

# COURSE OUTCOME

## COMPUTER ENGINEERING

<b>SECOND YEAR</b>	
<b>COURSE : 201</b>	<b>TECHNICAL COMMUNICATION</b>
<b>1</b>	Understand the concept, style and methodology used in technical communication
<b>2</b>	Develop understanding of English language and design of technical text
<b>3</b>	Apply knowledge of technical communication in professional life
<b>4</b>	Develop knowledge of writing text such as reports proposals etc.
<b>5</b>	Be competent in all forms of technical communication.
<b>COURSE : 202</b>	<b>DATA STRUCTURE AND ALGORITHMS</b>
<b>1</b>	Apply basic data structures' operations to solve engineering problems. {Related to Stack, Queue, Linked List, Trees and Graphs }
<b>2</b>	Provide solutions for complex engineering problems. {Related to Stack, Queue, Linked List, Trees, Graphs and Sorting and searching techniques }
<b>3</b>	Analyze various searching and sorting techniques to utilize them in different cases.
<b>4</b>	Evaluate the complexity to provide justification of the use of various searching and sorting techniques
<b>5</b>	Review various real time scenarios to provide valid conclusions.
<b>COURSE : 203</b>	<b>DIGITAL ELECTRONICS</b>
<b>1</b>	Understanding basic principles of digital circuits and different number systems.
<b>2</b>	Analyze logic expressions and circuits using Boolean laws and K-map.
<b>3</b>	Evaluate digital electronic circuit using various mapping and logical tools and know the techniques to prepare the most simplified circuit using various mapping and mathematical methods.
<b>4</b>	Design various types of without memory element digital electronic circuits for particular operation within the realm of economic, performance, efficiency, user friendly and environmental constraints.
<b>5</b>	Design various types of with memory element digital electronic circuits for particular operation within the realm of economic, performance, efficiency, user friendly and environmental constraints.
<b>COURSE : 204</b>	<b>SOFTWARE ENGINEERING</b>
<b>1</b>	Analyze different software life cycle models and testing techniques to develop real time projects.
<b>2</b>	Evaluate cost estimation and risk analysis in project management.
<b>3</b>	Identify and outline the engineering process of software requirement analysis.
<b>4</b>	Apply procedural design methods to architect software systems.
<b>5</b>	Apply the concept of object oriented analysis and design in software development process.

<b>COURSE : 205</b>	<b>OBJECT ORIENTED PROGRAMMING</b>
1	Understand basic knowledge of object oriented programming language constructs.
2	Apply memory allocation techniques and various inbuilt functions in different problems..
3	Apply inheritance and its the types in real time problems.
4	Implement concept of polymorphism to perform different types of bindings.
5	Create application using I/O and file handling with exception handling.
<b>COURSE : 206</b>	<b>ADVANCED ENGINEERING MATHEMATICS</b>
1	Apply the knowledge of probability and random variable to the real world problems.
2	Analyze the various method of numerical solutions of Normal, Poisson and Binomial probability distribution.
3	Formulation and solution of engineering problems in Linear programming problem.
4	Formulate and solve Non-linear programming problem.
5	Optimize the transportation, assignment and linear programming problem.
<b>COURSE : 207</b>	<b>SOFTWARE ENGINEERING LAB</b>
1	Develop the requirements specification, function oriented design using Software Analysis and Software Design of given project and understand the use of appropriate CASE tools and other tools in the software life cycle.
2	Develop Software Requirements Specification (SRS) for a given problem in IEEE template.
3	Design DFD model (level-0, level-1 DFD and Data dictionary) of the project.
4	Create all Structure and Behavior UML diagram of the given project.
5	Implement “ProjectLibre” a project management software tool to manage files.
<b>COURSE : 208</b>	<b>DATA STRUCTURES LAB</b>
1	Implement basic operations of Stack and Queue to solve various engineering problems.
2	Apply the concept of Linked List to provide solutions of computer-based problems.
3	Analyze various searching and sorting techniques to justify and utilize them in different cases.
4	Apply various operations on Non-Linear Data Structures like Tree and Graphs.
5	Design a solution of a given engineering problem using Stack, Queue, Linked List, Tree, Sorting and
<b>COURSE : 209</b>	<b>DIGITAL ELECTRONICS LAB</b>
1	Implement the basics of logic gates
2	Implement basic combinational circuits and verify their functionalities
3	Apply the design procedures to design basic sequential circuits
4	Implement different types of counter

