



KBTCE

Affiliated to Savitribai Phule Pune University
& Approved by AICTE New Delhi

NASHIK DISTRICT MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering

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IT Department Course Outcomes

Vision

To be the centre for excellence in the development of IT solutions with specific approach of industry interface, blended learning and project based learning leading to the development of globally competent graduates and life-long learners.

Mission

Committed to develop students as competent IT professionals for employment and self-employment by adapting to the innovative and interactive academic process to acquire domain specific technical knowledge, soft skills and social responsibilities

Program Educational Objectives

1. Possess strong fundamental concepts in mathematics, science, engineering and Technology to address technological challenges
2. Possess knowledge and skills in the field of Computer Science and Information Technology for analyzing, designing and implementing complex engineering problems of any domain with innovative approaches.
3. Possess an attitude and aptitude for research, entrepreneurship and higher studies in the field of Computer Science and Information Technology.
4. Have commitment to ethical practices, societal contributions through communities and life-long learning.
5. Possess better communication, presentation, time management and team work skills leading to responsible & competent professionals and will be able to address challenges in the field of IT at global level

Program Outcomes

PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	Communication: Communicate effectively on complex engineering activities with the engineering community 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.
PO11	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcome

PSO 1	Underpinning of mathematical concepts: To use mathematical fundamentals to solve problem using appropriate mathematical analysis, data structures and algorithm
PSO 2	Underpinning of computer system: Use the functionality of hardware & software aspects for rendering the fundamental concepts and methodology of computer system.
PSO 3	Underpinning of IT professional: Function as team member in order to manage IT projects using suitable project management techniques by utilizing soft skill for societal and environmental well-being.

SE Subjects Course Outcomes
ACADEMIC YEAR: - 2018-19
Semester – I

Subject Code	Discrete Structures
C201.1	Student will be able to understand permutation combination and counting principle and apply it to determine probabilities.
C201.2	Student will learn use of sets, proof techniques and use mathematical proposition to check the truthfulness.
C201.3	Student will understand and demonstrate relation and function and be able to determine their properties.
C201.4	The student will learn and formulate problem using graph theory
C201.5	The student will be familiar with trees, spanning trees and demonstrate tree traversal methods.
C201.6	Student will be familiar with groups and rings.

Subject Code	Computer Organization & Architecture
C202.1	Students will be able to solve problems based on computer arithmetic.
C202.2	Students will be able to explorer processor structure & its functions.
C202.3	Students will be able to learn and obtain knowledge about micro-programming of a processor.
C202.4	Students will understand architecture concepts related of IO organization and memory organization
C202.5	Students will acquire knowledge about instruction level parallelism.
C202.6	Students will acquire knowledge about parallel organization of multi-processors & multi core systems.

Subject Code	Digital Electronics and Logic Design
C203.1	To acquire knowledge of Number systems and Logic families.
C203.2	Ability to simplify K-map and to identify, analyze and design combinational circuits such as MUX, DEMUX.
C203.3	To acquire knowledge of Sequential circuits like Flip-Flops also Types, Conversion and Application of Flip-Flops.
C203.4	Ability to design Sequential circuits like Sequence generators and Sequence detector using Moore and Mealy Model.
C203.5	To acquire knowledge of Programmable Logic Devices.
C203.6	Use VHDL programming technique with different modelling styles to design any digital circuits.

Subject Code	Fundamentals of Data Structures
C204.1	Apply appropriate constructs of C language, coding standards for application development.
C204.2	Use dynamic memory allocation concepts and file handling in various application developments.
C204.3	Perform basic analysis of algorithms with respect to time and space complexity.
C204.4	Select appropriate searching and/or sorting techniques in the application development.
C204.5	Select and use appropriate data structures for problem solving and programming.
C204.6	Use algorithmic foundations for solving problems and programming.

Subject Code	Problem Solving and Object Oriented programming
C205.1	Student will be able to apply programming skills and problem solving concepts to solve problems using computers.
C205.2	Student will be able to develop solution for problem using different logic structures.
C205.3	The student will be able to describe object oriented features and differentiate between C and C++.
C205.4	The student will be able to design and develop solution to the problem using object oriented features like overloading and inheritance
C205.5	The student will be able to design and develop solution to the problem using object oriented features like templates and virtual functions.
C205.6	Student will be able to design and develop solution to the problem using object oriented features like exception handling and file operations.

