

Sr. No.	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
1	BTCOC601	Compiler Design	3	1	-	4
2	BTCOC602	Computer Networks	3	1	-	4
3	BTCOE603 - C	Object-Oriented Analysis Design	2	1	-	3
4	BTCOE604 - C	Internet of Things	2	-	-	2
5	BTCOE605 -B	National Social Service	2	-	-	2
6	BTCOC606	Competitive Programming-II	1	-	2	2
7	BTCOL607 - B	Internet of Things Laboratory	-	-	2	2
8	BTCOL608	Computer Networks Laboratory	-	-	2	1

9	BTCOF609	Internship	-	-	-	1

Semester: VII

Sr. No.	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
1	BTCOC701	Software Engineering	3	-	-	3
2	BTCOE702 -B	Distributed System	3	-	-	3
3	BTCOE703 -A	Cloud Computing	3	-	-	3
4	BTCOE704 -A	Blockchain Technology	3	-	-	3
5	BTCOL705	Full Stack Development (LAMP)	1	-	2	2
6	BTCOL706	System Administration	1	-	2	2
7	BTCOL707	Distributed System Lab	-	-	2	1
8	BTCOL708	Cloud Computing Lab	-	-	2	1
9	BTCOP709	Project phase - I	-	-	2	1
10	BTCOF609	Internship	-	-	-	1

Semester: VIII

Sr. No.	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
1	BTCOE801-B	Social Networks	3	-	-	3
2	BTCOE802-A	Introduction to Industry 4.0 and Industrial	3	-	-	3
3	BTCOE803	Project phase - II	-	-	24	12

Course Outcomes

Semster : III		
Course Name		**Engineering Mathematics – III**
Course Code		**BTBS301**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, students will be able to:**
CO 1	Explain the application of the Laplace Transform to find solutions of system of linear equations arising in many engineering	
CO 2	Demonstarte and apply the concept Laplace Transform	
CO 3	Interpret Computation of Fourier Transform and their applications to engineering problems	
CO 4	Identify Partial Differential Equations and Their Applications.	
CO 5	Evaluate Functions of Complex Variables.	
Semster : III		
Course Name		**Discrete Mathematics**
Course Code		**BTCOC302**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Develop knowladge of Fundamental Structures and Basic Logic .	
CO 2	Classify basic concepts of Functions and Relations .	
CO 3	Apply and demonstrate knowladge of Graph in data structures.	
CO 4	Identify and explain knowladge of Trees in data structures.	
CO 5	Interpret basic concepts of Algebraic Structures and Morphism.	
Semster : III		
Course Name		**Data Structures**
Course Code		**BTCOC303**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Explain the concepts of algorithm evaluation	
CO 2	Explain insertion, deletion and traversing operations on data structures.	
CO 3	Define data structures like array, stack, queues and linked list.	
CO 4	Apply searching and sorting techniques on data	
CO 5	Demonstrate the representation and traversal techniques of trees and graphs	
Semster : III		

Course Name		Computer Architecture & Organization
Course Code		BTCOC304
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Identify the basic organization of computer system, its function, interconnection and CPU structure.	
CO 2	Explain basic instruction set, operations, addressing modes and RISC and CISC architecture.	
CO 3	Perform Arithmetic operations, 2's complement representation and operations with this representation.	
CO 4	Identify a memory module and analyze its operation by interfacing with the CPU.	
CO 5	Create the organization for the Control unit, Arithmetic and Logical unit, Memory unit and the I/O unit and I/O interfaces.	
Semster : III		
Course Name		Object Oriented Programming in Java
Course Code		BTCOC305-B
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Explain the concept of Classes, Objects, Operators, JDE, JDK, and the structure of Java Programs.	
CO 2	Make use of Control Statements in java code.	
CO 3	Classify types of Array in java.	
CO 4	Apply the concept of Inheritance, Interfaces and Polymorphism in java	
CO 5	Make use of exception handling in Java and Javascript	
Semster : III		
Course Name		Object Oriented Programming Lab
Course Code		BTCOL306
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Build Java code using Classes, Objects, and Operators in Java.	
CO 2	Make use of Control Statements in java code.	
CO 3	Create Java code by using different types of Array.	
CO 4	Develop Java code by implementing Inheritance and Polymorphism	
CO 5	Make use of exception handling and Javascript	
Semster : III		
Course Name		Seminar I
Course Code		BTCOS307
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Identify recent technical topics from interested domain.	
CO 2	Analyze the applicability of modern software tools and technology.	
CO 3	Create the detailed literature survey and built a document with respect to technical publications.	
CO 4	Develop presentation and communication skills.	
CO 5	Develop technical report preparationand professional skills.	
Semster : III		
Course Name		Data Structures Lab
Course Code		BTCOL308
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Differentiate static and dynamic memory allocation techniques	
CO 2	Implement various operations on linear and non-linear data structures	
CO 3	Analyze and implement different searching and sorting techniques	
CO 4	Identity the appropriate data structure to solve a given problem	
CO 5	Compute time complexities of different algorithms	
Semster : IV		
Course Name		Design and Analysis of Algorithm
Course Code		BTCOC401
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Define worst-case running times of algorithms using asymptotic analysis	
CO 2	Compare searching algorithms using divide-and-conquer paradigm.	
CO 3	Design algorithms using dynamic programming and back tracking methods.	
CO 4	Apply the greedy algorithms to solve real world problems such as knapsack and TSP.	

