

First Year: Semester I: Group A/Semester II Group B

Course Name: Engineering Mathematics-I		Course Code: GE-2101
CO1	Apply the knowledge of differentiation to develop the Mathematical equations and compute geometrical measures	
CO2	Determine the expansion and derivatives of functions of Multiple variables and use it to find extreme values of functions.	
CO3	Evaluate the integrals of single, multiple variables and use it to measure the dimensions of various geometrical figures.	
CO4	Discuss Calculus of Scalar and vector point function and use appropriate theorems to evaluate integrals of functions of single, multiple variables.	

Course Name: Engineering Physics (T/P)		Course Code: GE-2105 /GE 2106
CO1	Examine the intensity variation of light due to interference, diffraction and its applications.	
CO2	Explain fundamentals of quantum mechanics and its application to problems dealing with quantum particle.	
CO3	Develop ability to classify and analyze the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands for device applications.	
CO4	Analyze the motion of charged particle in electric and magnetic fields and its applications to electron optic devices.	
CO1	Illustrate working principle of lasers, ultrasonic waves and its properties for useful applications in the field of industry.	

Course Name: Communication Skill		Course Code: GE-2107
CO1	Explain the basics of communication process as well as identify the barriers in communication.	
CO2	Classify and describe the different Speech Sounds of English Language.	
CO3	Apply different strategies and techniques of presentations, interviews and group communication.	
CO4	Drafting reports, memos and emails, considering the professional etiquettes and ethics with appropriate content and context.	

Course Name: Engineering Mechanics (T/P)		Course Code: CV2101/ CV2102
CO 1	An ability to apply the concept of applied mechanics and can solve problems on planar force system for friction as well as frictionless surfaces.	
CO 2	An ability to analyze pin jointed truss frame structure and beam structure analytically and graphic	
CO 3	An ability to understand centroid, moment of inertia, product of inertia and mass moment of inertia and can find properties of surfaces.	
CO 4	An ability to determine the dynamic variables of moving body, understand working principle of simple lifting machine.	

Course Name: Introduction to Computer Programming (T/P)		Course Code: IT2101/ IT2102
CO1	Understand computer system, basics of algorithm & flowchart, and demonstrate straight line program using basic 'C' programming language constructs.	
CO2	Design & Develop programs using different loop control structures, user defined functions, and Pointers.	
CO3	Analyze and apply concepts of different dimensional Arrays as a data structure & development of programs using the same.	
CO4	Design and develop programs using basics of Strings, Structures, union and Files in 'C' language.	

Course Name: Workshop Practice		Course Code: ME 2103
CO1	Understand the carpentry tools, joints, machineries and its applications	
CO2	Understand the fitting tools, measuring instruments, machineries and its applications	
CO3	Understand the smithy tools furnaces and hand and power forging equipment's	
CO4	Understand Gas and Electric welding processes, utility, tools and its applications	

First Year: Semester II: Group A/Semester I Group B

Course Name: Engineering Mathematics-II		Course Code: GE-2102
CO1	Use appropriate Methods to solve first order and higher order differential equations and apply it to find solutions of engineering problems	
CO2	Analyse the functions of complex numbers and variables, prove Mathematical equations and evaluate the complex integrals	
CO3	Use Matrix method to solve linear equations , evaluate eigen values - eigen vectors and its applications.	
CO4	Measure the statistical parameters and derive the equations of best fit curves	

Course Name: Engineering Chemistry (T/P)		Course Code: GE2103 /GE 2104
CO1	Assess qualitative and quantitative aspects of water as a conventional material for industrial and domestic applications.	
CO2	Apply the knowledge of basic electrochemistry to understand battery technology, corrosion process and preventive techniques.	
CO3	Know the basics and assess analytical aspects of industrial materials like fuels and lubricants for efficient utilization.	
CO4	Recognize the significance of cement and advanced engineering materials in technological applications.	
CO5	Analyze and generate analytical and instrumental techniques.	

