Course Outcome

C101-HS6151/TECHNICAL ENGLISH-I	
C101.1	Speak clearly, confidently, comprehensibly, and communicate with one or many listeners using communicative strategies.
C101.2	Write coherently and flawlessly using a wide diction.
C101.3	Read different genres of texts adopting various reading strategies.
C101.4	Comprehend different spoken discourses in different accents.
C101.5	Communicate in group and to larger audience appropriately.
C101.6	Enable to understand process descriptions and present it in the relevant field.

C102-MA6151/MATHEMEATICS-1	
C102.1	Find the eigen values and eigen vectors and diagonalise a matrix into quadratic form.
C102.2	Find the converges, diverges of infinite series.
C102.3	Determine the solutions of algebraic equations solved by iterative methods gets close to the required solution.
C102.4	Obtain the envelopes of a given curves by means of radius and centre of curvature.
C102.5	Calculate the maxima and minima value functions of two variables.
C102.6	Find the area of plain curves and volume of solid using double and triple integrals.

C103-PH6151/ENGINEERING PHYSICS-I	
C103.1	Discuss various crystal structures and different crystal growth techniques.
C103.2	Demonstrate the properties of elasticity and heat transfer through objects.
C103.3	Explain black body radiation, properties of matter waves and Schrodinger wave equations.
C103.4	Illustrate the acoustic requirements, production and application of ultrasonics.
C103.5	Examine the characteristics of laser and optical fiber.
C103.6	Improve the property of the materials for the application of commercial devices.

C104-CY6151/ENGINEERING CHEMISTRY-I	
C104.1	Classify the techniques of polymerization and properties of polymers.
C104.2	Relate various thermodynamic functions such as enthalpy, entropy, free energy and their significance.
C104.3	Explain the photophysical processes and various components of UV & IR spectrophotometer.
C104.4	Illustrate the phase transitions of one component and two component systems applications in industries.
C104.5	Outline the synthesis, characteristics and the applications of nano materials.
C104.6	Knowing the various applications related to photophysical laws.

C105-GE6151/COMPUTER PROGRAMMING	
C105.1	Demonstrate the Organization of a Computer and number systems
C105.2	Explain the attributes of algorithm and programming basics
C105.3	Illustrate simple programs by using arrays and string functions

C105.4	Explain functions and pointers for solving problems
C105.5	Develop simple applications using structure and union
C105.6	Develop a application program using c
C106-GE6152/ENGINEERING GRAPHICS	
C106.1	Construct the conic sections, special curves and orthographic views from pictorial views and models.
C106.2	Apply the principles of orthographic projections of points in all quadrants, lines and planes in first quadrant.
C106.3	Draw the projections of simple solids like prisms, pyramids, cylinder and cone.
C106.4	Design the sectional views of solids like cube, prisms, pyramids, cylinders & cones.
C106.5	Apply the principles of isometric projection of simple solids.
C106.6	Apply the principles of perspective projection of solids.
C107-GE6161/COMPUTER PRACTICES LABORATORY	
C107.1	Prepare data using MS office for Presentation and Visualization
C107.2	Describe the procedure for looping Statements to solve problems.
C107.3	Solve Problems using decision making.
C107.4	Use Arrays, Structures & Unions in problem solving.
C107.5	Solve Problems using Recursive Functions.
C107.6	Explain the algorithms to solve problems using c programs
C108-GE6162/ENGINEERING PRACTICES LABORATORY	
C108.1	Ability to fabricate electrical and electronics circuits
C108.2	Acquiring the knowledge about various types of wiring circuit, wiring tools, wiring estimation and cost.
C108.3	Understand the knowledge about bread board assembling, need of earthing.
C108.4	Recognize electrical Quantities of V, I & PF in RLC and Energy in Single Phase Energy meter.
C108.5	Gain the knowledge about Logic Gates and Electronic components.
C108.6	Acquiring the knowledge about HWR & FWR with ripple factor & test for generation of clock signal.
C109-GE6163-PHYSICS AND CHEMISTRY LABORATORY-I	
C109.1	Analyze the physical principle involved in the various instruments.
C109.2	Find the strength of an acid using pH meter and conductometer.
C109.3	Improve the creative skills that are essential for engineering.
C109.4	Evaluate the wavelength of spectral lines, particle size, acceptance angle of an optical fiber using spectrometer.
C109.5	Appraise the velocity of sound and compressibility of the liquid using ultrasonic Interferometer.
C109.6	Determine the DO content in water sample by winkler's method.
C110-HS6251/TECHNICAL ENGLISH-II	
C110.1	Speak clearly, confidently, comprehensibly, and communicate with one or many