Subject Code	Digital Laboratory
C206.1	Spectacle an awareness and apply knowledge and concepts and methods of digital system design techniques as hands-on experiments with the use of necessary A.C, D.C Loading Characteristics.
C206.2	Use logic function representation for simplification with K-Maps and analyze as well as design Combinational logic circuits using SSI & MSI chips.
C206.3	Analyze Sequential circuits like Flip-Flops (Truth Table, Excitation table) & design the applications like Asynchronous and Synchronous Counters.
C206.4	Design Sequential Logic circuits: Sequence generators, MOD counters with registers/Counters using synchronous /asynchronous counters.
C206.5	Understand the need of skills, techniques and learn state-of-the-art engineering tools through hands-on experimentation on the Xilinx tools for design as well as the basics of VHDL.
C206.6	Understand and implement the design Steps, main programming technique with different modeling styles for any digital circuits with VHDL Programming.

Subject Code	Programming Laboratory
C207.1	Apply appropriate constructs of C language, coding standards for application development.
C207.2	Use dynamic memory allocation concepts and file handling in various application developments.
C207.3	Perform basic analysis of algorithms with respect to time and space complexity.
C207.4	Select appropriate searching and/or sorting techniques in the application development.
C207.5	Select and use appropriate data structures for problem solving and programming.
C207.6	Use algorithmic foundations for solving problems and programming.

Subject Code	Object Oriented programming Lab.
C208.1	Student will be able to develop and implement algorithms for solving simple problems using modular programming concept.
C208.2	Student will be able to design and develop solution to the problem using object oriented feature like overloading.
C208.3	Student will be able to design and develop solution to the problem various types of inheritance.
C208.4	Student will be able to design and develop solution to the problem using object oriented features like templates and virtual functions.
C208.5	Student will be able to design and develop solution to the problem using object oriented features like exception handling
C208.6	Student will be able to design database using object oriented features like file handling.

Subject Code	Communication Skills
C209.1	Provides an ability to understand, analyze and interpret the essentiality of grammar and its proper usage.
C209.2	Build the students' vocabulary by means of communication via web, direct Communication and indirect communication.
C209.3	Improves Students' Pronunciation skills and understanding between various phonetic sounds during communication.
C209.4	Understanding the various rules and means of written communication.
C209.5	Effective communication with active listening, facing problems while communication and how to overcome it.

SE Subjects Course Outcomes
ACADEMIC YEAR: - 2018-19
Semester – II

Subject Code	Engineering Mathematics -III
C210.1	Solve higher order linear differential equation using appropriate techniques for modeling and analyzing electrical circuits.
C210.2	Solve problems related to Fourier transform, Z-Transform and applications to Signal and Image processing.
C210.3	Apply statistical methods like correlation, regression analysis for prediction of a given data as applied to machine intelligence.
C210.4	Apply probability theory like Random variables, Mathematical Expectation, Probability density function, Probability distributions for prediction of a given data as applied to machine intelligence.
C210.5	Perform vector differentiation and integration to analyze the vector fields and apply to compute line, surface and volume integrals.
C210.6	Analyze conformal mappings, transformations and perform contour integration of complex functions required in Image processing, Digital filters and Computer graphics.

Subject Code	Computer Graphics
C211.1	Student will be able to understand the basic concepts of computer graphics and apply fundamental engineering knowledge to solve problems using DDA and Bresenham's algorithms.
C211.2	Student will understand and demonstrate the operations of 2D Transformation.
C211.3	Student will understand and demonstrate the operations of 3D Transformation.
C211.4	The student will be able to learn the Window clipping and view port transformation.
C211.5	Apply the logic to develop animation and gaming programs.
C211.6	To understand the concept of fractals, curves and usage of the tools of computer graphics.

