


 MANJARA CHARITABLE TRUST
 RAJIV GANDHI INSTITUTE OF TECHNOLOGY, MUMBAI

Department of Computer Engineering

COURSE OBJECTIVES AND COURSE OUTCOMES

SEM-III

Course code	Course Name	Objectives	Outcomes
CSC301	Applied Mathematics-III	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1.To understand the concept of complex variables, C-R equations, harmonic functions and its conjugate and mapping in complex plane. 2.To learn the complex mapping, standard mappings, cross ratios and fixed point. 3.To learn the Laplace Transform, Inverse Laplace Transform of various functions, its application and Z-transform. 4.To understand the concept of Fourier Series, its complex form and enhance the problem solving skill. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1.Understand complex variable theory, application of harmonic conjugate to get orthogonal trajectories and analytic function. 2.Plot the image of the curve by a complex transformation from z-plane to w-plane. 3.Expand the periodic function by using Fourier series and complex form of Fourier series. 4.Understand the concept of Laplace transform and inverse Laplace transform of various functions and its application to solve ordinary differential equations. 5.Apply the concept of Z-transformation and its inverse of the given sequence. 6.Apply the concept of Correlation and Regression to the engineering problems.
CSC302	Digital Logic Design and Analysis	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1.To introduce the fundamental concepts and methods for design of digital circuits and a pre-requisite for computer organization and architecture, microprocessor 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1.To understand different number systems and their conversions. 2.To analyze and minimize Boolean expressions. 3.To design and analyze

		<p>systems.</p> <p>2.To provide the concept of designing Combinational and sequential circuits.</p> <p>3.To provide basic knowledge of how digital building blocks are described in VHDL.</p>	<p>combinational circuits.</p> <p>4. To design and analyze sequential circuits.</p> <p>5. To understand the basic concepts of VHDL.</p> <p>6. To study basics of TTL and CMOS Logic families.</p>
CSC303	Discrete Mathematics	<p>Students will try to learn:</p> <p>1.Cultivate clear thinking and creative problem solving.</p> <p>2.Thoroughly train in the construction and understanding of mathematical proofs. Exercise common mathematical arguments and proof strategies.</p> <p>3.Thoroughly prepare for the mathematical aspects of other Computer Engineering courses</p>	<p>Students will be able to:</p> <p>1.Understand the notion of mathematical thinking, mathematical proofs and to apply them in problem solving.</p> <p>2. Ability to reason logically.</p> <p>3.Ability to understand relations, Diagraph and lattice..</p> <p>4.Ability to understand use of functions, graphs and their use in programming applications.</p> <p>5. Understand use of groups and codes in Encoding-Decoding.</p> <p>6. Apply discrete structures into other computing problems such as formal specification, verification, artificial intelligence, cryptography, Data Analysis and Data Mining etc</p> <p>.</p>
CSC304	Electronic Circuits and Communication Fundamentals	<p>Students will try to learn:</p> <p>1.To develop the knowledge of semiconductor devices and circuits, and explain their use in communication applications.</p> <p>2.To inculcate circuit analysis capabilities in students.</p> <p>3.To gain knowledge in electronic devices and circuits that is useful in real life applications.</p> <p>4.To understand the fundamental concepts of electronic</p>	<p>Students will be able to:</p> <p>1.To understand the use of semiconductor devices in circuits and analyze them.</p> <p>2.To understand importance of oscillators and power amplifiers in communication system.</p> <p>3.To understand basic concepts of operational amplifier and their applications.</p> <p>4.To understand the fundamental concepts of electronic communication</p>

		communication and their use in computer applications.	5.To apply knowledge of electronic devices and circuits to communication applications. 6.To study basic concepts of information theory.
CSC305	Data Structures	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1.To teach various storage mechanisms of data. 2.To design and implement various data structures. 3.To introduce various techniques for representation of the data in the real world. 4.To teach different sorting techniques. 5.To teach different searching techniques. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Students will be able to implement various linear and nonlinear data structures. 2. Students will be able to handle operations like insertion, deletion, searching and traversing on various data structures. 3. Students will be able to select appropriate sorting technique for given problem. 4. Students will be able to select appropriate searching technique for given problem. 5. Students will be able to apply the learned concepts in various domains like DBMS and Compiler Construction. 6. Students will be able to choose appropriate data structure for specified problem domain.

