

Subject Name with Code	Course Outcomes
Engineering Mathematics-III-15CS31	1) Know the use of periodic signals and Fourier series to analyze circuits and system communications.
	2) Explain the general linear system theory for continuous-time signals and digital signal processing using Fourier Transform and analyze discrete-time systems using convolution and the z-transform.
	3) Employ appropriate numerical methods to solve algebraic and transcendental equations and also to calculate a definite integral numerically.
	4) Apply Green's Theorem, Divergence Theorem and Stokes' theorem in various applications in the field of electro-magnetic and gravitational fields and fluid flow problems.
	5) Determine the extremals of functional and solve the simple problem of the calculus of variations.
	Analog and Digital Electronics-15CS32
CO232.2: Acquire knowledge of JFETs and MOSFETs, Operational Amplifier circuits and their applications, Combinational Logic, Simplification Techniques using Karnaugh Maps, Quine McClusky Technique, Operation of Decoders, Encoders, Multiplexers, Adders and Subtractors, Working of Latches, Flip-Flops, Designing Registers, Counters, A/D and D/A Converters.	
CO232.3: Apply the gained knowledge in FET applications, op-amp circuits, combinational and sequential circuits, ADC and DAC.	
CO232.4: Analyse the of JFETs and MOSFETs based circuits, Operational Amplifier circuits, Simplification Techniques using Karnaugh Maps, Quine McClusky Technique, Synchronous and Asynchronous Sequential Circuits.	
CO232.5: Appraise the performance of JFET, MOSFET, OP-Amp, DAC and ADC.	
CO232.6: Construct the op-amp based circuits, combinational and sequential logic circuits.	
DATA STRUCTURES AND APPLICATIONS-15CS33	C233.1. Define pointer, structures, union, stack, queue, list, trees, graphs.
	C233.2. Acquire knowledge of - Various types of data structures, operations and algorithms - Sorting and searching operations
	- File structures

	<p>C233.3. Analyse the performance of - Stack, Queue, Lists, Trees, Searching and Sorting techniques</p> <p>C233.4. Express, Design and analyse graph traversal algorithm and hashing functions</p> <p>C233.5 Implement all the applications of data structures in a high-level language</p> <p>C233.6. Design and apply appropriate data structures for solving computing problems.</p>
Computer Organization-15CS34	<p>CO234.1: Define the Number System, Arithmetic Operations and Characters, flip-flops, register, counters and memory.</p> <p>CO234.2: Demonstrate Computer Types, Functional Units and Basic Operational Concepts of computer, Bus Structures, Processor working, Memory Operations, Instructions and Instruction Sequencing, Addressing Modes, Assembly Language, Basic Input and Output Operations, Stacks and Queues, Subroutines, Encoding of Machine Instructions, different types of memories, pipeline and embedded system.</p> <p>CO234.3: Apply knowledge of Basic Input/Output Operations and Arithmetic Operations in Input/Output Organization and arithmetic unit organization respectively.</p> <p>CO234.4: Dissect the Interrupt, DMA, PCI Bus, SCSI Bus, USB, memories like static and dynamic and cache memories, arithmetic unit, basic processing unit and Multiprocessors.</p> <p>CO234.5: Determine performance of Processor, clock rate, cache memories and Multiprocessors.</p> <p>CO234.6: Adapt basic in the organization of the computer peripherals, Multiprocessors and Embedded</p>
UNIX AND SHELL PROGRAMMING- 15CS35	<p>C236.1 Explain multi user OS UNIX and its basic features.</p> <p>C236.2 Interpret UNIX Commands, Shell basics, and shell environments.</p> <p>C236.3 Design and develop shell programming, communication, System calls and terminology.</p> <p>C236.4 Design and develop UNIX File I/O and UNIX Processes</p> <p>C236.5 Design and develop perl programs and handle processes</p> <p>C236.6 Apply the knowledge of Unix commands, shell & Perl programming practically.</p>
DISCRETE MATHEMATICAL STRUCTURES- 15CS36	<ol style="list-style-type: none"> 1. State the correctness of an argument using proportional and predicate logic and truth tables. 2. Explain mathematical arguments using logical connectives, quantifiers, methods of proof and disproof, and mathematical induction. 3. Solve problems involving relations, recurrence relations and generating functions. 4. Solve problems using basic graph theory and Identify induced subgraphs, Hamiltonian and/or Eulerian in graphs. 5. Identify properties of trees and solve problems using weighted trees and prefix codes. 6. Compute the number of possible outcomes of elementary Combinatorial processes such as permutations and combinations, addition principle, rook polynomials.
ANALOG AND DIGITAL ELECTRONICS LABORATORY-15CSL37	<ul style="list-style-type: none"> •Use various Electronic Devices like Cathode ray Oscilloscope, Signal generators, Digital Trainer Kit, Multimeters and components like Resistors, Capacitors, Op amp and Integrated Circuit. •Design and demonstrate various combinational logic circuits.