Course Name: Social Science	Course Code: GE-2108
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CO1	Explain the basic concepts of Social Sciences.
CO2	Describe the development of various Civilizations and their Culture.
CO3	Analyze the Impact of Industrialization on society and discuss the Fundamental Concepts of Society.
CO4	Explain Industrial Organization and Management.

Course Name: Basic Electronics		Course Code: EE 2101
CO1	Characterize Number systems, semiconductors, diodes, transistors and operational amplifiers.	
CO2	Design simple analog circuits	
CO3	Design simple combinational and sequentiallogic circuits	
CO4	Identify functions of digital multimeter, Bridges and transducers in the measurement of physical variables	

Course Name:Electrical Engineering (T/P)		Course Code: EL 2101/ EL-2102
CO1	Reproduce fundamentals of dc circuits, single phase, and three phase ac circuits.	
CO2	Analyse dc circuits, single phase and three phase ac circuits for basic electrical quantities such as current, voltage, power etc.	
CO3	Explain construction, working, testing, and applications of various electrical machines.	
CO4	Analyse performance of various electrical machines.	
CO5	Perform laboratory experiments and demonstrate competency in collecting, interpreting, analysing data, communicate and present effectively through laboratory journals.	

Course Name: Engineering Graphics(T/P)		Course Code: ME2101/ME2102
CO1	Transform orthographic projections into isometric projections and vice versa.	
CO2	Evaluate Projections of various One Dimensional, Two dimensional, Three dimensional objects.	
CO3	Built the development of lateral surfaces of various solids and their cut section.	
CO4	Predict the intersections and intersections of various solid objects.	
CO5	Justify the use of software tools used for Two dimensional drawings.	

Second Year: Semester III:

Course Name: : Engineering Mathematics-III		Course Code: GE-2201
CO1	Estimate the Calculus of Numerical Function.	
CO2	Determine the transforms and inverse transforms of various functions of variables and use it to solve Mathematical equations.	
CO3	Discuss the nature of periodic function and express it in terms of series.	
CO4	Use appropriate method/s to solve partial differential equations.	

Course Name: Electronic Devices and Circuits (T/P)		Course Code:ET2201/ET2202
CO1	Apply the knowledge of semiconductor diodes in circuit analysis.	
CO2	Identify the operating conditions of bipolar junction transistors.	
CO3	Design and analyze transistor circuit with suitable biasing and stabilization techniques. And analyze the operation of MOSFET in various regions.	
CO4	Analyze the response of transistors at low and high frequency	
CO5	Analyze the Characteristics of different power amplifier	

Course Name:Digital Circuits and Fundamentals of Microprocessor(T/P)		Course Code:ET2203/ET2204
CO1	Explain and compare the digital logic families	
CO2	Simplify Boolean expressions using k-map & tabulations method.	
CO3	Identify, formulate, and solve combinational logic design problems.	
CO4	Describe and Design sequential logic circuits.	
CO5	Describe the concept of 8085 and develop programs for it	
Course Name: Electronic Measurement & Instrumentation(T/P)		Course Code: ET2205/ET2206
CO1	Describe basic measurement system and analyze errors	
CO2	Analyze the behavior of bridge circuits for the measurement of different electrical quantities	
CO3	Demonstrate the working of measuring instrument, display devices, generators, spectrum analyzers along with sensors and transducers	
CO4	Elaborate application of data conditioning and acquisition	

Course Name: Network Analysis		Course Code: ET2207
CO1	Analyze electrical circuits using nodal and mesh analysis	
CO2	Design and analyze electrical circuits using network theorems.	
CO3	Analyze steady state and transient response of electrical circuits	
CO4	Characterize the transfer function for two – port networks.	