SEM-IV

Course code	Course Name	Objectives	Outcomes
CSC401	Applied Mathematics-IV	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. Matrix theory, and application to find the matrix function. Present methods of computing and using Eigen values and Eigen vectors. 2. Set up and directly evaluate contour integrals Cauchy integral theorem and formula in basic and extended form. Present Taylor and Laurent series to find singularities zero and poles also presents residues theory 3. Theory of probability, Baye Theorem, Expectation and Moments and its application. 4. Probability distribution such as Binomial, Poisson and Normal distribution with their properties. 5. Sampling theory and its application for small and large sample and Optimization techniques. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Students in this course will be able to apply the method of solving complex integration, computing residues & evaluate various contour integrals. 2. Demonstrate ability to manipulate matrices and compute Eigen values and Eigen vectors. 3. Apply the concept of probability distribution to the engineering problems. 4. Apply the concept of sampling theory to the engineering problems. 5. Use matrix algebra with its specific rules to solve the system of linear equation, using concept of Eigen value and Eigen vector to the engineering problems. 6. Apply the concept of Linear & Non-Linear Programming Problem to the engineering problems.
CSC402	Analysis of Algorithms	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To provide mathematical approach for Analysis of Algorithms 2. To solve problems using various strategies 3. To analyse strategies for solving problems not solvable in polynomial time. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Analyze the running time and space complexity of algorithms. 2. Describe, apply and analyze the complexity of divide and conquer strategy. 3. Describe, apply and analyze the complexity of greedy strategy. 4. Describe, apply and analyze the complexity of dynamic programming strategy. 5. Explain and apply backtracking, branch and bound and string matching techniques to deal with some hard problems. 6. Describe the classes P, NP, and NP-Complete and be able to prove that a certain problem is NP-Complete.

CSC403	Computer Organization and Architecture	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To have a thorough understanding of the basic structure and operation of a digital computer. 2. To discuss in detail the operation of the arithmetic unit including the algorithms & implementation of fixed-point and floating-point addition, subtraction, multiplication & division. 3. To study the different ways of communicating with I/O devices and standard I/O interfaces. 4. To study the hierarchical memory system including cache memories and virtual memory. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. To describe basic structure of the computer system. 2. To demonstrate the arithmetic algorithms for solving ALU operations. 3. To describe instruction level parallelism and hazards in typical processor pipelines. 4. To describe superscalar architectures, multi-core architecture and their advantages 5. To demonstrate the memory mapping techniques. 6. To Identify various types of buses, interrupts and I/O operations in a computer system
CSC404	Computer Graphics	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 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. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 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.
CSC405	Operating System	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To introduce basic concepts and functions of operating systems. 2. To understand the concept of process, thread and resource management. 3. To understand the concepts of process synchronization and deadlock. 4. To understand various Memory, I/O and File management techniques. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Understand role of Operating System in terms of process, memory, file and I/O management. 2. Apply and analyse the concept of a process, thread, mutual exclusion and deadlock. 3. Evaluate performance of process scheduling algorithms and IPC. 4. Apply and analyse the concepts of memory management techniques. 5. Evaluate the performance of memory allocation and replacement techniques. 6. Apply and analyze different techniques of file and I/O management.

SEM-V

Course code	Course Name	Objectives	Outcomes
CSC501	Microprocessor	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1.To equip students with the fundamental knowledge and basic technical competence in the field of Microprocessors. 2.To emphasize on instruction set and logic to build assembly language programs. 3.To prepare students for higher processor architectures and Embedded systems 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1.Describe architecture of x86 processors. 2. Interpret the instructions of 8086 and write assembly and Mixed language programs. 3. Explain the concept of interrupts 4. Identify the specifications of peripheral chip 5. Design 8086 based system using memory and peripheral chips 6.Appraise the architecture of advanced processors
CSC502	Database Management System	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1.Learn and practice data modelling using the entity-relationship and developing database designs. 2.Understand the use of Structured Query Language (SQL) and learn SQL syntax. 3.Apply normalization techniques to normalize the database 4.Understand the needs of database processing and learn techniques for controlling the consequences of concurrent data access. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Understand the fundamentals of a database systems 2. Design and draw ER and EER diagram for the real life problem. 3. Convert conceptual model to relational model and formulate relational algebra queries. 4.Design and querying database using SQL. 5.Analyze and apply concepts of normalization to relational database design. 6.Understand the concept of transaction, concurrency and recovery.
CSC 503	Computer Network	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1.To introduce concepts and fundamentals of data communication and computer networks. 2.To explore the inter-working of various layers of OSI. 3.To explore the issues and 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1.Demonstrate the concepts of data communication at physical layer and compare ISO - OSI model with TCP/IP model. 2.Demonstrate the knowledge of networking protocols at data link layer.