	<ul style="list-style-type: none"> •Design and demonstrate various types of counters and Registers using Flip-flops •Use simulation package to design circuits. •Understand the working and implementation of ALU.
DATA STRUCTURES LABORATORY-15CSL38	<ul style="list-style-type: none"> •Analyze and Compare various linear and non-linear data structures •Code, debug and demonstrate the working nature of different types of data structures and their applications •Implement, analyze and evaluate the searching and sorting algorithms •Choose the appropriate data structure for solving real world problems
ENGINEERING MATHEMATICS - IV - 15MAT41	<ol style="list-style-type: none"> 1. Use appropriate single step and multi-step numerical methods to solve first and second order ordinary differential equations arising in flow data design problems. 2. Explain the idea of analyticity, potential field's residues and poles of complex potentials in field theory and Electromagnetic theory. 3. Employ Bessel's functions and Legendre's polynomials for tackling problems arising in continuum mechanics, hydrodynamics and heat conduction. 4. Describe random variables and probability distributions using rigorous statistical methods to analyze problems associated with optimization of digital circuits, information, coding theory and stability analysis of systems. 5. Apply the knowledge of joint probability distributions and Markov chains in attempting engineering problems for feasible random events
SOFTWARE ENGINEERING- 15CS42	<ol style="list-style-type: none"> 1. Incorporate the software engineering concepts to develop the software applications. 2. Develop concrete plan for different projects. 3. Implements the software applications in an efficient way. 4. Apply the verification and validation process to check the correctness of the developed software projects. 5. Analyze ethical and professional issues and to explain why they are of concern to software engineers 6. Incorporate different management skills to manage human resource in a better way.
DESIGN AND ANALYSIS OF ALGORITHMS -15CS43	<ol style="list-style-type: none"> 1. Assess the correctness of algorithms using inductive proofs and loop variants. 2. Analyze and compare the asymptotic behaviors of functions obtained by elementary composition of polynomials, exponentials and logarithmic functions. 3. Design and analyze the algorithms for the optimization problems viz.(Knapsack, shortest path, job scheduling etc). 4. Describe, apply and analyze the different algorithm design techniques: divide-and-conquer, dynamic programming, greedy technique, graph algorithms and analysis. 5. Describe, apply and analyze the P, NP, NP-Complete problems, Backtracking and Branch and Bound algorithms and analysis. 6. Judge the applicability of appropriate method for solving real world problems.