5	Analyze the different types of shift register
<b>COURSE : 210</b>	<b>OBJECT ORIENTED PROGRAMMING LAB</b>
1	Implement the knowledge of C++ programming language constructs and evaluate different access specifiers to define member function.
2	Implement memory allocation techniques and various inbuilt functions.
3	Student will be able to implement inheritance and analyze the types of inheritance.
4	Student will be able to implement concept of polymorphism to perform different types of bindings.
5	Student will be able to implement application using I/O and file handling with exception handling.
<b>COURSE : 211</b>	<b>DISCRETE MATHEMATICAL STRUCTURES</b>
1	Solve problems involving functions, using the fundamental definitions of sets, set operators, and set identities
2	Apply the concept of mathematical logic(sets and functions) in Computer Engineering
3	Evaluate algorithmic correctness using various proof methods.
4	Solve problems involving graphs, paths, circuits, graph colouring, directed graphs, shortest path algorithms.
5	Apply the knowledge of groups, ring and field and solve the complex engineering problems and also design a test cases to analyze various elements in a set.
<b>COURSE : 212</b>	<b>MANAGERIAL ECONOMICS &amp; FINANCIAL ACCOUNTING</b>
1	Apply the basic knowledge of economics related to demand and supply.
2	Demonstrate the methods like deductive and inductive methods in economics and research areas.
3	Evaluate the pricing policies of various market structures.
4	Demonstrate the balance sheet, profit and loss statements.
5	Determine the cost in the market and the concepts related to production function.
<b>COURSE : 213</b>	<b>MICROPROCESSORS &amp; INTERFACES</b>
1	Assess basic binary math operations using the microprocessor and learn the microprocessor's and Microcontroller's internal architecture and its operation within the area of manufacturing and performance.
2	Demonstrate programming proficiency using the various addressing modes and data transfer instructions of the target microprocessor and microcontroller.
3	Apply practical hands on experience with Assembly Language Programming.
4	Analyze the interfacing circuits of various devices with the microprocessor.
5	Evaluate programming logic and concepts of 8085 microprocessor.
<b>COURSE : 214</b>	<b>DATABASE MANAGEMENT SYSTEM</b>
1	Design Database System with the help of Entity relationship Diagram for Real

	World Application
2	Deduct data using query language from any Database
3	Apply normal forms for database schema refinement
4	Design transaction with different types of schedule
5	Evaluate concurrency control mechanism and Recovery system
<b>COURSE : 215</b>	<b>THEORY OF COMPUTATION</b>
1	Apply the knowledge of different types of grammar, along with the relationship among them.
2	Analyze the concept of regular expression and finite automaton
3	Generate the Context free grammar and Pushdown Automaton for evaluating the CFG.
4	Design Turing Machine in reference of Type-0 grammar
5	Apply the knowledge of Pumping Lemma Theorem
<b>COURSE : 216</b>	<b>DATA COMMUNICATION AND COMPUTER NETWORKS</b>
1	Analyze the principles of a layered protocol architecture
2	Solve mathematical problems for data-link and network protocols.
3	Analyze network layer protocols and calculate number of subnets required for a network.
4	Evaluate the reliability of data transfer over transport layer by lossy channel bit errors problem.
5	Demonstrate common services, system services, such as name and address lookups, and communications applications.
<b>COURSE : 217</b>	<b>MICROPROCESSOR AND INTERFACE LAB</b>
1	Apply the fundamentals of assembly level programming.
2	Create interfacing between input and output device
3	Demonstrate the interfacing between motor and processor
4	Implement advance Assembly Language Programming tools
5	Implement standard microprocessor real time interfaces including digital-to-analog converters and analog-to-digital converters
<b>COURSE : 218</b>	<b>DATA BASE MANAGEMENT SYSTEM LAB</b>
1	Design a database schema for a given problem Domain.
2	Apply Integrity Constraints on a database using RDBMS.
3	Design and Build a GUI application using 4GL.
4	Implement advanced concepts of pl/sql including stored procedures , stored functions , cursors packages.
5	Implement SQL and Procedural interfaces
<b>COURSE : 219</b>	<b>NETWORK PROGRAMMING LAB</b>
1	Analyze the functioning of various networking equipments
2	Analyze LAN Installation and Configurations techniques