		<p>challenges of protocols design while delving into TCP/IP protocol suite.</p> <p>4.To assess the strengths and weaknesses of various routing algorithms.</p> <p>5.To understand the transport layer and various application layer protocols.</p>	<p>3.Design the network using IP addressing and subnetting / supernetting schemes.</p> <p>4.Analyze various routing algorithms and protocols at network layer.</p> <p>5.Analyze transport layer protocols and congestion control algorithms.</p> <p>6. Explore protocols at application layer .</p>
CSC504	Theory of Computer Science	<p>Students will try to learn:</p> <p>1.Acquire conceptual understanding of fundamentals of grammars and languages.</p> <p>2.Build concepts of theoretical design of deterministic and non-deterministic finite automata and push down automata.</p> <p>3.Develop understanding of different types of Turing machines and applications.</p> <p>4. Understand the concept of Undesirability.</p>	<p>Students will be able to:</p> <p>1.Identify the central concepts in theory of computation and differentiate between deterministic and nondeterministic automata, also obtain equivalence of NFA and DFA.</p> <p>2.Infer the equivalence of languages described by finite automata and regular expressions.</p> <p>3.Devise regular, context free grammars while recognizing the strings and tokens.</p> <p>4.Design pushdown automata to recognize the language.</p> <p>5.Develop an understanding of computation through Turing Machine.</p> <p>6.Acquire fundamental understanding of decidability and undesirability.</p>
CSDLO 5013 (Department Level ptional Course)	Advanced Algorithm	<p>Students will try to learn:</p> <p>1.To provide mathematical approach for Analysis of Algorithms.</p> <p>2.To teach advanced data structures.</p> <p>3.To solve complex problems in real life applications.</p>	<p>Students will be able to:</p> <p>1.Describe analysis techniques for algorithms.</p> <p>2.Identify appropriate data structure and design techniques for different problems</p> <p>3.Identify appropriate algorithm to be applied for the various application like geometric modeling, robotics, networking, etc.</p> <p>4.Appreciate the role of probability</p>

and randomization in the analysis of algorithm

5. Analyze various algorithms.
6. Differentiate polynomial and non deterministic polynomial algorithms.

SEM-VI

Course code	Course Name	Objectives	Outcomes
CSC601	Software Engineering	<p>Students will try to learn:</p> <p>The main objective of the course is to introduce to the students about the product that is to be engineered and the processes that provides a framework for the engineering methodologies and practices.</p> <ol style="list-style-type: none"> 1. To provide the knowledge of software engineering discipline. 2. To apply analysis, design and testing principles to software project development. 3. To demonstrate and evaluate real time projects with respect to software engineering principles. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Understand and demonstrate basic knowledge in software engineering. 2. Identify requirements, analyze and prepare models. 3. Plan, schedule and track the progress of the projects. 4. Design & develop the software projects. 5. Identify risks, manage the change to assure quality in software projects. 6. Apply testing principles on software project and understand the maintenance concepts.
CSC602	System Programming And Compiler Construction	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To understand the role and functioning of various system programs over application program. 2. To understand basic concepts and designing of assembler, Macro processor and role of static and dynamic loaders and linkers. 3. To understand the need to follow the syntax in writing an application program and to learn the how the analysis phase of 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Identify the relevance of different system programs. 2. Describe the various data structures and passes of assembler design. 3. Identify the need for different features and designing of macros. 4. Distinguish different loaders and linkers and their contribution in developing efficient user applications. 5. Construct different parsers for given context free grammars.

		<p>compiler is designed to understand the programmer's requirements without ambiguity.</p> <p>4. To synthesize the analysis phase outcomes to produce the object code that is efficient in terms of space and execution time.</p>	<p>6. Justify the need synthesis phase to produce object code optimized in terms of high execution speed and less memory usage</p>
CSC603	Data Warehousing and Mining	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To identify the scope and essentiality of Data Warehousing and Mining. 2. To analyze data, choose relevant models and algorithms for respective applications. 3. To study spatial and web data mining. 4. To develop research interest towards advances in data mining. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Understand Data Warehouse fundamentals, Data Mining Principles 2. Design data warehouse with dimensional modelling and apply OLAP operations. 3. Identify appropriate data mining algorithms to solve real world problems 4. Compare and evaluate different data mining techniques like classification, prediction, clustering and association rule mining 5. Describe complex data types with respect to spatial and web mining. 6. Benefit the user experiences towards research and innovation. integration.
CSC604	Cryptography and System Security	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To introduce classical encryption techniques and concepts of modular arithmetic and number theory. 2. To explore the working principles and utilities of various cryptographic algorithms including secret key cryptography, hashes and message digests, and public key algorithms 3. To explore the design issues and 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Understand system security goals and concepts, classical encryption techniques and acquire fundamental knowledge on the concepts of modular arithmetic and number theory. 2. Understand, compare and apply different encryption and decryption techniques to solve problems related to confidentiality and authentication 3. Apply the knowledge of