Subject Code	Processor Architecture and Interfacing
C212.1	Students will learn architectural details of 80386 microprocessor.
C212.2	Students will be able to learn memory management and privilege levels of 80386 Microprocessor.
C212.3	Students will be able to learn multitasking and interrupt structure of 80386 microprocessor.
C212.4	Students will understand architecture and memory organization of 8051 microcontroller.
C212.5	Students will learn Timers and interrupts of 8051 Microcontroller.
C212.6	Students will learn interfacing of I/O devices with 8051 Microcontroller

Subject Code	Data Structures & Files
C213.1	Understand and implement different advanced ADT and linear data structures such as stack, queue.
C213.2	Understand and implement different advanced ADT and linear data structures such as Tree.
C213.3	Understand different algorithm design techniques for graphs and their implementation.
C213.4	Learn and apply the concept of hashing and its applications.
C213.5	Understand and implement concept of advanced trees.
C213.6	Understand the concept of file organization and its implementation.

Subject Code	Foundations of Communication and Computer Network
C214.1	Student will be able to understand fundamentals of communication systems, data/signal transmission over communication media, noise and able to differentiate between OSI and TCP/IP models and identify the responsibility of each layer.
C214.2	Student will be able to recognize usage of various Analog modulation and demodulation techniques in communication.
C214.3	Student will be able to recognize usage of various Digital modulation and demodulation techniques in communication.
C214.4	Student will learn and classify error control and flow control techniques
C214.5	Student will analyze various spread spectrum and multiplexing techniques and learn multiple access techniques.
C214.6	Student will learn LAN hardware and the different IEEE standards for Ethernet and understand concept of switched network.

Subject Code	Processor Interfacing Laboratory
C215.1	Learn and apply concepts related to assembly language programming
C215.2	Write and execute assembly language program to perform array addition, code conversion, block transfer, sorting and string operations
C215.3	Learn and apply interfacing of real world input and output devices to 8051 microcontroller

Subject Code	Data Structure and Files Laboratory
C216.1	Apply and implement the fundamentals of linear data structures such as stack and advanced abstract data type (ADT).
C216.2	Apply and implement the fundamentals of linear data structures such as queue and advanced abstract data type (ADT).
C216.3	Apply and implement algorithms to create/represent and traverse non-linear data structures such as trees.
C216.4	Apply and implement algorithms to create/represent and traverse non-linear data structures such as graphs.
C216.5	Apply and implement algorithms to create and manipulate database using different file organizations
C216.6	Learn and apply the concept of hashing in database creation and manipulation

Subject Code	Computer Graphics Laboratory
C217.1	Apply and implement line drawing and circle drawing algorithms to draw specific shape given in the problem.
C217.2	Apply and implement polygon filling algorithm for a given polygon
C217.3	Apply and implement 2-D and 3-D transformation algorithms for given input shape.
C217.4	Apply and implement polygon clipping algorithm for given input polygon.
C217.5	Apply and implement fractal generation algorithm for a given input.
C217.6	Apply and implement animation concepts for generating simple animation without using any animation tool.

TE Subjects Course Outcomes
ACADEMIC YEAR: - 2018-19
Semester – I

Subject Code	Theory of Computation
C301.1	To construct finite state machines to solve problems in computing
C301.2	To write mathematical expressions for the formal languages
C301.3	To apply well defined rules for syntax verification
C301.4	To construct and analyze Push Down Automata and Post Machine for formal languages
C301.5	To construct and analyze Turing Machine for formal languages.
C301.6	To express the understanding of computational complexity, decidability and reducibility problems

Subject Code	Database Management Systems
C302.1	To define basic functions of DBMS & RDBMS. Also analyze database models & entity relationship models.
C302.2	To design and implement a database schema for a given problem-domain. Also Populate and query a database using SQL DML/DDDL commands.
C302.3	To define basic concepts of transaction, transaction processing and concurrency control. Also implement PL/SQL programming.
C302.4	To understand the different types of database architectures and also their benefits.
C302.5	To understand the impact of analytics and big data on the information industry and the external ecosystem for analytical and data services.
C302.6	To understand emerging database technologies. Also study the data warehousing and data mining.