Microprocessors and Microcontrollers-15CS44	CO244.1 Recall the Number System, flip-flops, register, counters, memory, DAC, basic working of diodes and transistors.
	CO244.2 Illustrate the knowledge about Microprocessor, inside the 8088/86 microprocessor, Assembly language programming, x86 Instructions sets description, INT 21H and INT 10H Programming, Memory and Memory interfacing, 8255 I/O programming, RISC and CISC Architectures, The ARM Architecture, ARM development tools. ARM Assembly language Programming, Cortex-M3 series block diagram and Embedded C Programming for ARM7.
	CO244.3 Apply the basic knowledge in x86 PC's, programming and interfacing, C Programs for ARM microprocessor in KEIL.
	CO244.4 Analyze the Program Segments, The Stack, Flag register, x86 Addressing Modes, The ARM programmer's model and General purpose registers, CPSR, SPSR, ARM memory map, data format, load and store architecture.
	CO244.5 Compare the microprocessors and microcontrollers, RISC and CISC Architectures.
	CO244.6 Adapt the assembly language programming in programming and interfacing the 8255 with x86, Interfacing ARM7TDMI/ Cortex-M3 to LCD, Keyboard, DAC, sensors and Stepper motor.
OBJECT ORIENTED CONCEPTS - 15CS45	C245.1: Describe the fundamental principles of object oriented concepts for the construction of robust programs.
	C245.2: Set up Java JDK environment to create, debug and run simple Java programs.
	C245.3: Build efficient java programs using packages, interfaces and exception handling techniques
	C245.4: Incorporate Object Oriented paradigms in order to create more efficient Java programs using multi- threading and event handling techniques.
	C245.5: Develop effective user interfaces using java Applets and Swings (JApplet) features.
	C245.6: Apply the knowledge of java and C++ programming in developing the application oriented projects.
DATA COMMUNICATION-15CS46	1. Illustrate basic computer network technology.
	2. Identify the different types of network topologies and protocols.
	3. Enumerate the layers of the OSI model and TCP/IP functions of each layer.
	4. Make out the different types of network devices and their functions within a network
	5. Demonstrate the skills of subnetting and routing mechanisms.
	6. Explains the different wireless technologies like WIMAX, Cellular telephony and Satellite networks
DESIGN AND ANALYSIS OF ALGORITHM LABORATORY- 15CSL47	· Design algorithms using appropriate design techniques (brute-force, greedy, dynamicprogramming, etc.)
	· Implement a variety of algorithms such as sorting, graph related, combinatorial, etc., in a highlevel language.
	· Analyze and compare the performance of algorithms using language features.
	· Apply and implement learned algorithm design techniques and data structures to solve realworldproblems.
MICROPROCESSOR AND MICROCONTROLLERLABORATORY- 15CSL48	· Learn 80x86 instruction sets and gain the knowledge of how assembly language works.
	· Design and implement programs written in 80x86 assembly language
	· Know functioning of hardware devices and interfacing them to x86 family
	· Choose processors for various kinds of applications.

MANAGEMENT, ENTREPRENEURSHIP AND CYBER LAW -15CS51	CO1: Define management, the nature and characteristics of management and different management approaches; analyze the functional area of management
	CO2: Define the term entrepreneur and entrepreneurship; analyze the evolution of Entrepreneurship and role of entrepreneur in economic development of India.
	CO3: Explain different management processes such as planning, staffing, directing, controlling and also importance of ERP.
	CO4: Evaluate the importance of small scale industries in economic development and also the intuitional support provided by Government of India in order to support the development of small scale industries.
	CO5: Write project reports on his/her business proposals
	CO6: Explain importance of IPR and cyber law to protect infringement of secret documents
COMPUTER NETWORKS - 15CS52	3.5.2.1 Explain principles of application layer protocols and demonstrate knowledge in using Socket Interface to design and implement network protocols.
	3.5.2.2 Recognize transport layer services and interpret UDP and TCP protocols
	3.5.2.3 Classify routers, IP and Routing Algorithms in network layer
	3.5.2.4 Understand the Wireless and Mobile Networks covering IEEE 802.11 Standard and Identify different Nodes and the interfaces of the 3G and beyond 3G network architecture.
	3.5.2.5 Describe the system design principles of multimedia communications systems.
	3.5.2.6 Discuss the need for the synchronization of multimedia streams and describe several related approaches to measure QOS
DATABASE MANAGEMENT SYSTEMS - 15CS53	C353.1: Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.
	C353.2: Analyze and develop relational models, relational algebra concepts & ER diagrams.
	C353.3: Demonstrate the Structured Query Language (SQL) in the design of database systems.
	C353.4: Design and build simple real-world database systems and applications using GUI.
	C353.5: Implement normalization algorithms using database design theory for different applications
	C353.6: Analyze and implement transaction processing, concurrency control and database recovery protocols in databases.
AUTOMATA THEORY AND COMPUTABILITY - 10CS54	C354.1 Acquire fundamental understanding of the core concepts in automata theory and theory of Computation
	C354.2 Learn how to translate between different models of Computation (e.g., Deterministic and Non- Deterministic and Software models).
	C354.3 Design Grammars and Automata (recognizers) for different language classes.
	C354.4 Gain knowledge about restricted models of Computation (Regular, Context Free) and their relative Powers.
	C354.5 Develop skills in formal reasoning and reduction of a problem to a formal model, with an emphasis on semantic precision and conciseness.
	C354.6 Classify a problem with respect to different models of Computation.
	1. Interpret the need for advanced Java concepts like enumerations and collections in developing modular and efficient programs
	2. Build client-server applications and TCP/IP socket programs