		<p>working principles of various authentication protocols, PKI standards and various secure communication standards including Kerberos, IPsec, and SSL/TLS and email.</p> <p>4. To develop the ability to use existing cryptographic utilities to build programs for secure communication..</p>	<p>cryptographic checksums and evaluate the performance of different message digest algorithms for verifying the integrity of varying message sizes.</p> <p>4. Apply different digital signature algorithms to achieve authentication and design secure applications</p> <p>5. Understand network security basics, analyze different attacks on networks and evaluate the performance of firewalls and security protocols like SSL, IPsec, and PGP.</p> <p>6. Analyze and apply system security concept to recognize malicious code.</p>
<p>CSDLO 6021 (Department Level optional Course)</p>	<p>Machine Learning</p>	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To introduce students to the basic concepts and techniques of Machine Learning. 2. To become familiar with regression methods, classification methods, clustering methods. 3. To become familiar with Dimensionality reduction Techniques. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Gain knowledge about basic concepts of Machine Learning 2. Identify machine learning techniques suitable for a given problem 3. Solve the problems using various machine learning techniques 4. Apply Dimensionality reduction techniques. 5. Design application using machine learning techniques.
<p>CSDLO 6022 (Department Level optional Course)</p>	<p>Advanced Database Management System</p>	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To provide overview of indexing and hashing techniques 2. To impart knowledge of query processing and optimization 3. To provide an overview of distributed database systems. 4. To introduce the concept of 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Build indexing mechanisms for efficient retrieval of information from databases. 2. Measure query cost and optimize query execution 3. Design distributed database for better resource management 4. Demonstrate the understanding

		<p>document oriented database.</p> <p>5. To create awareness about potential security threats to a database and mechanisms to handle it.</p> <p>6. Understand the usage of advanced data models for real life application.</p>	<p>of the concepts of document oriented databases.</p> <p>5. Apply appropriate security techniques database systems.</p> <p>6. Implement advanced data models for real life applications.</p>
<p>CSDLO 6023 (Department Level optional Course)</p>	<p>Enterprise Resource Planning(ERP)</p>	<p>Students will try to learn:</p> <p>1. To understand the technical aspects and life cycle of ERP systems.</p> <p>2. To understand the steps and activities in ERP.</p> <p>3. To identify and describe different types of ERP system.</p> <p>4. To understand tools and methodology used for designing ERP for an Enterprise.</p>	<p>Students will be able to:</p> <p>1. To understand the basic structure of ERP.</p> <p>2. To identify implementation strategy used for ERP.</p> <p>3. To apply design principles for various business modules in ERP.</p> <p>4. To apply different emerging technologies for implementation of ERP.</p> <p>5. To analyze security issues in ERP.</p> <p>6. To acquire ERP concepts for real world applications.</p>
<p>CSDLO 6024 (Department Level optional Course)</p>	<p>Advanced Computer Network</p>	<p>Students will try to learn:</p> <p>1. To make learners aware about advances in computer networking technologies.</p> <p>2. To give overview of advance internet, QoS based and management protocols.</p> <p>3. To introduce issues related to traffic engineering and capacity planning.</p>	<p>Students will be able to:</p> <p>1. Demonstrate the understanding of advance data communication technologies.</p> <p>2. Demonstrate the understanding of WAN Technology typically ATM .</p> <p>3. Demonstrate the understanding of packet switching protocols such as X.25, X.75.</p> <p>4. Explore the issues of advance internet routing protocols and also QoS based protocols.</p> <p>5. Analyze issues of traffic requirements and perform capacity planning.</p> <p>6. Demonstrate the understanding of protocol used for management of network.</p>

SEM-VII

Course code	Course Name	Objectives	Outcomes
CPC701	Digital Signal Processing	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1.To learn the fundamental concepts of Digital Signal Processing. 2. To explore the properties of DFT in mathematical problem solving. 3.To illustrate FFT calculations mathematically and develop FFT based DSP algorithms. 4.To introduce DSP processor for real time signal processing application 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. To understand the concept of DT Signal and perform signal manipulation 2. To perform analysis of DT system in time domain 3. To develop FFT flow-graph and Fast DSP Algorithms. 4. To design DSP system for Real Time Signal Processing.
CPC702	Cryptography and System Security	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1.To provide students with contemporary knowledge in Cryptography and Security. 2. To understand how crypto can be used as an effective tools in providing assurance concerning privacy and integrity of information. 3.To provide skills to design security protocols for recognize security problems. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1.Understand the principles and practices of cryptographic techniques. 2. Understand a variety of generic security threats and vulnerabilities, and identify & analyze particular security problems for given application. 3. Appreciate the application of security techniques and technologies in solving reallife security problems in practical systems. 4.Apply appropriate security techniques to solve security problem 5. Design security protocols and methods to solve the specific security problems. 6. Familiar with current research issues and directions of security.