Subject Code	Software Engineering & Project Management
C303.1	To understand the nature of software complexity in various application domains, disciplined way of software development and software lifecycle process models.
C303.2	To introduce principles of agile software development, the SCRUM process and agile practices.
C303.3	To know methods of capturing, specifying, visualizing and analyzing software requirements.
C303.4	To understand project management through life cycle of the project.
C303.5	To understand current and future trends and practices in the IT industry.
C303.6	To learn about project planning, execution, tracking, audit and closure of project

Subject Code	Operating System
C304.1	To understand the role and development of Operating System.
C304.2	To understand and use the concept of a process, thread and their scheduling.
C304.3	To apply the concept of process synchronization, mutual exclusion and the deadlock.
C304.4	To understand and use various memory management techniques.
C304.5	To realize the concept of I/O management and File system.
C304.6	To realize above concepts in Linux OS as Case study

Subject Code	Human-Computer Interaction
C305.1	To explain importance of HCI study and principles of user-centred design (UCD) approach.
C305.2	To develop understanding of human factors in HCI design.
C305.3	To develop understanding of models, paradigms and context of interactions.
C305.4	To design effective user-interfaces following a structured and organized UCD process.
C305.5	To evaluate usability of a user-interface design.
C305.6	To apply cognitive models for predicting human-computer-interactions.

Subject Code	Software Laboratory-I
C306.1	To install and configure database systems.
C306.2	To analyse database models & entity relationship models.
C306.3	To design and implement a database schema for a given problem-domain
C306.4	To understand the relational and document type database systems.
C306.5	To populate and query a database using SQL DML/DDI commands.
C306.6	To populate and query a database using MongoDB commands.

Subject Code	Software Laboratory-II
C307.1	To understand the basics of Linux commands and program on the shell of Linux.
C307.2	To develop various system programs for the functioning of concurrency control
C307.3	To implement basic building blocks of threads under the Linux.
C307.4	To understand & implement different inter process communication.
C307.5	To develop various system programs for implementing Process & file handling system calls.
C307.6	To develop the system program for the functioning of OS concepts in kernel space like embedding the system call in any Linux kernel.

Subject Code	Software Laboratory-III
C308.1	To understand, explore and apply various web technologies
C308.2	To understand concepts and principles of software design and architecture
C308.3	To apply the concepts of Software Engineering process models for project development and to develop team building for efficient project development

TE Subjects Course Outcome
ACADEMIC YEAR: - 2018-19
Semester - II

Subject Code	Computer Network Technology
C309.1	To know Responsibilities, services offered and protocol used at each layer of network.
C309.2	To understand different addressing techniques used in network.
C309.3	To know the difference between different types of network.
C309.4	To know the different wireless technologies and IEEE standards.
C309.5	To use and apply the standards and protocols learned, for application development.
C309.6	To understand and explore recent trends in network domain.

Subject Code	Systems Programming
C310.1	Student will be able to understand the major concepts in areas of language translation and compiler design.
C310.2	Student will be able to design & implement System Programs as macro processor and loaders.
C310.3	Student will be able to use tool LEX for generation of Lexical Analyzer.
C310.4	Student will be able to analyze use YACC tool for generation of syntax analyzer.
C310.5	Student will be able to generate output for all the phases of compiler.
C310.6	Student will be able to apply code optimization techniques in the compilation process.

Subject Code	Design and Analysis of Algorithms
C311.1	To calculate computational complexity using asymptotic notations for various algorithms.
C311.2	To apply Divide & Conquer as well as Greedy approach to design algorithms.
C311.3	To practice principle of optimality.
C311.4	To illustrate different problems using Backtracking.
C311.5	To compare different methods of Branch and Bound strategy.
C311.6	To explore the concept of P, NP, NP-complete, NP-Hard and parallel algorithms.

Subject Code	Cloud Computing
C312.1	To understand the need of Cloud based solutions.
C312.2	To understand Security Mechanisms and issues in various Cloud Applications
C312.3	To explore effective techniques to program Cloud Systems.
C312.4	To understand current challenges and trade-offs in Cloud Computing.
C312.5	To find challenges in cloud computing and delve into it to effective solutions.
C312.6	To understand emerging trends in cloud computing.

Subject Code	Data Science & Big Data Analytics
C313.1	To understand Big Data primitives
C313.2	To learn and apply different mathematical models for Big Data.
C313.3	To demonstrate their Big Data learning skills by developing industry or research applications.
C313.4	To analyse different algorithmic approach and check performance under different datasets.
C313.5	To understand needs challenges and techniques for big data visualization.
C313.6	To learn different programming platforms for big data analytics.