	listeners using communicative strategies.
C110.2	Write coherently and flawlessly using a wide diction.
C110.3	Read different genres of texts adopting various reading strategies.
C110.4	Comprehend different spoken discourses in different accents.
C110.5	Communicate in group and to larger audience appropriately.
C110.6	Enable to understand process descriptions and present it in the relevant field.
C111-MA6251/MATHEMATICS-II	
C111.1	Apply the vector concepts of vector calculus in engineering disciplines
C111.2	Apply the knowledge of mathematics in solving higher order differential equations with constant coefficients.
C111.3	Understand the basic knowledge of differential equation in typical mechanical fields.
C111.4	Apply the knowledge of Laplace transform in solving ordinary differential equation.
C111.5	Understand the standard techniques of complex variable theory and solve core engineering problems.
C111.6	Evaluate real integrals by applying concept of complex integration.
C112-PH6251/ENGINEERING PHYSICS-II	
C112.1	Illustrate Classical and Quantum free electron theory & calculate carrier concentration in metals.
C112.2	Identify the carrier concentration of P-type & N-type semiconductors using Hall effect
C112.3	Classify the different types of magnetic and superconducting materials.
C112.4	Explain the dielectrics, types of polarization, losses and breakdowns.
C112.5	Discuss the properties, preparation and applications of Metallic Alloys, SMA, Nanomaterials, NLO, Biomaterials
C112.6	Development of modern devices using new engineering materials.
C113-CY6251-ENGINEERING CHEMISTRY-II	
C113.1	Develop innovative methods to produce soft water for industrial use and potable water at cheaper cost.
C113.2	Produce cheaper biodegradable polymers to reduce environmental pollution.
C113.3	Design economically and new methods to synthesis nano materials.
C113.4	Apply their knowledge for protection of different metals from corrosion.
C113.5	knowledge of converting solar energy into most needy electrical energy efficiently.
C113.6	Develop a solution to reduce the environmental pollutions.
C114-GE6251- BASIC CIVIL AND MECHANICAL ENGINEERING	
C114.1	Explain the working principles of various power plants, pumps and turbines.
C114.2	State the functions of IC engine and types of boilers.
C114.3	Apply the principles of vapour absorption and compression systems.
C114.4	Apply the principles of surveying and use various measurements using engineering materials and leveling instruments.
C114.5	Classify the types of bridges, foundation, floorings, roofs and plasters.

C114.6	Explain the R.C.C structural members and state the purpose of dam.
C115-EE6201/CIRCUIT THEORY	
C115.1	Able to Illustrate the basic laws and series & parallel circuits.
C115.2	Network reduction & source transformation technique for complex circuits.
C115.3	Able to analyze Series & parallel circuit parameters and Self & mutual inductance.
C115.4	Analyze the transient response of RL, RC and RLC Circuits using Laplace transform
C115.5	Able to solve three phase balanced / unbalanced voltage sources with star and delta connected loads,
C115.6	Solve complex circuits and Transient response.
C116-GE6252/ PHYSICS AND CHEMISTRY LABORATORY - II	
C116.1	Appraise the Young's modulus of the beam by uniform and non uniform bending method.
C116.2	Determine the coefficient of viscosity of the liquid use Poiseuille's method
C116.3	Evaluate the refractive index of spectral lines for determining the dispersive power of a prism.
C116.4	Determine the type, amount of alkalinity , hardness in a given water sample and evaluate the amount of copper using EDTA method
C116.5	Examine the potentiometric redox titration and Conductometric precipitation titration.
C116.6	Improve the creative skills that are essential for engineering
C117-CS6212/ COMPUTER PROGRAMMING LABORATORY	
C117.1	Explain UNIX Operating system and usage of file system.
C117.2	Apply Shell Commands for a given task using filter and pipe commands.
C117.3	Develop the Shell scripts in VI editor.
C117.4	Develop C Program on Unix environment.
C117.5	Apply File handling in C to copy, merge and display the given file.
C117.6	Develop C++ Program on Unix environment.
C118-EE6211/ELECTRI CIRCUITS LABORATORY	
C118.1	Apply KCL, KVL and Network Theorems to Simple and Complex circuits.
C118.2	Demonstrate the working of CRO and time constant of RC circuit.
C118.3	Simulate frequency response of RLC series and parallel resonant circuits.
C118.4	Determine the power in three phase balanced and unbalanced circuits by two wattmeter methods.
C118.5	Determine h-parameters of Two port networks.
C118.6	Calibrate single phase energy meter.
C201-MA6351/TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS	
C201.1	Apply the Fundamental concept of Partial Differential Equations.
C201.2	To develop Fourier Series for different types of functions.
C201.3	Find the solutions of the heat equation, wave equation and the Laplace equation subject to boundary conditions
C201.4	To solve the Problems using Fourier Transforms and its inverse Transforms.