3	Implement various Error correcting techniques and framing methods
4	Develop the programs for client and server involving UDP/TCP sockets using socket programming.
5	Evaluate the communication between client and server using Network Simulator.
<b>COURSE : 220</b>	<b>LINUX SHELL PROGRAMMING LAB</b>
1	Implement concepts and commands in shell programming.
2	Design the directory layout of a typical UNIX system , maintain, secure UNIX directories and files.
3	Demonstrate the knowledge of engineering to use the various shell quoting mechanism appropriately
4	Create simple regular expressions using filters to define patterns with various commands.
5	Formulate simple scripts to enhance basic command output
<b>COURSE : 221</b>	<b>JAVA LAB</b>
1	Understand fundamentals of java,and tools for program designing environments.
2	Apply concept of overloading, inheritance and access controls to class.
3	Apply the concept of interfaces and importing the packages in java.
4	Design the application by handling files,Exceptions and threads.
5	Develop the applications using applets and design some polygons.

<b>THIRD YEAR</b>	
<b>COURSE : 301</b>	<b>INFORMATION THEORY AND CODING</b>
1	Apply information theory and linear algebra in source coding.
2	To unDesign channel performance using information theory.
3	To leaApply linear block codes for error detection and error correction .
4	Apply Cyclic codes for error detection and error correction .
5	Apply convolution codes for performance analysis.
<b>COURSE : 302</b>	<b>COMPLIER DESIGN</b>
1	Analyse the working of compiler by understanding its different phases.
2	Apply and implement different types of Parsing algorithms.
3	Evaluate between different types of Intermediate code generations.
4	Analyse different storage organization techniques.
5	Analyse different issues in the design of the code generator and basic block control flow graph.
<b>COURSE : 303</b>	<b>ADVANCED DATABASE MANAGEMENT SYSTEM</b>
1	Analyze the processes involved in query optimization which impact on database operation and design
2	Analyze the database functions and packages suitable for enterprise

	database application development and management
3	Evaluate alternative designs and architectures for databases.
4	Apply the database solutions for data access and its security measures.
5	Create the design of database systems for the solution of an applications.
<b>COURSE : 304</b>	<b>COMPUTER GRAPHICS AND MULTIMEDIA TECHNIQUES</b>
1	Analyze basic of principles computer graphics, the geometrical and mathematical problems with reference to computers and evaluate various algorithmic solutions.
2	Implement transformation methods and clipping algorithms.
3	Analyze algorithms of Hidden Lines and Surfaces to create curves.
4	Implementation various illumination models and color models.
5	Explore various multimedia and animation techniques.
<b>COURSE : 305</b>	<b>ANALYSIS OF ALGORITHM</b>
1	Evaluate the algorithm correctness and efficiency.
2	Apply Dynamic Programming to solve real time problems .
3	Formulation design and analysis of various pattern matching algorithms and of assignment problem.
4	Evaluate the randomized algorithm using Min-Cut, 2-SAT etc.
5	Identify behaviors of algorithms and the notion of various classes of algorithms.
<b>COURSE : 306</b>	<b>WIRELESS COMMUNICATION</b>
1	Analyze the Mobile radio propagation, fading, diversity concepts and the channel modeling.
2	Design cellular system and analyze technical challenges.
3	Apply the Digital Signaling concept for fading channels.
4	Apply the equalization techniques in wireless communication and calculate error probability in fading channels
5	Analyze the design parameters, beam forming and MIMO systems.
<b>COURSE : 307</b>	<b>COMPUTER GRAPHICS AND MULTIMEDIA TECHNIQUES LAB</b>
1	Implement of program functions to draw different graphics primitives.
2	Analysis of various graphics drawing algorithms to draw basic objects of graphics.
3	Apply various transformations techniques on graphical objects.
4	Apply various clipping algorithms and then filling methods on various graphical objects.
5	Design and create a small applications in programming language.
<b>COURSE : 308</b>	<b>COMPILER LAB</b>
1	Identify different kinds of tokens and lexemes.
2	Analyze scanning by using the concept of finite state automation,parse tr