Second Year: Semester IV:

Course Name: : Advance Mathematical Techniques		Course Code: GE-2204
CO1	Utilize numerical techniques to obtain approximate solutions of mathematical equations	
CO2	Design and determine the solution of linear programming problems.	
CO3	Measure the Statistical parameters for random variables	
CO4	.Explain the basic concept of fuzzy sets, Relations and fuzzy logic.	

Course Name:Electromagnetic Fields		Course Code:ET2251
CO1	Compare different types of co-ordinate systems for electromagnetic fields	
CO2	Apply the concepts of electric field and magnetic field to solve engineering problems.	

CO3	Analyze static and time varying fields using Maxwell's equations
CO4	Analyze wave propagation in different medium.

Course Name: Microcontroller and Interfacing (T/P)		Course Code: ET2252 / ET2253
CO1	Explain 8051 microcontroller architecture.	
CO2	Develop assembly language program.	
CO3	Develop embedded C language program.	
CO4	Interface 8051 microcontroller to solve real life problems.	

Course Name: Analog Communication (T/P)		Course Code: ET2254 / ET2255
CO1	Analyze different analog modulation techniques.	
CO2	Evaluate different parameters of communication receivers.	
CO3	Analyze and comprehend concept of television transmission and reception.	
CO4	Describe and analyze Pulse modulation techniques, noise and wave propagation of signals	

Course Name: Microcontroller and Interfacing (T/P)		Course Code: ET2252 / ET2253
CO1	Explain 8051 microcontroller architecture.	
CO2	Develop assembly language program.	
CO3	Develop embedded C language program.	
CO4	Interface 8051 microcontroller to solve real life problems.	

Course Name: Control Systems(T/P)		Course Code: ET2256 / ET2257
CO1	Apply block diagram reduction technique and signal flow graph for transfer function	
CO2	Analyze the characteristic of feedback control system	
CO3	Explain and analyze time response of first and second order control systems for different standard test signals	
CO4	Determine the stability of linear control system	
CO5	Perform frequency domain analysis of linear control system using bode plot and nyquist stability criterion	

Third Year: Semester V:

Course Name: Fundamentals of Economics		Course Code: GE2312
CO1	Recognize consumer's behavior and analyze Market price	
CO2	Extrapolate operations in market with production constraints	
CO3	Describe the national income accounting and public finance.	
CO4	Analyze international trade and institutions.	

Course Name: Analog Integrated Circuits(T/P)		Course Code: ET 2301/ET 2302
CO1	Describe, Design and analyze OP-AMP circuits.	
CO2	Parametric analysis and Design of error compensation network.	
CO3	Design and analyze linear and non- linear OP-AMP applications.	
CO4	Explain special function ICs and design circuits using it.	

Course Name: Fields & Radiating Systems		Course Code: ET 2303
CO1	Analyze transmission lines and perform its parametric analysis.	
CO2	Analyze parallel plane waveguides	
CO3	Analyze and design rectangular waveguides	
CO4	Design antenna arrays	

Course Name: Signals & Systems (T/P)		Course Code: ET 2304/ ET 2305
CO1	Classify systems based on their properties and determine the response of LTI system.	
CO2	Analyze system properties based on impulse response and Fourier analysis.	
CO3	Apply sampling and interpolation to sample and reconstruct signals.	
CO4	Apply the Laplace transform and Z- transform for analysis of continuous-time and discrete-time signals and systems	

Course Name: Lab: Electronics Workshop(P)		Course Code: ET 2306
CO1	Identify and test passive and active electronic components and devices.	
CO2	Identify and Test wires, cables, connectors and interconnected components.	
CO3	Construct mini project and troubleshoot it.	