C201.5	Determine the Z- transform and inverse transform of simple functions, properties, various related theorems and application to differential equations with constant coefficients.
C201.6	Understand the applications of each topic.
C202-EE6301/DIGITAL LOGIC CIRCUITS
C202.1	Develop a solution to solve real life problems using digital logic.
C202.2	Design the combinational logic circuits.
C202.3	Classify the semiconductor memories.
C202.4	Design the sequential logic circuits.
C202.5	Develop the digital system design using PLD.
C202.6	Simulate the combinational and sequential circuits using VHDL systems.
C203-EE6302/ELECTROMAGNETIC THEORY
C203.1	Explain the basic mathematical concepts related to electromagnetic vector fields
C203.2	Describe the application field of electrostatics, electrical potential and energy density.
C203.3	Classify the magnetic parameters and potentials in electromagnetic circuits.
C203.4	Execute the induced emf using Maxwell's equations.
C203.5	Clarify the concepts of electromagnetic waves.
C203.6	Understand the different types of Pointing vector in magnetic circuits.
C204-GE6351/ ENVIRONMENTAL SCIENCE AND ENGINEERING
C204.1	Understand the values, threats and conservation of biodiversity and classify various ecosystems.
C204.2	Identify and implement technological and eco solutions to environmental problems
C204.3	Develop the knowledge on various natural resources, their causes and their effects
C204.4	Understand various environmental acts and disaster management.
C204.5	Relate population and environment and the role of IT in environment and human health.
C204.6	Analyze the impact of environment integrated themes and social issues
C205-EC6202/ELECTRONIC DEVICES AND CIRCUITS
C205.1	Understand the construction and modeling of semiconductor diodes and rectifiers.
C205.2	Discuss the methods of transistors and its characteristics.
C205.3	Interpret the midband analysis of amplifier circuits with gain and impedance values.
C205.4	Analyze the frequency response of differential amplifier and tuned circuits.
C205.5	Examine the methods of feedback and generation of oscillator conditions.
C205.6	Understand characteristics of electron devices towards its applications.
C206-EE6303/ LINEAR INTEGRATED CIRCUITS AND APPLICATIONS
C206.1	Explain the procedure for the fabrication of IC
C206.2	Summarize the DC & AC characteristics of Operational amplifier.
C206.3	Discuss the applications of Operational amplifier
C206.4	Describe the internal functional blocks of special ICs like Timer and PLL
C206.5	Classify types of voltage regulators and describe the special ICs
C206.6	Ability to understand and analyse, linear and digital electronic circuits.