CO 5	Develop various types of programming paradigms in a high-level language.

Semster : IV		
Course Name		**Probability Theory and Random Processes**
Course Code		**BTBS404**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Apply knowledge of Bayes‘ theorem of inverse probability, Properties of probabilities.	
CO 2	Classify Relation between binomial and normal distributions.	
CO 3	Analyse Poisson and normal distributions, Importance of normal distribution.Properties of Karl Pearson's correlation coefficient	
CO 4	Demonstrate the Linear and non-linear regression, Lines of regression, Derivation of regression lines of y on x and x on y, Angle	
CO 5	Identify the principles of Estimation, Large Sample Estimation of a Population Mean, Small Sample Estimation of a Population	

Semster : IV		
Course Name		**Operating Systems**
Course Code		**BTCOC402**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Illustrate the basic concepts of operating systems .	
CO 2	Differentiate between programs, processes and threads.	
CO 3	Describe the concepts of process and scheduling algorithms.	
CO 4	Identify deadlock and use various algorithms to handle deadlocks.	
CO 5	Illustrate various memory mgmt,file mgmt and disk storage management mechanisms.	

Semster : IV		
Course Name		**Digital Logic Design & Microprocessors**
Course Code		**BTES405**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Examine the structure of number system and performs the conversion among different number systems.	
CO 2	Create combinational circuits for given application.	
CO 3	Design and analysis of synchronous and asynchronous sequential circuits using flip-flops.	
CO 4	Explain the architecture of 8086 microprocesor.	
CO 5	Write the program using 8086 microprocessor.	

Semster : IV		
Course Name		**Python Programming Lab**
Course Code		**BTCOL406**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Explain programming, algorithms, data structure concepts and a simple Python program.	
CO 2	Make use of variables, operators and control-flow statements and Functions in Python program.	
CO 3	Illustrate Python Exception handling, String processing,basic input/output and file-handling methods	
CO 4	Analyze classes, Objects and data structures	
CO 5	Develop Python code with SQLite database	

Semster : IV		
Course Name		**Operating Systems Lab**
Course Code		**BTCOL406**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Execute basic Unix Commands.	
CO 2	Execute Bash Shell commands.	
CO 3	Describe the CPU scheduling algorithms and page replacement algorithms.	
CO 4	Illustrate different memory management algorithms.	
CO 5	Identify different system calls.	

Semster : IV		
Course Name		**Seminar II**
Course Code		**BTCOS407**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Define the basic tags and properties in HTML.	
CO 2	Demonstrate the easily maintained CSS code to represent HTML pages.	

CO 3	Make Use of JavaScript to add dynamic content to pages.
CO 4	Analyze server side scripting and make use of PHP
CO 5	Develop web based application using HTML, CSS, Java Script, AJAX, PHP or any other front-end tool

Semster : IV		
Course Name		**Basic Human Rights**
Course Code		**BTHM403**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Expain the history of human rights.	
CO 2	Recall responsibilities of others caste, religion, region and culture.	
CO 3	Remember the importance of groups and communities in the society.	
CO 4	Analyse the philosophical and cultural basis and historical perspectives of human	
CO 5	Aware of their responsibilities towards the nation.	