ADVANCED JAVA AND J2EE - 15CS553	3. Illustrate database access and details for managing information using the JDBC API
	4. Describe how servlets fit into Java-based web application architecture
	5. Develop reusable software components using Java Beans
DOT NET FRAMEWORK FOR APPLICATION DEVELOPMENT -15CS564	C356.1- Explain the syntax and semantics of C# using Visual Studio .NET platform. (L1)
	C356.2- Illustrate the use of arrays, parameters mechanisms, properties, generics, and collections in C#. (L2)
	C356.3- Develop an Object Oriented Programming concepts using C# programming language. (L3, L6)
	C356.4-Explain concept of custom interfaces by designing C# applications. Leverage and examine the available built-in interfaces in building complex applications. (L4, L5, L6)
	C356.5-Compose queries to query in-memory data and define own operator behavior. (L1, L6)
	C356.6- Develop stand alone and graphical user interface applications on .NET Framework to solve the problems in different domains. (L3, L6)
COMPUTER NETWORK LABORATORY - 15CSL57	1. Gain the knowledge on to master the terminology and concepts of the OSI reference model and the TCP-IP reference model.
	2. Apply the concepts of protocols, network interfaces, and design/performance issues in local area networks and wide area networks.
	3. Demonstrate operation of network and its management commands
	4. Simulate and demonstrate the performance of GSM and CDMA
	5. Implement data link layer and transport layer protocols
	6. Effectively communicate the contemporary issues in networking technologies,
DBMS LABORATORY WITH MINI PROJECT - 15CSL58	1. Create, Update and query on the database.
	2. Demonstrate the working of different concepts of DBMS.
	3. Implement, analyze and evaluate the project developed for an application.
Management & Entrepreneurship - 10AL61	CO361.1 Define Management, Explain the nature and characteristics of management and different management approaches, analyze the functional areas of management.
	CO361.2 Explain different management processes such as planning, organizing, staffing, directing and controlling.
	CO361.3 Define the term entrepreneur and entrepreneurship; analyze the evolution of entrepreneurship and role of entrepreneur in economic development of India.
	CO361.4 Evaluate the importance of small scale industries in economic development and also the institutional support provided by government of India in order to support the development of small scale industries.
	CO361.5 Write project reports on his/her business proposal.
UNIX System Programming - 10CS62	CO362.1 Utilize the different standards available for UNIX and C language for different applications.
	CO362.2 Analyze the fundamentals of UNIX file system.
	CO362.3 Apply the use of APIs for handling different types of files.

	CO362.4	Apply the use of APIs for handling of processes and process control.
	CO362.5	Study the daemon processes and signals.
	CO362.6	Implement the network applications in a user friendly manner for sharing data.
Compiler Design - 10CS63	C363.1.	Define various language processors
	C363.2.	Discuss different phases of compiler and their scope of study
	C363.3.	Formulate regular definitions for different tokens of programming languages
	C363.4.	Construct CFG and SDD for different constructs of programming languages
	C363.5.	Explain in detail the different storage allocation strategies
	C363.6.	Design different phases of compiler
COMPUTER NETWORKS-II - 10CS64	C364.1	Define and explain network services, operation, topology and routing in packet networks using shortest path algorithm.
	C364.2	Analyze TCP/IP, UDP, IPv6 and apply protocols like IRP, Multicast routing, DHCP, NAT and mobile IP to communication network.
	C364.3	Build applications, network management,, network security methods, protocols and algorithm to specified network.
	C364.4	Identify, design and develop a rich set of applications which gives QoS using VPN's, tunneling and overlay networks.
	C364.5	Construct multimedia networking applications using standard protocols like JPEG, MPEG, VoIP, IPT, RTMTP, SCTP.
	C364.6	Demonstrate MANET and WSN using AD-HOC network and sensor network features and analyze ZIGBEE technology.
Computer Graphics & Visualization - 10CS65	C665.1	List the different applications of computer science and imaging systems.
	C665.2	Understand the working of OpenGL tool and Apply OpenGL API for programming.
	C665.3	Design interactive program for various input and output devices used in computer graphics.
	C665.4	Compare various types of transformations and develop programming skills accordingly.
	C665.5	Select different types of viewing, lighting and shading techniques to design different applications in graphics programming.
	C665.6	Analyse the implementation of various clipping,rasterization and hidden surface removal algorithm
Operations Research - 10CS661	C366.1.	Define operations research and formulate a certain class of decision problems as a linear programming problem(LPP).
	C366.2.	Solve a linear programming problem using simplex method.
	C366.3.	Interpret the optimal solution and perform elementary sensitivity analysis.
	C366.4.	Recognize and solve transportation and assignment problems.
	C366.5.	Explain decision trees and solve two person, zero sum games.
	C366.6.	Use metaheuristic to find sufficiently good solution to an optimization problem.
	1.	Analyze and demonstrate programming structure of Open GL.
	2.	Develop and execute various programs using Open GL.