Course Name: OE I/ OE III: Microcontroller & Embedded Systems		Course Code: ET 2311/ET 2381
CO1	Explain 8051 microcontroller architecture.	
CO2	Develop assembly language program.	
CO3	Develop embedded C language program.	
CO4	Interface 8051 microcontroller to solve real life problems	

Course Name: OE I/ OE III: Principles Of Communication Engineering		Course Code: ET 2312/ET 2382
CO1	Classify systems based on their properties and determine the response of LTI system.	
CO2	Analyze system properties based on impulse response and Fourier analysis.	
CO3	Apply sampling and interpolation to sample and reconstruct signals.	
CO4	Apply the Laplace transform and Z- transform for analysis of continuous-time and discrete-time signals and systems	

Course Name: OE I/ OE III: Fundamentals Of Image Processing		Course Code: ET 2313/ET 2383
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CO1	Apply basic image processing algorithms for image enhancement.
CO2	Apply filtering techniques in spatial and frequency domain.
CO3	Describe and analyze various image transform techniques.
CO4	Apply segmentation and compression algorithms on images

Course Name: OE II/ OE IV: Soft Computing		Course Code: ET 2321/ET 2391
CO1	Describe and apply genetic operators and genetic algorithms for problem solving	
CO2	Apply Neural Network algorithms in pattern classification	
CO3	Apply fuzzy logic and arithmetic to handle uncertainty and solve engineering problems	
CO4	Describe and analyze fuzzy implications and fuzzy controller	

Course Name: OE II/ OE IV: Industrial Instrumentation		Course Code:ET 2322/ET 2392
CO1	Describe instrumentation system using various transducers.	
CO2	Measure and analyze various parameters using transducers.	
CO3	Explain and Identify automation system components	

Course Name: OE II/ OE IV: Medical Electronics		Course Code:ET 2323/ET 2393
CO1	Describe various parameters of human anatomy and physiology.	
CO2	Explain the functioning of different measuring and recording instruments	
CO3	Describe radiography equipments	
CO4	Explain Biomedical computer application	

Course Name: OE II/ OE IV: Display Technology & Applications		Course Code:ET 2324/ET 2394
CO1	Identify and describe different display technologies, their working, Luminescence materials and manufacturing processes.	
CO2	Characterize and analyze specifications of display technology, light emission process and analyze matrix addressing.	
CO3	Explain the fundamentals of backplane and backlight unit technologies.	
CO4	Elaborate materials and applications of displays.	

Course Name: OE II/ OE IV: PLCs and SCADA		Course Code:ET2325 /ET2400
CO1	Identify and describe different display technologies, their working, Luminescence materials and manufacturing processes.	
CO2	Characterize and analyze specifications of display technology, light emission process and analyze matrix addressing.	
CO3	Explain the fundamentals of backplane and backlight unit technologies.	
CO4	Elaborate materials and applications of displays.	

Third Year: Semester VI:

Course Name: Fundamentals of Management		Course Code: GE2311
CO1	Explain the Legal provision and Functions of Management.	
CO2	Analyze the role of Human Resource and Financial Management in the organization.	
CO3	Analyze the project life cycles.	
CO4	Identify tools and techniques for the marketing of goods and services.	

Course Name: Digital Signal Processing(T/P)		Course Code: ET2351/ET2352
CO1	Apply discrete Fourier transform and verify its properties.	
CO2	Implement digital filters in a variety of structures.	
CO3	Design and analyze digital IIR and FIR filter.	
CO4	Analyze the effects of finite word length on discrete time system	
CO5	Analyze multi-rate discrete time system with unequal sampling rates	

Course Name: PE I : Object Oriented Programming(T/P)		Course Code: ET2361/ ET2362
CO1	Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.	
CO2	Demonstrate the use of various OOPs concepts with the help of C++ programs.	
CO3	Design and develop C++ programs for implementing data structures using array and linked list.	
CO4	Implement the concept of file handling, template and exception handling to develop the software.	