3	Deploy intermediate code for various statements in a programming language concept
4	Deploy heap structure for storage
5	Deploy various language patterns using lex tools they are also able to parse.
<b>COURSE : 309</b>	<b>ANALYSIS OF ALGORITHM LAB</b>
1	Analyse the complexity of the basic algorithms.
2	Apply sorting algorithms on real time problem.
3	Create binary search tree using various algorithms.
4	Implement minimum spanning tree algorithms
5	Explore Pattern matching algorithms.
<b>COURSE : 310</b>	<b>ADVANCED JAVA LAB</b>
1	Understand fundamentals of java, and tools for program designing environments.
2	Apply concept of overloading, inheritance and access controls to class.
3	Apply the concept of interfaces and importing the packages in java.
4	Design the application by handling files, Exceptions and threads.
5	Develop the applications using applets and design some polygons.
<b>COURSE : 311</b>	<b>DIGITAL IMAGE PROCESSING</b>
1	Analyze various steps of Digital Image processing.
2	Apply Image Transformation & Filtering techniques
3	Evaluate various methods of Image Restoration.
4	Evaluate concepts of Image Compression and segmentation
5	Analyze image segmentation and representation algorithms and techniques
<b>COURSE : 312</b>	<b>MACHINE LEARNING</b>
1	Apply supervised machine learning algorithms on real time data and make predictions.
2	Analyze unsupervised machine learning algorithms like clustering & association mining on real time data
3	Evaluate feature extraction & selection methods and select appropriate machine learning model.
4	Analyze various semi supervised learning & reinforcement learning algorithms.
5	Apply advance concepts like recommender system and deep learning.
<b>COURSE : 313</b>	<b>INFORMATION SYSTEM SECURITY</b>
1	Analyse different cryptography techniques transposition and substitution methods.
2	Apply AES, RC6, random number generation. S-box theory
3	Analyze Public key Cryptosystem using RSA and also learn various techniques used for the distribution of key in public key cryptosystem
4	Analyze Message authentication and hash function using MD5 and SHA and also learn the concept of digital signature.



5	Apply the IP security and password message protocols..
<b>COURSE : 314</b>	<b>COMPUTER ARCHITECTURE AND ORGANIZATION</b>
1	Implement register transfer with the help of micro operations.
2	Analyze basic of computer organization, instructions, RISC & CISC characteristics.
3	Apply integer and floating type computer arithmetic techniques .
4	Analyze basics of memory organization, allocation and management schemes.
5	Assess modes of transfer and input output interface, interrupts and DMA processing.
<b>COURSE : 315</b>	<b>ARTIFICIAL INTELLIGENCE</b>
1	Analyze different approaches of AI important AI techniques, including in particular search, knowledge representation, planning and constraint management
2	Interpret the modern view of AI as the study of agents that receive percepts from the environment and perform actions.
3	Explore awareness of AI facing major challenges and the complexity of typical problems within the field.
4	Assess critically the techniques presented and apply them to real world problems.
5	Apply advance approach of AI such as intelligence system and expert system.
<b>COURSE : 316</b>	<b>CLOUD COMPUTING</b>
1	Exhibit the evolution of Cloud computing and its applications.
2	Analyse the Design,Architecture of cloud and its models
3	Evaluation of Virtualization Technology, Data Centers and their applications in cloud computing
4	Develop up the awareness of security on Data , Data Centre and Cloud services.
5	Assess an cloud services on AWS, GoogleApp Engine etc , Integrating with cloud applications.
<b>COURSE : 317</b>	<b>DISTRIBUTED SYSTEM</b>
1	Exploration and understanding various architectures used to design distributed systems along with different types of operating systems.
2	Analysis of concurrent programming with interprocess communication techniques, such as remote method invocation, remote events.
3	Analysis of various distributed file systems through case studies.
4	Analysis of distributed shared memory models and their failures in distributed computation.
5	Analyze various faults and their consequences and replicated data management through exploration different types of Distributed Systems
<b>COURSE : 318</b>	<b>DIGITAL IMAGE PROCESSING LAB</b>



1	Apply image enhancement operation and image Arithmetic Operations on a given image
2	Evaluate image restoration and Histogram Processing on various images
3	Analyze various Noise and filtering algorithms on images
4	Implement image restoration and segmentation techniques on an image
5	Extract features of an image and apply pattern recognition techniques
<b>COURSE : 319</b>	<b>MACHINE LEARNING LAB</b>
1	Identify the characteristics of machine learning to solve real-world problems.
2	Apply appropriate data sets to the Machine Learning algorithms
3	Design Python programs for supervised learning for classification and unsupervised algorithms for clustering.
4	Develop Python programs to apply neural networks for learning non-linear functions.
5	Apply Machine Learning algorithms to solve real world problems
<b>COURSE : 320</b>	<b>PYTHON LAB</b>
1	Explore basic data types in python.
2	Apply decision control programs using if-else, while , for loop.
3	Apply various functions to manipulate string .
4	Apply functions and file handling.
5	Implement various sorting algorithms on different scenarios.
<b>COURSE : 321</b>	<b>MOBILE APPLICATION DEVELOPMENT LAB</b>
1	Apply essential Android Programming concepts.
2	Develop various Android applications related to layouts & rich uses interactive interfaces
3	Develop Android applications related to mobile related server-less database like SQLITE.
4	Implement an application that writes data to the SD card.
5	Create mini application of Android studio.