Semster : V		
Course Name		**Database Systems**
Course Code		**BTCOC501**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Illustrate the database design for applications and make use of ER diagram.	
CO 2	Explain relational algebra concepts.	
CO 3	Apply the various concepts in query processing using SQL.	
CO 4	Apply normalization techniques in database application.	
CO 5	Describe basic database storage structures and access techniques using file organizations, indexing and Transaction Processing.	

Semster : V		
Course Name		**Theory of Computation**
Course Code		**BTCOC502**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Define Finite Automata machines for given problems and conversion of various Machine.	
CO 2	Illustrate given Finite Automata machine and find out its Language	
CO 3	Apply Pushdown Automata machine for given CF language(s)	
CO 4	Discover the strings/sentences of a given context-free languages using its grammar	
CO 5	Design Turing machines for given any computational problem.	

Semster : V		
Course Name		**BTCOC503**
Course Code		**Machine Learning**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Explain types of Machine learning, hypothesis space, bias, cross-validation, Linear regression, Decision trees and overfitting	
CO 2	Illustrate Instance-based learning, Feature reduction, Collaborative filtering-based recommendation, Probability, and Bayes	
CO 3	Classify Logistic Regression and Support Vector Machine	
CO 4	Explian Neural network and deep learning concepts	
CO 5	Apply computational learning theory, PAC learning model, Sample complexity, VC Dimension, Ensemble learning.	
CO 6	Analyze Clustering k-means, adaptive hierarchical clustering, Gaussian mixture model	

Semster : V		
Course Name		**Introduction to Research**
Course Code		**BTCOE504 -A**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Understand the research process and develop the ability to apply the methods while working on a research project work.	
CO 2	Perform literature reviews through conducting Systematic Research Survey.	
CO 3	Identify procedures of sampling, measurement scales and instruments, data collection, analysis and framework for research	
CO 4	Write a research report, thesis and Technical Presentations.	
CO 5	Choose the appropriate research design and develop appropriate research hypothesis for a research project.	

Semster : V	
Course Name	**Competitive Programming - I**
Course Code	

Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Explain the concepts of online Judges, feedback and the standard input output to solve the programming challenges.	
CO 2	Design and implement the basic programs of Arrays, Linked list, Strings etc	
CO 3	Design the test cases for the various programs.	
CO 4	Participate in the programming challenges in competitive platforms like codechef.com, uva.onlinejudge.com.	
Semster : V		
Course Name		**Business Communication**
Course Code		**BTCOE505 - B**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Demonstrate verbal and non-verbal communication ability	
CO 2	communicate effectively in various situations.	
CO 3	Develop interpersonal communications skills that are required for social and business interaction.	
CO 4	Employ proper public speaking techniques.	
CO 5	Demonstrate the use of basic and advanced business communication skills.	
Semster : V		
Course Name		**Database System Laboratory**
Course Code		**BTCOL507**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Explain the basics of SQL commands and construct queries using SQL.	
CO 2	Identify the design principles for logical design of databases, including the E-R method and normalization approach.	
CO 3	Implement Basic DDL, DML , DCL commands, Understand Data selection and operators used in queries and restrict data	
CO 4	Group functions to summarize data, join multiple tables using different types of joins.	
Semster : V		
Course Name		**Machine Learning Laboratory**
Course Code		**BTCOL508**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Interpret Regression Models	
CO 2	Solve a given problem by using the Logistic Regression model	
CO 3	Make use of Random Forest and Parameter Tuning methodsRandom Forest and Parameter Tuning	
CO 4	Apply Clustering Algorithms and make its evaluation	
CO 5	Choose the appropriate research design and develop appropriate research hypothesis for a research project.	
CO 6	Develop Machine Learning Project in Python on House Prices Data.	
Semster : V		
Course Name		**Seminar**
Course Code		**BTCOS509**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Identify recent technical topics from interested domain.	
CO 2	Analyze the applicability of modern software tools and technology.	
CO 3	Create the detailed literature survey and built a document with respect to technical publications.	
CO 4	Develop presentation and communication skills.	
CO 5	Develop technical report preparationand professional skills.	
Semster : VI		
Course Name		**Compiler Design**
Course Code		**(BTCOC601)**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Define the various phases and architecture of a compiler and how these phases interact with each other.	
CO 2	Illustrate designing and implementing lexical analyzers and parsers,regular expressions, finite automata,context-free grammars	
CO 3	Apply semantic analysis , manage symbol tables by using variable scopes, data types, and other semantic aspects.	
CO 4	Apply various compiler optimization techniques for improving the efficiency of generated code.	
CO 5	Create efficient and optimized machine code or intermediate code from the input source code.	
Semster : VI		
Course Name		**Computer Network**