Course Name: PE I : Discrete Structures (T/P)		Course Code: ET2363/ET2364
CO1	Analyze the concept of logic and proofs.	
CO2	Apply discrete mathematics to develop recursive algorithms.	
CO3	Design and Solve various problems of discrete probability theory.	
CO4	Analyze graphs, tree, group theory concepts used in computer science	
CO5	Design and analyze network models related to transport network and pumping network	

Course Name: PE I : Microprocessors and Peripherals(T/P)		Course Code: ET2365/ET2366
CO1	Explore architecture of 8085 microprocessor and utilize the instruction set of 8085 to develop assembly language programs	
CO2	Analyse timing details, develop delay programs & interface memory ICs with 8085	
CO3	Interface various off chip peripherals with 8085 & develop programs for the same	
CO4	Explore architecture of 8086 microprocessor & compare it with 8088	
CO5	Develop programs using 8086 instruction set.	

Course Name: PE I : Electronic Instrumentation(T/P)		Course Code: ET2367/ET2368
CO1	Design instrumentation system using various transducers and its calibration process.	
CO2	Analyze pressure and temperature using measuring instruments and its calibration process.	
CO3	Measure and analyze flow and level using flow transducers.	
CO4	Measure and analyze various parameters like level, thickness speed, ph value etc.	
CO5	Develop PLC programs by using ladder diagram	

Course Name:PE I : Fundamentals of Computing(T/P)		Course Code: ET2371/ET2372
CO1	Describe and develop Pythonprogramming using data types, operators and control structures.	
CO2	Develop python programs using loops and decision statements.	
CO3	Describe and apply strings, lists, tuples, Numpy and dictionaries in Python programs.	
CO4	Develop python programs using functions and recursions	

Course Name: PE I : Algorithms and data structures(T/P)		Course Code: ET2373/ ET2374
CO1	Describe fundamental concepts of Object Oriented Programming	
CO2	Develop programs for Various types of data structures.	
CO3	Analyze Skip-list, hashing and search trees.	

Course Name: PE II : Antenna Theory & Design (T/P)		Course Code: ET2377/ ET2378
CO1	Evaluate various parameters of antennas.	
CO2	Analyze performance parameters of various antennas & antenna array	
CO3	Perform of antenna measurements by using different antenna measurement techniques.	
CO4	Design and Analyze various antennas	

Course Name: PE II : Digital System Design (T/P)		Course Code: ET2379/ET2380
CO1	Compare and contrast different FPGA and CPLD architectures.	
CO2	Design, develop and analyze combinational circuits.	
CO3	Design, develop and analyze sequential circuits.	
CO4	Implement digital system using CAD tool.	

Course Name:PE II : Internet of Things (IoT) (T/P)		Course Code: ET2381/ET2382
CO1	Explore the physical and Logical design of IoT.	

CO2	Explore the M2M and NETCONF.
CO3	Explore python programming.
CO4	Apply basic skills of IoT to solve real life problems.

Course Name:PE II : Optical Communication(T/P)		Course Code: ET2383/ET2384
CO1	Design and analyze an Optical Communication Systems with different types of losses.	
CO2	Explore different types of sources and receivers in fiber optics.	
CO3	Use different splicing techniques, connectors and coding.	
CO4	Explore different methods of loss measurements in fiber optics	

Course Name:PE II: Principles of image processing(T/P)		Course Code: ET2385/ET2386
CO1	Apply basic image processing algorithms for image enhancement.	
CO2	Apply filtering techniques in spatial and frequency domain.	
CO3	Understand noise models and degradation process for image restoration	
CO4	Implement the algorithms for image segmentation and compression	
CO5	Implement the algorithms for image representation and description	

Course Name: PE II: TV & Video Engineering (T/P)		Course Code: ET2387/ET2388
CO1	Describe basic concept of monochrome and color TV.	
CO2	Describe and troubleshoot Video Amplifier & luminance circuits.	
CO3	Explain and compare PAL, NTSC and SECAM systems.	
CO4	Explain and compare analog and digital television-transmission and reception.	