Subject Code	Software Laboratory-IV
C314.1	To implement small size network and its use of various networking commands.
C314.2	To understand and use various networking and simulations tools.
C314.3	To configure various client/server environments to use application layer protocols
C314.4	To understand the protocol design at various layers.
C314.5	To explore use of protocols in various wired and wireless applications.
C314.6	To develop applications on emerging trends.

Subject Code	Software Laboratory-V
C315.1	Student will be able to design and implement two pass assembler and macro for hypothetical machine instructions.
C315.2	Student will be able to design and implement different phases of compiler.
C315.3	Student will be able to use the tools "Lex" and "YACC" for implementation of simple Calculator.
C315.4	Student will be able to apply Divide & Conquer as well as Greedy approach to design algorithms.
C315.5	Student will be able to illustrate different problems using Dynamic Programming
C315.6	Student will be able to analyze the solution using recurrence relation.

Subject Code	Software Laboratory-VI
C316.1	To apply Big data primitives and fundamentals for application development.
C316.2	To explore different Big data processing techniques for different applications
C316.3	To apply the Analytical concept of Big data using R/Python
C316.4	To visualize the Big Data using Tableau.
C316.5	To design algorithms and techniques for Big data analytics.
C316.6	To design Big data analytic application for emerging trends.
Subject	Project Based Seminar

Code	
C317.1	To Gather, organize, summarize and interpret technical literature with the purpose of formulating a project proposal.
C317.2	Define intended future work based on the technical review.
C317.3	To present the study using presentation and documentation.
C317.4	To present the study using presentation and documentation.

BE Subjects Course Outcome
ACADEMIC YEAR: - 2018-19
Semester - I

Subject Code	Information and Cyber Security
C401.1	Students will be able to understand fundamentals of security and Intrusion detection system with its types.
C401.2	Students will be able to perform and analyze algorithm implementation for security like Symmetric key algorithms and Asymmetric key algorithms.
C401.3	Students will be able to use basic cryptographic techniques in software and system design.
C401.4	The students will learn and understand Laws, Ethics and Risk management in Information Security
C401.5	Students will have understanding of key concepts of cybercrime and computer forensics awareness
C401.6	Students will be able to use computer forensics tools

Subject Code	Machine Learning and Applications
C402.1	Identify machine learning primitives such as structure, characteristics, machine learning tasks and types of machine learning models
C402.2	To analyze performance of machine learning model for classification, regression and thereby understands to identify effective number of hypothesis using theory of generalization
C402.3	Competent to build linear model for classification using regression methods, perceptron, support vector machine and nonlinear kernel methods.
C402.4	Ability to apply distance based, rule based and tree based modeling for unsupervised machine learning task
C402.5	Understand generative and discriminative probabilistic modeling for complex machine learning tasks
C402.6	Identify real world problems and its solution using advanced machine learning methods in the domain of Data Mining, Information Retrieval, Computer vision, Linguistics and Bioinformatics.

Subject Code	Software Design and Modeling
C403.1	Understand object oriented methodologies, basics of Unified Modeling Language (UML).
C403.2	Understand analysis process, use case modeling, domain/class modeling
C403.3	Understand interaction and behavior modeling
C403.4	Understand design process and business, access and view layer class design
C403.5	Get started on study of GRASP principles and GoF design patterns.
C403.6	Get started on study of architectural design principles and guidelines in the various type of application development.

Subject Code	Elective –I (Business Analytics and Intelligence)
C404 .1	Comprehend the Information Systems and development approaches of Intelligent Systems
C404 .2	Evaluate and rethink business processes using information systems
C404 .3	Propose the Framework for business intelligence
C404 .4	Get acquainted with the Theories, techniques, and considerations for capturing organizational intelligence.
C404 .5	Align business intelligence with business strategy.
C404 .6	Apply the techniques for implementing business intelligence systems.

Subject Code	Elective -II (Software Testing & Quality Assurance)
C405.1	Understand software testing and how to detect, classify, prevent and remove defects.
C405.2	Investigate the scenario and to select the proper testing technique.
C405.3	Explore the test automation concepts and tools and estimation of cost, schedule based on standard metrics.
C405.4	Understand software quality assurance and explore tools used in quality management.
C405.5	Choose appropriate quality assurance models and develop quality.
C405.6	Ability to conduct formal inspections, record and evaluate results of inspections.