Course Code		BTCOC602
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Recall the basic concept of Network, Transport and Application Layer.	
CO 2	Classify different terminologies of client server programming.	
CO 3	Apply various error detection and correction techniques at data link layer.	
CO 4	Analyze different network layer protocol like IPv4/IPv6,TCP,UDP and congestion control.	
CO 5	Elaborate different application layer protocol like DHCP, DNS, FTP, HTTP and SMTP.	
Semster : VI		
Course Name		Object-Oriented Analysis Design
Course Code		BTCOE603C
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Explain basic OOAD concepts	
CO 2	Draw various UML diagrams	
CO 3	Identify various design patterns.	
CO 4	Illustrate Use case analysis and CRC card analysis	
Semster : VI		
Course Name		Internet of Things
Course Code		BTCOE604 - C
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Explain the impact and challenges caused by IoT networks leading to new architectural model.	
CO 2	Compare smart objects and its deployment model and the technologies to connect to network.	
CO 3	Assess the role of IoT protocol for sustainable network communication.	
CO 4	Explain the need of Data Analytics and Security in IoT.	
CO 5	Design different interdisciplinary IoT applications using Arduino and RaspberryPi	
Semster : VI		
Course Name		National Social Services
Course Code		BTCOE605 -B
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Know Introduction and Basic Concepts of NSS	
CO 2	Know Youth and community mobilization	
CO 3	Identify the importance and Role of Youth Leadership	
CO 4	Identify Life Competencies and skill.	
CO 5	Develop Social Harmony and National Integration.	
Semster : VI		
Course Name		Competitive Programming-II
Course Code		BTCOC606
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Illustrate the concepts of online Judges, feedback and the standard input output to solve the programming challenges.	
CO 2	Implement the advanced programs of Arrays, Linked list, Strings, Dynamic	
CO 3	Explain the guidelines for designing the test cases for the various programs.	
CO 4	Participate in the programming challenges in competitive platforms like codechef.com,	
Semster : VI		
Course Name		Internet of Things Laboratory
Course Code		BTCOL607 - B
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Explain the different operating systems for Raspberry-Pi and OS installation on Raspberry-Pi.	
CO 2	Connectivity and configuration of Raspberry-Pi circuit with basic peripherals	
CO 3	Implement interfacing of various sensors with Raspberry Pi	
CO 4	Demonstrate the ability to transmit data between different devices.	
CO 5	Apply IoT concepts in different applications using Raspberry Pi	
Semster : VI		
Course Name		Computer Network Laboratory

Course Code		BTCOL608
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Choose Different types of cables and implement cross-wired and straight cable using Climping Tool.	
CO 2	Illustration of Network Devices Repeater, Hub, Switch, Bridge, Router.	
CO 3	Organize the computer in Local Area Network.	
CO 4	Analyze a Network topology using Packet tracer software.	
CO 5	Construct a Network using Distance Vector routing protocol.	
Semster : VII		
Course Name		Software Engineering
Course Code		BTCOC701
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Define software lifecycle development models.	
CO 2	Compare requirements engineering including functional & non-functional requirements.	
CO 3	Apply specification into an architectural design and system models.	
CO 4	Analyze Object-oriented design using UML & an implementation issues.	
CO 5	Elaborate fundamental concepts in software testing & designing test cases and test data.	
Semster : VII		
Course Name		Distributed System
Course Code		BTCOE702B
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Analyze distributed operating system concepts & design issues.	
CO 2	Illustrate communication, synchronization and processes in distributed systems.	
CO 3	Identify distributed file systems, distributed shared memory concepts.	
CO 4	Explain distributed architecture, naming, synchronization, consistency and replication, fault tolerance, security, and distributed file	
Semster : VII		
Course Name		Cloud Computing
Course Code		BTCOE703 -A
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Explain evolution, vision, benefits, challenges of cloud computing and the concept of Virtualization.	
CO 2	Explain Cloud Computing Architecture along with services and types of Clouds.	
CO 3	Explain other services available in Clouds for Enterprise and Disaster recovery management of cloud.	
CO 4	Identify Aneka: Cloud Application Platform and its Deployment Models.	
CO 5	Design different Applications in Cloud Application Platform	
Semster : VII		
Course Name		Full Stack Development
Course Code		BTCOL705
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Explain the basic concepts of HTML and CSS to design and implement static web sites.	
CO 2	Design a responsive web site using HTML5 and CSS3 and JavaScripts.	
CO 3	Create PHP programs that uses various PHP library functions, and that manipulate files and directories.	
CO 4	Create PHP Programs to connect, access, and update a MySQL database.	
CO 5	Design and develop the web based applications using a combination of client-side (JavaScript, HTML) and server-side	
Semster : VII		
Course Name		Blockchain Technology
Course Code		BTCOE704 -C
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Understand concept of blockchain using bitcoin and cryptography.	
CO 2	Analyze difference in bitcoin and blockchain.	
CO 3	Illustrate different prrmissioned model using different algorithms.	
CO 4	Analyze different uses of blockchain such as cross border payment , trading, KYC.	
CO 5	Develop smart contracts in Ethereum framework.	
Semster : VII		