Fourth Year: Semester VII:

Course Name: RF & Microwave(T/P)		Course Code: ET 1401/ ET 1402
CO1	Describe and analyze the behavior of linear beam and cross field tubes.	
CO2	Apply s-parameters to model and analyze output response of microwave transmission lines.	
CO3	Analyze behavior of passive components using s-matrix.	
CO4	Measure performance parameters of microwave devices.	
CO5	Explain and characterize microwave solid state devices.	

Course Name:Principles of Image Processing		Course Code:ET 1403/ ET 1404
CO1	Apply basic image processing algorithms for image enhancement.	
CO2	Apply filtering techniques in spatial and frequency domain.	
CO3	Explain noise models and apply degradation process for image restoration	
CO4	Implement the algorithms for image segmentation and compression	
CO5	Describe various image transform techniques.	

Course Name:PE III : Optical Communication		Course Code:ET 1405/ ET 1406
CO1	Design and analyze an Optical Communication Systems with different types of losses.	
CO2	Explore different types of sources and receivers in fiber optics.	
CO3	Use different splicing techniques, connectors and coding.	
CO4	Explore different methods of loss measurements in fiber optics	

Course Name: PE III : Microwave Integrated circuit		Course Code: ET 1407/ ET 1408
CO1	Identify and describe the different MIC components.	
CO2	Design and analyze Microwave Integrated circuit and various Microstrip antennas	
CO3	Analyze the design of microstrip circuits in low and High Power circuits.	
CO4	Analyze Hybrid MIC's & Monolithic MIC s fabrication techniques.	

Course Name: PE III : Communication Networks		Course Code: ET 1409/ ET 1410
CO1	Apply LAN structure to design data communication system.	
CO2	Detect Data transmission errors in communication networks.	
CO3	Describe and compare data transmission protocols.	
CO4	Describe and compare data and network security protocols.	

Course Name: PE III : Analog VLSI		Course Code:ET 1431/ ET 1432
CO1	Apply mathematical methods to analyze Analog VLSI circuits and design MOS amplifier to improve the gain and operating frequency range.	
CO2	Design single stage amplifier with various loads and analyze the various characteristic.	
CO3	Design and analyze the differential amplifier and Op-AMP with two stage & Cascade stage technique.	
CO4	Explain basics of switch capacitor and design layout of analog circuits.	

Course Name:Industrial Training/ CRT		Course Code:ET 1413
CO1	Write effectively in English.	
CO2	Analyze logically and critically on different issues.	
CO3	Solve quantitative problems effectively.	
CO4	Apply fundamentals of Electronics and Telecommunication for practical applications.	

Course Name:Project phase -I		Course Code:ET 1414
CO1	Identify, formulate and analyze complex engineering problems through literature survey.	
CO2	Apply knowledge to assess health, social, safety and environmental issues.	

CO3	Implement core /multidisciplinary/ industrybased electronics projects in cost effective manner.
CO4	Communicate technical details effectively

Fourth Year: Semester VIII:

Course Name: Antenna Theory & Design (T/P)		Course Code:ET 1415/ ET 1416
CO1	Evaluate various parameters of antennas.	
CO2	Analyze performance parameters of various antennas & antenna array	
CO3	Perform of antenna measurements by using different antenna measurement techniques.	
CO4	Design and Analyze various antennas	

Course Name:CMOS VLSI Design(T/P)		Course Code:ET 1417/ ET 1418
CO1	Analyze the characteristics of MOSFET	
CO2	Analyze the voltage transfer characteristics of MOS inverters.	
CO3	Apply the LAMBDA design rules for design of optimized CMOS circuits and describe the process of fabrication for CMOS circuits	
CO4	Analyze switching characteristics and interconnection effects of MOS device	
CO5	Design and analyze the combinational, sequential and advanced techniques in CMOS logic circuits	

Course Name:PE IV : Power Electronics		Course Code:ET 1419
CO1	Describe and characterize power electronics devices	
CO2	Describe and Analyze 3 Phase rectifier circuit.	
CO3	Describe and Analyze converters, cycloconverters and inverters.	
CO4	Explain protection circuits.	