<b>FORTH YEAR</b>	
<b>COURSE : 401</b>	<b>CLOUD COMPUTING</b>
1	Exhibit the evolution of Cloud computing and its applications.
2	Analyse the Design,Architecture of cloud and its models
3	Evaluation of Virtualization Technology, Data Centers and their applications in cloud computing
4	Develop up the awareness of security on Data , Data Centre and Cloud services.
5	Assess an cloud services on AWS, GoogleApp Engine etc , Integrating with cloud applications.

<b>COURSE : 402</b>	<b>INFORMATION SYSTEM SECURITY</b>
1	Analyse different cryptography techniques transposition and substitution methods.
2	Apply AES, RC6, random number generation. S-box theory
3	Analyze Public key Cryptosystem using RSA and also learn various techniques used for the distribution of key in public key cryptosystem
4	Analyze Message authentication and hash function using MD5 and SHA and also learn the concept of digital signature.
5	Apply the IP security and password message protocols..
<b>COURSE : 403</b>	<b>DATA MINING AND WAREHOUSING</b>
1	Apply preprocessing techniques over raw data and provide suitable input for range of data mining algorithms.
2	Apply appropriate association rule mining algorithms & statistical measures on data.
3	Create solutions to real life problems using different data mining techniques like classification, prediction & clustering.
4	Design data warehouse with dimensional modeling.
5	Apply OLAP operations & Discover the knowledge imbibed in the high dimensional system.
<b>COURSE : 404</b>	<b>COMPUTER AIDED DESIGN FOR VLSI</b>
1	Analyze digital circuits, incorporating into a VLSI chip.also expected to understand various design methodologies such as custom, semi-custom, standard cell, arrayed logic, sea-of-gates.
2	Explore various contemporary techniques for the design, Simulation.
3	Apply simulation , synthesis and optimization on digital circuit.
4	Design the Layout , routing, placement of a VLSI Chip.
5	Optimize performance of h/w through CAD tools with floor planning, placement and routing.
<b>COURSE : 405</b>	<b>COMPILER CONSTRUCTION</b>
1	Analyse the working of compiler by understanding its different phases.
2	Apply and implement different types of Parsing algorithms.
3	Evaluate between different types of Intermediate code generations.
4	Analyse different storage organization techniques.
5	Analyse different issues in the design of the code generator and basic block control flow graph.
<b>COURSE : 406</b>	<b>ADVANCED DATABASE MANAGEMENT SYSTEM</b>
1	Analyze the processes involved in query optimization which impact on database operation and design

2	Analyze the database functions and packages suitable for enterprise database application development and management
3	Evaluate alternative designs and architectures for databases.
4	Apply the database solutions for data access and its security measures.
5	Create the design of database systems for the solution of an applications.
<b>COURSE : 407</b>	<b>WEB DEVELOPMENT LAB</b>
1	Apply the basic knowledge of web development using knowledge of HTML and CSS elements.
2	Create student registration form entry using validation through JavaScript.
3	Identify basic configuration of Web Servers. Design a dynamic web page using JSP, PHP and ASP
4	Analysis and Interpretation for Dynamic Web Page using JSP and JDBC.
5	Apply the concept of Session in Web Page and demonstrate the knowledge of Ajax development.
<b>COURSE : 408</b>	<b>VLSI PHYSICAL DESIGN LAB</b>
1	Design digital circuits, incorporating into a VLSI chip.
2	Explore various contemporary techniques for the design, Simulation.
3	Apply simulation , synthesis and optimization of digital circuit.
4	Implementation and Design the Layout , routing, placement of a VLSI Chip.
5	Optimize performance of h/w through CAD tools with floor planning, placement and routing.
<b>COURSE : 409</b>	<b>COMPILER DESIGN LAB</b>
1	Identify different kinds of tokens and lexemes.
2	Analyze scanning by using the concept of finite state automation,parse tr
3	Deploy intermediate code for various statements in a programming language concept
4	Deploy heap structure for storage
5	Deploy various language patterns using lex tools they are also able to parse.
<b>COURSE : 410</b>	<b>PROJECT – I</b>
1	Demonstrate a sound technical knowledge of their selected project topic that can be applied to fulfill the needs of society
2	Analyze the problem to formulate it
3	Develop engineering solutions to complex problems by utilizing a systematic approach.
4	Create an engineering project that can demonstrate functioning
5	Communicate effectively for various activities with the help of reports, presentations and verbal communication that can help in life-long learning.