Course Name		System Administration
Course Code		BTCOL706
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Select the installation process of Linux operating system with LVM & without LVM.	
CO 2	Illustrate the role and responsibilities of a Linux System Administration.	
CO 3	Make a use of Linux utilities and commands.	
CO 4	Determine the problem and troubleshoot them.	
CO 5	Design network services on a Linux System	
Semster : VII		
Course Name		Distributed System Lab
Course Code		BTCOL707
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Define the characterization of Distributed Systems,practical Foundation for Distributed System and Concepts in Message Passing	
CO 2	Explain the Distributed Mutual Exclusion and Distributed Deadlock Detection	
CO 3	Apply the Agreement Protocols and Distributed Resource Management.	
CO 4	Evaluate the Transactions and Concurrency Control,Distributed Transactions and Replication.	
Semster : VII		
Course Name		Cloud Computing Lab
Course Code		BTCOL708
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Explain evolution, vision, benefits, challenges of cloud computing and the concept of Virtualization.	
CO 2	Explain Cloud Computing Architecture along with services and types of Clouds.	
CO 3	Explain other services available in Clouds for Enterprise and Disaster recovery management of cloud.	
CO 4	Identify Aneka: Cloud Application Platform and its Deployment Models.	
CO 5	Design different Applications in Cloud Application Platform	
Semster : VII		
Course Name		Project phase - I
Course Code		BTCOP709
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Analyze the problem, formulation and solution of the selected project	
CO 2	Develop solutions for contemporary problems using modern tools for sustainable development.	
CO 3	Demonstrate ethical and professional sustainability while working in a team and communicate effectively for the benefit of the	
CO 4	Explain the engineering, finance and management principles.	
CO 5	Elaborate technical information by means of written reports.	
Semster : VIII		
Course Name		Social Networks
Course Code		BTCOE801-B
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Explain different types of entities and relationships as nodes and edges and represent this information as relational data	
CO 2	Execute network analytical computations.	
CO 3	Use advanced network analysis software to generate visualizations and perform empirical investigations of network data.	
CO 4	Interpret and synthesize the meaning of the results with respect to a question, goal, or task.	
CO 5	Collect network data in different ways and from different sources while adhering to legal standards and ethics standards.	
Semster : VIII		
Course Name		Introduction to industry 4.0 & industrial IOT
Course Code		BTCOE802-A
Course Outcome No	Course Outcome Statement	By the end of the course, the student will be able to:
CO 1	Choose the topics from the recent various existing industrial systems.	
CO 2	Analyze different modern technologies and software tools that are applicable solve the complex problem.	
CO 3	Identify how cyber-physical systems integrate digital and physical components in an industrial context.	
CO 4	Discover knowledge of theory and practice related to industrial IOT systems.	
CO 5	Develop architectural design patterns,representation,Interaction skill related to Industrial IOT.	

Semster : VIII		
Course Name		**Project phase - II**
Course Code		**BTCOE803**
Course Outcome No	**Course Outcome Statement**	**By the end of the course, the student will be able to:**
CO 1	Apply the technical knowledge acquired in the program for solving real world problems.	
CO 2	Apply new technologies & design techniques (platform, database, etc.) concerned for devising a solution for a given problem	
CO 3	Apply project management skills (scheduling work, procuring parts and documenting Expenditures and working within the	
CO 4	Work with team mates, sharing due and fair credits and collectively apply effort for making project successful.	
CO 5	Elaborate technical information by means of written reports.	