	C207- EC6351/ELECTRONICS LABORATORY
C207.1	Discuss the various types of diodes and its v-i characteristics.
C207.2	Construct the various types of transistors and draw its v-i characteristics.
C207.3	Demonstrate the classifications of amplifier.
C207.4	Categorize about filter circuits and multivibrators.
C207.5	Describe the working of feedback amplifiers and oscillator circuits.
C207.6	Ability to construct the different types of electronic circuits and its characteristics.
	C208- EE6311/ LINEAR AND DIGITAL INTEGRATED CIRCUITS LABORATORY
C208.1	Implement adder, subtractor circuits and conversions using Boolean functions.
C208.2	Test Parity generator and checker circuits.
C208.3	Demonstrate 4 bit synchronous, asynchronous counter and Shift registers
C208.4	Illustrate the multiplexer and demultiplexer circuits.
C208.5	Construct Adder, comparator, differentiator and integrator using Op-amp.
C208.6	Understand the comparison between linear and digital electronic circuits.
	C209-MA6459/ NUMERICAL METHODS
C209.1	Find Eigen values and Eigen vectors of a given matrix by power method.
C209.2	To make effective use of the interpolation formulas to find the missing data using the given data.
C209.3	Apply the techniques of solving any algebraic, transcendental equations
C209.4	Distinguish among the criteria of selection and procedures of various Numerical rules.
C209.5	Apply various numerical methods in solving an initial value problem involving an ordinary differential equation.
C209.6	Estimate the best fit polynomial for the given tabulated data using the methods of Newton's interpolation and Lagrange's interpolation.
	C210-EE6401/ ELECTRICAL MACHINES – I
C210.1	Obtain the fundamental knowledge of Magnetic circuits and Magnetic Materials.
C210.2	Explain the various construction details and erection of Transformer.
C210.3	Describe the working principles of electrical machines and generator.
C210.4	Classify the various motor and its speed control techniques
C210.5	Expertise in testing methods to obtain the performance of DC Machines.
C210.6	Illustrate the real time applications of DC Machines and Transformers.
	C211-CS6456/ OBJECT ORIENTED PROGRAMMING
C211.1	Gain the basic knowledge on object oriented concepts
C211.2	Ability to implement features of object oriented programming to solve real world problems.
C211.3	Discuss the suitable test to validate the programs with exception handling mechanism.
C211.4	Apply to evaluate the concept of overloading.
C211.5	Develop the concept of java in creating classes, objects using arrays and control statements.

C211.6	Create packages, handle exceptions and multi-threaded programs.
C211- EE6402/TRANSMISSION AND DISTRIBUTION	
C212.1	Identify the basic elements of the electric power system, generation, transmission, distribution and describe the role played by each element.
C212.2	Compute the losses, efficiency and parameters of the Transmission line.
C212.3	Discuss the Performance of Transmission Lines.
C212.4	Solve the voltage distribution in insulator strings, cables and methods to improve the same.
C212.5	Design overhead lines both Mechanical and electrical aspects using Sag calculation.
C212.6	Illustrate the power system operation, stability, control and protection.
C213- EE6403 DISCRETE TIME SYSTEMS AND SIGNAL PROCESSING	
C213.1	Classify the different types of signals and systems.
C213.2	Apply z-transform and inverse Z transform of discrete time systems.
C213.3	Apply Radix-2 FFT Algorithm to Compute Discrete Fourier Transform.
C213.4	Explain different types of Infinite Impulse Response (IIR) filters and Finite Impulse Response (FIR) filters.
C213.5	Understand the sampling conversion technique in signal processing and its applications.
C213.6	Explain the various architectures of Digital signal processors
C214- EE6404/MEASUREMENTS AND INSTRUMENTATION	
C214.1	Identify the basic block elements in measuring instruments.
C214.2	Explain the significance of electrical and magnetic instruments.
C214.3	Demonstrate the working of various bridge circuits..
C214.4	Choose the suitable display devices for different applications.
C214.5	Illustrate the function of different blocks involved in DAS.
C214.6	Compare the performance of electrical and electronic instruments.
C215-CS6461/OBJECT ORIENTED PROGRAMMING LABORATORY	
C215.1	Design C++ programs using functions, classes with objects, member functions and constructors.
C215.2	Develop operator and function overloading and run time polymorphism using C++.
C215.3	Develop file handling techniques in C++ for sequential and random access also use Java code for strings.
C215.4	Construct packages and interfaces in Java.
C215.5	Create threads in Java and handle predefined and user defined exceptions.
C215.6	Develop file handling techniques use Java code for strings.
C216- EE6411/ELECTRICAL MACHINES LABORATORY – I	
C216.1	Discuss the working and characteristics of DC generator.
C216.2	Examine load characteristics of DC shunt, series and compound motor and its maximum efficiency operating point
C216.3	Predict the efficiency of DC shunt machine in different methods
C216.4	Explain the load characteristics of single phase and three phase transformer ,