Computer Graphics and Visualization Laboratory - 10CSL67	3. Develop and execute programs for drawing various structures using implicit functions provided by Open GL.
	4. Develop and execute programs for developing dynamic structures using functions such as scale, rotate etc.
	5. Develop graphic project using Open GL functions
Unix Systems Programming and Compiler Design Laboratory - 10CSL68	1) Explain the different standards available for UNIX and C language.
	2) Apply the use of APIs for handling different types of files and processes.
	3) Compute the sophisticated and better understanding operating system applications.
	4) Assess the process handling tasks and signals.
	5) Implement the network applications in a user friendly manner for sharing data.
	6) Implement the parse tree using compiler design concepts.
Object Oriented Modeling And Design - 10CS71	C471.1 Define OO themes, models, process and patterns in object oriented modeling and design.
	C471.2 Classify and illustrate models, process and patterns.
	C471.3 Apply the acquired knowledge of OOMD in software development process.
	C471.4 Analyze the class model, state model, interaction model and design patterns.
	C471.5 Evaluate the previous system design concepts and OOMD concepts.
	C471.6 Create the different designs to solve the problems by using OOMD concepts.
Embedded Computing Systems - 10CS72	C472.1 Define embedded system design metrics, challenges, exceptions and describe model train controller and data compressor.
	C472.2 Explain CPU bus, memory devices, I/O devices, component interfacing and demonstrate alarm clock.
	C472.3 Compare distributed embedded systems and design architecture for elevator controller.
	C472.4 Express Real Time Operating System based design.
	C472.5 Discuss program design and analysis.
	C472.6 Apply knowledge of Integrated Development Environment.
PROGRAMMING THE WEB - 10CS73	CO473.1 Define Fundamentals of Internet and web & recall the differences between XHTML and HTML.
	CO473.2 Explain the purpose of Cascading Style Sheets in Web development & illustrate the creation of XHTML documents by using Cascading Style Sheets.
	CO473.3 Build Dynamic XHTML documents using Document Object Model(DOM) & JavaScript.
	CO473.4 Analyze functions of XML Objects and write XML Programs.
	CO473.5 Design server side applications using PERL& CGI, PHP & MySQL.
	CO473.6 Create ruby and rail applications with databases.
ADVANCED COMPUTER ARCHITECTURES - 10CS74	1. Explain classes of computers, new trends and developments in computer architecture, pipelining, instruction set architectures, memory addressing, performance metrics of microprocessors
	2. Analyze various techniques to enhance a processors ability to exploit Instruction-level parallelism (ILP), and its challenges using dynamic scheduling, multiple issue and and speculation

	3. Explain symmetric shared-memory architectures , multiprocessor cache coherence using the directory based and snooping class of protocols and measure their performance
	4. Analyze various models to achieve memory consistency performance of multicore processors using SPEC benchmarks and several advanced optimizations to achieve cache performance
	5. Able to Detect and Enhance Loop-Level Parallelism,Scheduling and Structuring Code for Parallelism
JAVA AND J2EE - 10CS753	C475.1: Describe the fundamental principles of java programming for the construction of robust programs.
	C475.2: Incorporate Object Oriented paradigms in order to create more efficient Java programs using multi-threading and exception handling techniques.
	C475.3: Develop effective user interfaces using java Swing features.
	C475.4: Gain JDBC skills necessary to build database-driven enterprise applications to access and manipulate information.
	C475.5: Implement client server web applications with JSP and Servlets.
	C475.6: Acquire knowledge on EJB container features to configure and deploy EJB applications.
C# PROGRAMMING & .NET CONCEPTS - 10CS761	C476.1 Define the .NET framework (CLR, CTS, CLS etc.) and its components.
	C476.2 Demonstrate the concepts of OOPs, exceptions, interfaces, delegates and events in C#.
	C476.3 Apply the knowledge of OOPs concepts in C# to solve the problems.
	C476.4 Analyze the .NET framework.
	C476.5 Evaluates the previous state of affairs and fundamentals of C# language.
	C476.6 Write a C# programs to find the solutions in different domains.
Networks Laboratory - 10CSL77	1. Ability to analyze the functionality of Network Layers and to determine corresponding algorithm functionality design, correctness and Pseudo-code.
	2. Ability to apply and implement designed algorithm using techniques and data structures to solve problems.
	3. Augmenting various Network topologies and implementing algorithms layer wise applications.
	4. Use various advanced Simulation tools to efficiently implementing algorithm design and their performance measuring techniques
	5. Simulate different scenario with respect to different network size, type and connectivity and run the scenario for proper inputs and analyze output.
Web Programming Laboratory - 10CSL78	1. Analyze and apply the role of languages like HTML, XHTML, CSS, XML, JavaScript, PHP, Perl, Ruby and protocols in the workings of the web and web applications
	2. Analyze a web page and identify its elements and attributes.
	3. Create web pages using HTML, XHTML and Cascading Style sheets.
	4. Create dynamic web pages using JavaScript
	5. Create interactive web applications using php
	6. Build web applications using Perl