<b>COURSE : 411</b>	<b>PRACTICAL TRAINING</b>
1	Demonstrate work done training duration.
2	Apply work done in the form of presentations and paper publication.
3	Apply verbal communication that can help in life-long.
4	Explore multiskilled engineer along with good technical knowledge.,management and leadership skills.
5	Analyse the importance of sustainability and cost effectiveness in design and development of engineering solution.
<b>COURSE : 412</b>	<b>MOBILE COMPUTING</b>
1	Analyse the principles of mobile computing technologies and Evaluate Mobility management Techniques.
2	Interpret Data dissemination and management and evaluate mobile middleware.
3	Assess Service Discovery and Evaluate standardization Methods.
4	Apply Mobile IP, Mobile TCP, Database systems in mobile environments, and assess World Wide Web.
5	Analyze Ad Hoc networks, evaluate and practise Routing protocols.
<b>COURSE : 413</b>	<b>DIGITAL IMAGE PROCESSING</b>
1	Analyze various steps of Digital Image processing.
2	Apply Image Transformation & Filtering techniques
3	Evaluate various methods of Image Restoration.
4	Evaluate concepts of Image Compression and segmentation
5	Analyze image segmentation and representation algorithms and techniques
<b>COURSE : 414</b>	<b>DISTRIBUTED SYSTEM</b>
1	Exploration and understanding various architectures used to design distributed systems along with different types of operating systems.
2	Analysis of concurrent programming with interprocess communication techniques, such as remote method invocation, remote events.
3	Analysis of various distributed file systems through case studies.
4	Analysis of distributed shared memory models and their failures in distributed computation.
5	Analyze various faults and their consequences and replicated data management through exploration different types of Distributed Systems
<b>COURSE : 415</b>	<b>REAL TIME SYSTEM</b>
1	Analyze the concepts of Real-Time systems and modeling
2	Explore the functionality in real-time systems, their architecture and inner behavior.

3	Evaluate the multi-task scheduling algorithms for periodic tasks performance of scheduling.
4	Apply scheduling algorithms for aperiodic, and sporadic tasks as well as examine the impact of scheduling
5	Design of protocols related to real-time communication
<b>COURSE : 416</b>	<b>UNIX NETWORK PROGRAMMING &amp; SIMULATION LAB</b>
1	Analyze the functionality of various distributions of Unix via. BSD, POSIX.
2	Develop the programs for client and server involving UDP/TCP sockets using socket programming.
3	Evaluate interoperability between IPV4 & IPV6.
4	Implement the functionality of FORK function for system call
5	Evaluate the communication between client and server using Network Simulator.
<b>COURSE : 417</b>	<b>FPGA LAB</b>
1	Design the various continuous, discrete analog and digital signals with the use of sampling and quantization
2	Evaluate the various parameters of the different signals
3	Design the various filters and calculate the parameter for their characteristics.
4	Apply digital design flows for system design and recognise the trade-offs involved Design state machines to control complex systems
5	Simulate the transmission and reception of signal of different digital modulation techniques
<b>COURSE : 418</b>	<b>DIGITAL IMAGE PROCESSING LAB</b>
1	Apply image enhancement operation and image Arithmetic Operations on a given image
2	Evaluate image restoration and Histogram Processing on various images
3	Analyze various Noise and filtering algorithms on images
4	Implement image restoration and segmentation techniques on an image
5	Extract features of an image and apply pattern recognition techniques
<b>COURSE : 419</b>	<b>PROJECT - II</b>
1	Present the impact of engineering solution to society by working in a team
2	Undertake problem formulation and need for sustainable development
3	Design engineering solutions to complex problems by following ethical principles
4	Demonstrate functioning and management of engineering project
5	Communicate effectively for various activities with the help of reports, presentations and verbal communication that can help in life-long learning.

<b>COURSE : 420</b>	<b>SEMINAR</b>
<b>1</b>	Demonstrate effectively work done by student.
<b>2</b>	Apply work done in the form of presentations and paper publication.
<b>3</b>	Apply verbal communication that can help in life-long.
<b>4</b>	Explore multiskilled engineer along with good technical knowledge.,management and leadership skills.
<b>5</b>	Analyse the importance of sustainability and cost effectiveness in design and development of engineering solution.