	separate the different losses and to find the efficiency
C216.5	Predetermine the equivalent circuit parameters of single phase transformer in two different methods and compare the results
C216.6	Explore the DC starters.
C301- EE6501/POWER SYSTEM ANALYSIS	
C301.1	Explain the model of power system under steady state condition using per unit diagram.
C301.2	Apply efficient numerical methods to solve power flow problems
C301.3	Illustrate the networks in terms of symmetrical component sequence networks.
C301.4	Illustrate the fault condition in sequence networks.
C301.5	Compute the transient behaviour of power system.
C301.6	Analyse stability during fault, prefault and post fault conditions.
C302- EE6502/MICROPROCESSORS AND MICROCONTROLLERS	
C302.1	Describe the basic Architecture of 8085 Microprocessor and working of all blocks of the processor, IO and memory interfacings with necessary timing diagrams.
C302.2	Classify the instructions with the help of Addressing modes of 8085 with necessary programs.
C302.3	Explain the basic Architecture of 8051 Microcontroller with working of various blocks of the controller with necessary timing diagram.
C302.4	Explain the architecture of various interfacing devices like 8255 PPI, 8259 PIC, 8251 USART, 8279, 8253
C302.5	Analyze the architecture of various Interfacing Devices like ADC and DAC and Programming of all the Interfacing IC's.
C302.6	Apply the knowledge of programming concepts of 8051 Microcontroller for various applications.
C303- ME6701/POWER PLANT ENGINEERING	
C303.1	Discuss the layout of modern coal power plant and various components used in thermal power plant.
C303.2	Identify the components of diesel and gas turbine power plants.
C303.3	Describe the layout of subsystems of various nuclear power plants and safety measures for nuclear power plants.
C303.4	Distinguish different hydroelectric power plants.
C303.5	Calculate theper unit cost of electrical energy based on Power tariff, load factor, demand factor, diversity factor and plant safety factor.
C303.6	Construct various renewable energy power plants such as wind, tidal, PV, solar, thermal, geo thermal, biogas and fuel cell.
C304 - EE6503/POWER ELECTRONICS	
C304.1	Explain the significance of switching devices and its application of power converters.
C304.2	Compare the operation of two, three Pulse Converters and output waveforms with and without source and load inductance.
C304.3	Classify the operation of Choppers and applications of SMPS.

C304.4	Explain the operation of single phase and three phase Inverters with and without load.
C304.5	Illustrate the operation of cycloconverter and its application.
C304.6	Discuss the operation of AC voltage controller and its application.
C305-EE6504/ELECTRICAL MACHINES-II	
C305.1	Determine the conditions for synchronization of synchronous generators.
C305.2	Calculate the performance of synchronous motor.
C305.3	Describe the starting methods of induction machines.
C305.4	Discuss the speed control of three-phase induction motors.
C305.5	Explain the various methods of starting of single phase induction motor.
C305.6	Develop the model of electrical apparatus and their application in power systems.
C306- IC6501/CONTROL SYSTEMS	
C306.1	Identify the various control system components and their representations
C306.2	Analyze the various time domain parameters.
C306.3	Analyze the various frequency response plots
C306.4	Apply the concepts of various system stability criterions
C306.5	Design various transfer functions of digital control system using state variable models
C306.6	Design the compensation technique that can be used to stabilize control systems
C307- EE6511/CONTROL AND INSTRUMENTATION LABORATORY	
C307.1	Analyze the stability of the control system by (i) Bode plot (ii) Root Locus Plot and (iii) Nyquist plot using MATLAB
C307.2	Design the Lag, Lead and Lag-Lead Compensators for the given specifications.
C307.3	Determine the Characteristics of Synchro-Transmitter- Receiver and its simulation.
C307.4	Calculate the unknown Capacitance, Inductance and Resistance using AC and DC Bridges experimentally.
C307.5	Measure the Power and Energy in AC and DC circuits.
C307.6	Analyze the Signal Conditioning units (a) Instrumentation Amplifier (b) ADC and DACs and its simulation.
C308- GE6563/COMMUNICATION SKILLS - LABORATORY BASED	
C308.1	Apply appropriate communication skills across settings, purposes and audiences.
C308.2	Demonstrate knowledge of communication theory and applications.
C308.3	Practice critical thinking to develop innovative and well-founded perspectives related to the students emphasis.
C308.4	Use technology to communicate effectively in various settings and contexts.
C308.5	Demonstrate appropriate and professional ethical behavior.
C308.6	Build and maintain healthy and effective relationships.
C309-EE6512/ELECTRICAL MACHINES LABORATORY - II	
C309.1	Determine the voltage regulation of three phase alternator in different methods and compare the results.
C309.2	Discuss the characteristics of salient pole synchronous machine and negative &zero sequence components.
C309.3	Explain the V and inverted V characteristics of three phase synchronous machine at