Subject Code	Computer Laboratory-VII
C406.1	To implement number theory, asymmetric cryptographic and hash algorithm.
C406.2	Ability to demonstrate and use network intrusion detection and web security tools
C406.3	To identify and study machine learning tool such as WEKA, R, Python
C406.4	Design and implement regression analysis and dimensionality reduction problem using R programming.
C406.5	Design and implement python program for K-Means unsupervised learning algorithm and nonlinear modeling using kernel method.
C406.6	Evaluate probabilistic machine learning model using WEKA.

Subject Code	Computer Laboratory-VIII
C407.1	Draw, discuss different UML 2.0 diagrams, their concepts, notation, advanced notation, forward and reverse engineering aspects.
C407.2	Identify different software artifacts used to develop analysis and design model from requirements.
C407.3	Develop use case model.
C407.4	Develop, implement analysis model and design model.
C407.5	Develop, implement Interaction and behavior Model.
C407.6	Implement an appropriate design pattern to solve a design problem.

Subject Code	Project Phase-I
C408.1	To study independently in the chosen domain of information Technology and Programming Language
C408.2	Apply their acquired knowledge to variety of real time problem scenarios.
C408.3	To function effectively as a team to accomplish a desired goal.
C408.4	An understanding of professional, ethical, legal, security and social issues and responsibilities related to Information Technology Project.

BE Subjects Course Outcome
ACADEMIC YEAR: - 2018-19
Semester – II

Subject Code	Distributed Computing System
C409.1	To understand the fundamentals and knowledge of the architectures of distributed systems.
C409.2	To understand and apply the basic theoretical concepts and algorithms of distributed systems in problem solving.
C409.3	Understand and apply the concept of file systems and multimedia systems in distributed system.
C409.4	Understand and apply the concept of file systems and multimedia systems in distributed system.
C409.5	Understand the principles on which the internet and other distributed systems are based
C409.6	To make students aware about security issues and protection mechanism for distributed environment.

Subject Code	Ubiquitous Computing
C410.1	To demonstrate the design knowledge of Ubiquitous Computing and its applications.
C410.2	To analyse and explore smart devices and services used in Ubiquitous Computing.
C410.3	Identify the significance of actuators and controllers in real time application design.
C410.4	Apply and use the concept of HCI to comprehend the design of automation applications.
C410.5	Evaluating Ubiquitous Computing privacy and identifying the challenges associated with Ubiquitous Computing privacy.
C410.6	Recognize knowledge of ubiquitous and service oriented networks along with Ubiquitous Computing management.

Subject Code	Elective-III (Social Media Analytics)
C411.1	Understand the basics of Social Media Analytics
C411.2	Students will be able to understand significance of Data mining in Social media.
C411.3	Demonstrate the algorithms used for text mining.
C411.4	Apply network measures for social media data
C411.5	Students will be able to understand Behaviour Analytics techniques used for social media data
C411.6	Apply social media analytics for Face book and Twitter kind of applications

Subject Code	Elective-IV (Internet of Things)
C412.1	Explain what is Internet of things.
C412.2	Explain architecture and design of IoT.
C412.3	Describe the objects connected in IoT.
C412.4	Understand the underlying Technologies.
C412.5	Understand the platforms in IoT
C412.6	Understand cloud interface to IoT

Subject Code	Computer Laboratory-IX
C413.1	Demonstrate knowledge of the core concepts and techniques in distributed systems.
C413.2	Learn how to apply principles of state-of-the-Art Distributed systems in practical application.
C413.3	Design, build and test application programs on distributed systems.

Subject Code	Computer Laboratory-X
C414.1	Understand the android development environment
C414.2	Design user interface and control components of android application
C414.3	To create database for an android application and its manipulation
C414.4	To develop an android application for Electronic appliances control, location finding and multimedia services
C414.5	To design and develop the ubiquitous application and evaluate its performance
C414.6	Analyze the evolution of mobile cellular network

Subject Code	Project Work
C415.1	Learn Team Work
C415.2	know everything about implementation of Project
C415.3	apply various testing methods and tools
C415.4	understand importance of documentation and presentation