	7. Build web applications using ruby and rail
SOFTWARE ARCHITECTURES - 10IS81	CO481.1 Define and understand software architecture for large scale software systems.
	CO481.2 Demonstrate the major software architectural styles, design patterns and quality attributes.
	CO481.3 Develop architectural alternatives for a problem and select among them.
	CO481.4 Analyze the Architectural styles, architectural Concern for Designing, evaluating system Architecture.
	CO481.5 Evaluate the quality of system and its Architectures.
	CO481.6 Adapt the system architecture pattern to solve various software problems.
SYSTEM MODELING AND SIMULATION - 10CS82	C482.1. Define the theory of simulation, basic steps of simulation study and the characteristics of simulation models.
	C482.2. Construct simulation models for real world problems and apply Event-Scheduling / Time-Advance Algorithm and implement the simulation packages using various programming languages.
	C482.3. Incorporate the basic concept of queuing theory, its general characteristics, typical measures of performance of queuing models, and their relationships. And also evaluate the performance of various queuing models.
	C482.4. Define importance of random numbers in simulation systems, its desired properties, and demonstrate the mathematical methods to generate test and develop the routines for true random numbers.
	C482.5. Define the concept of data collection, data analysis, parameter estimation and testing for goodness of fit for given input data by using appropriate methods.
	C482.6. Apply the verification, validation and calibration process to the simulation models of real world systems and recognize the cost/benefits, formulate judgments, and synthesize conclusions through research of a simulation.
INFORMATION AND NETWORK SECURITY - 10CS835	C483.1 Define the firewall, IDS, Kerberos, PGP, IPsec, web security and security policy.
	C483.2 Classify the security policies and security mechanisms for different applications.
	C483.3 Apply the knowledge of security policies and security facts to resolve IP/web security issues
	C483.4 Analyze the Contingency plan, security tools and mechanisms to support information and network security.
	C483.5 Explain the present security mechanism with previously defined security aspects.
	C483.6 Design the new security tools and applications by using X.509, S/MIME, PGP and SSL mechanisms
SOFTWARE TESTING - 10CS842	C484.1 Define basic elements of testing, testing methods, process framework, test execution & planning and monitoring
	C484.2 Classify the different testing techniques.
	C484.3 Apply modern software testing processes in relation to software development and project management.
	C484.4 Analyze different testing techniques individually
	C484.5 Summarize different software testing techniques .
	C484.6 Create test strategies and plans, design test cases, prioritize and implement them.

Project Work -10CS85	1. Gain the knowledge of contemporary issues through literature surveys.
	2. Formulate, design and implement the solutions to real world problems.
	3. Apply programming skills to bring out solutions to global, economic, environmental and societal problems.
	4. Apply modern technologies and engineering tools.
	5. Effectively communicate verbally and literally.
	6. Work individually and as a team member in multidisciplinary domains with ethical standards.
Seminar - 10CS86	1. Creating the ability to take a piece of writing through the process of revision in order to advance their ideas and communicate more effectively with their readers.
	2. Evaluating the knowledge of contemporary issues through literature surveys.
	3. Identify ,formulate and solve problems of computer science and engineering
	4. Apply the knowledge individually in multidisciplinary domains with ethical standards.
	5. Work as a professional to function as an individual and as a member or leader in diverse or multi disciplinary teams
	6. Recognize the level of confidence in terms of eye contact and body language in oral presentation