<p>CPC703</p>	<p>Artificial Intelligence</p>	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To conceptualize the basic ideas and techniques underlying the design of intelligent systems. 2. To make students understand and Explore the mechanism of mind that enable intelligent thought and action. 3. To make students understand advanced representation formalism and search techniques. 4. To make students understand how to deal with uncertain and incomplete information. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Ability to develop a basic understanding of AI building blocks presented in intelligent agents. 2. Ability to choose an appropriate problem solving method and knowledge representation technique. 3. Ability to analyze the strength and weaknesses of AI approaches to knowledge– intensive problem solving. 4. Ability to design models for reasoning with uncertainty as well as the use of unreliable information. 5. Ability to design and develop the AI applications in real world scenario.
<p>CPE7025</p>	<p>Soft Computing</p>	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To Conceptualize the working of human brain using ANN. 2. To become familiar with neural networks that can learn from available examples and generalize to form appropriate rules for inference systems. 3. To introduce the ideas of fuzzy sets, fuzzy logic and use of heuristics based on human experience. 4. To provide the mathematical background for carrying out the optimization and familiarizing genetic algorithm for seeking global optimum in self-learning situation. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Ability to analyze and appreciate the applications which can use fuzzy logic. 2. Ability to design inference systems. 3. Ability to understand the difference between learning and programming and explore practical applications of Neural Networks (NN). 4. Ability to appreciate the importance of optimizations and its use in computer engineering fields and other domains. 5. Students would understand the efficiency of a hybrid system and how Neural Network and fuzzy logic can be hybridized to form a Neuro-fuzzy network and its various applications.

SEM-VIII

Course code	Course Name	Objectives	Outcomes
CPC801	Data Warehouse and Mining	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To study the methodology of engineering legacy databases for data warehousing and data mining to derive business rules for decision support systems. 2. To analyze the data, identify the problems, and choose the relevant models and algorithms to apply. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Enable students to understand and implement classical algorithms in data mining and data warehousing; students will be able to assess the strengths and weaknesses of the algorithms, identify the application area of algorithms, and apply them. 2. Students would learn data mining techniques as well as methods in integrating and interpreting the data sets and improving effectiveness, efficiency and quality for data analysis.
CPC802	Human Machine Interaction	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To stress the importance of a good interface design. 2. To understand the importance of human psychology in designing good interfaces. 3. To motivate students to apply HMI in their day – to – day activities. 4. To bring out the creativity in each student – build innovative applications that are user friendly. 5. To encourage students to indulge into research in Machine Interface Design. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. To design user centric interfaces. 2. To design innovative and user friendly interfaces. 3. To apply HMI in their day-to-day activities. 4. To criticise existing interface designs, and improve them. 5. To Design application for social and technical task.
		<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To provide students with contemporary knowledge in parallel and distributed systems 2. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Apply the principles and concept in analyzing and designing the parallel and distributed system 2. Reason about ways to parallelize

<p>CPC803</p>	<p>Parallel and distributed Systems</p>	<p>To equip students with skills to analyze and design parallel and distributed applications. 3. To provide master skills to measure the performance of parallel and distributed algorithms</p>	<p>problems. 3. Gain an appreciation on the challenges and opportunities faced by parallel and distributed systems. 4. Understand the middleware technologies that support distributed applications such as RPC, RMI and object based middleware. 5. Improve the performance and reliability of distributed and parallel programs.</p>
<p>CPE8035</p>	<p>Big data Analytics</p>	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. To provide an overview of an exciting growing field of big data analytics. 2. To introduce the tools required to manage and analyze big data like Hadoop, NoSql MapReduce. 3. To teach the fundamental techniques and principles in achieving big data analytics with scalability and streaming capability. 4. To enable students to have skills that will help them to solve complex real-world problems in for decision support. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Understand the key issues in big data management and its associated applications in intelligent business and scientific computing. 2. Acquire fundamental enabling techniques and scalable algorithms like Hadoop, Map Reduce and NO SQL in big data analytics. 3. Interpret business models and scientific computing paradigms, and apply software tools for big data analytics. 4. Achieve adequate perspectives of big data analytics in various applications like recommender systems, social media applications etc.