Course Name:PE IV : Wireless Mobile Communication Systems		Course Code:ET 1420
CO1	Describe the evolution of wireless systems & cellular standards.	
CO2	Apply the concepts of frequency reuse for design of cellular systems and capacity improvement in cellular systems.	
CO3	Quantify causes and effects of path loss and signal fading on received signal characteristics and use various techniques to improve signal quality and link performance.	
CO4	Analyze GSM & CDMA systems & understand the fundamentals of wireless networking.	

Course Name:PE IV : Satellite Communication & RADAR Engineering		Course Code:ET 1433
CO1	Explain satellite System and Services in propagation of satellite.	
CO2	Describe various systems in Earth Station	
CO3	Analyze the effect of weather conditions on Radar Systems.	
CO4	Describe and apply the Radar range equation and Doppler principle to detect moving targets and cluster.	

Course Name:PE IV : Display Technology		Course Code:ET 1437
CO1	Identify and describe different display technologies, manufacturing process and specifications of display technology.	
CO2	Explain and analyze properties of Luminescence materials	
CO3	Explain design parameters for displays and analyze matrix addressing.	
CO4	Explain backlight unit technologies and elaborate applications of displays.	

Course Name:PE IV : Biomedical Instrumentation		Course Code:ET 1434
CO1	Describe and analyze various parameters using ECG,EEG EMG and phonocardiograph.	
CO2	Describe and analyze various parameters such as -Blood Pressure, Blood flow rate, Pulse rate, Heart rate, respiration rate and temperature and hearing ability.	
CO3	Explain the working principle of radiology equipments	
CO4	Describe working principles of advanced medical imaging systems	

Course Name:PE V : Fuzzy Logic & Neural Networks (T/P)		Course Code:ET 1422/ET 1423
CO1	Analyze computing algorithms in Fuzzy logic and neural network.	
CO2	Describe neural network architecture and apply supervised/unsupervised algorithms for pattern recognition/classification problems.	
CO3	Apply fuzzy logic and reasoning to handle uncertainty and solve engineering problems.	
CO4	Prove and Apply fuzzy arithmetic operations and relations for problem solving.	
CO5	Apply Fuzzy implications and Design Fuzzy logic controller for solving real life problems.	

Course Name:PE V : RF Circuit Design (T/P)		Course Code:ET 1424/ET 1425
CO1	Apply the fundamentals of RF to design and analyze the RLC circuits at high frequency	
CO2	Design and analyze different bandwidth estimation techniques.	
CO3	Apply the knowledge of CMOS technology for design of supply independent bias circuit.	
CO4	Design and analyze the parameters of HF power amplifier circuits	
CO5	Describe and analyze Phase detectors.	

Course Name:PE V : Multimedia Communications(T/P)		Course Code:ET 1426/ ET 1427
CO1	Describe and compare different color models and file formats used for video and audio.	
CO2	Analyze and compare digital/ analog video signal and quantization techniques for digital audio signals.	
CO3	Apply different compression scheme used for image and video	
CO4	Describe and compare various multimedia networks communication protocols.	
CO5	Explain content based image retrieval techniques	

Course Name:PE V : Advances in Communication(T/P)		Course Code:ET 1435/ ET 1436
CO1	Apply the knowledge of switching technologies for digital telephony	
CO2	Describe digital subscriber & wireless local loop	
CO3	Apply the concept of random variables to characterize the signal behavior in communication.	
CO4	Apply the concept of density function to analyze the performance of communication system..	

Course Name:Project Phase-II		Course Code:ET 1428
CO1	Design and analyze application based electronic systems.	
CO2	Implement core / multidisciplinary / industrybased electronics projects in cost effective manner.	
CO3	Communicate technical details effectively	