	different load condition.
C309.4	Determine and pre determine performance characteristics of three phase induction Motor.
C309.5	Illustrate the performance characteristics of single phase induction Motor.
C309.6	Develop the model of electrical apparatus and their application in power systems.
C310- EC6651/COMMUNICATION ENGINEERING	
C310.1	Explain the different types of AM systems
C310.2	Discuss the various types of digital communication systems.
C310.3	Illustrate different types of line codes & error control codes in digital communication.
C310.4	Understand various source coding techniques used in compression technique.
C310.5	Analyze the different multiple access techniques in wire and wireless communication.
C310.6	Ability to understand the various communication medias like fiber optic and satellite communications.
C311-EE6602/SOLID STATE DRIVES	
C311.1	Determine the condition for steady state stability.
C311.2	Select a drive for a particular application based on power rating.
C311.3	Explain the different modes of operation of converter fed dc motor.
C311.4	Describe the different control methods of induction motor drives.
C311.5	Explain the different control methods of synchronous motor drives.
C311.6	Compare the different controllers in DC drives.
C312-EE6603/EMBEDDED SYSTEMS	
C312.1	Analyze the basic build process of embedded systems, structural units in embedded processor.
C312.2	Classify the types of I/O device ports, buses and different interfaces for data transfer.
C312.3	Model the Embedded Product Development Life Cycle (EDLC) by using different Techniques.
C312.4	Compare the features of different types of real time operating systems.
C312.5	Apply the knowledge of programming concepts of Embedded Systems for various Applications.
C312.6	Plan the scheduling of different task using real time operating systems
C313-EE6603/POWER SYSTEM OPERATION AND CONTROL	
C313.1	Analyze the various load characteristics with load curve and load duration curve.
C313.2	Describe modeling of power-frequency dynamics and design power-frequency controller
C313.3	Explain the modeling of reactive power-voltage interaction and the control actions
C313.4	Solve economic dispatch problems and unit commitment problems in power systems
C313.5	Explain the need of computer controls to energy management using SCADA
C313.6	Ability to understand and analyze power system operation, stability, control and

	protection
C314-EE6604/DESIGN OF ELECTRICAL MACHINES	
C314.1	Describe the mmf calculation and thermal rating of various types of electrical machines
C314.2	Illustrate the armature and field systems for D.C. machines
C314.3	Understand the core, yoke, windings and cooling systems of transformers
C314.4	Describe the construction of stator and rotor of induction machines.
C314.5	Discuss stator and rotor of synchronous machines and study their thermal behavior.
C314.6	Model of electrical apparatus and their application in power system.
C315-EE6002/POWER SYSTEM TRANSIENTS	
C315.1	Analyze the concept of transients and compute the solution of transient current equation for RL and RLC system
C315.2	Apply the concept of resistance switching, load switching.
C315.3	Describe the concept of lightning mechanism.
C315.4	Describe the interaction between lightning and power system
C315.5	Apply the concept of reflection and refraction.
C315.6	Justify the EMTP for transient computation.
C316- EE6611/POWER ELECTRONICS AND DRIVES LABORATORY	
C316.1	Draw the VI characteristics of SCR and generate the Gate Pulse using R, RC and UJT
C316.2	Plot the characteristics of MOSFET and IGBT
C316.3	Simulate a single phase AC to DC half and fully controlled converter
C316.4	Simulate the output response of step up and step down MOSFET based chopper.
C316.5	Plot the output response of AC voltage controller and Simulate the Power Electronic Circuits
C316.6	Ability to understand and analyze, linear and digital electronic circuits.
C317- EE6612/MICROPROCESSORS AND MICROCONTROLLERS LABORATORY	
C317.1	Demonstrate and apply working of programs in microprocessor 8085 and 8051 microcontroller.
C317.2	Explain the various assembly language programs using 8085 and 8051.
C317.3	Develop the basic knowledge of microprocessor and microcontroller interfacing and their application
C317.4	Design the system using capabilities of stack program counter and status register.
C317.5	Justify the programming proficiency using various addressing modes in 8085 & 8051.
C317.6	Develop mini-projects using 8085 processor
C318- EE6613/PRESENTATION SKILLS AND TECHNICAL SEMINAR	
C318.1	Present seminar in the field of electrical and electronics engineering subjects studied.
C318.2	Solve objective type questions in the field of electrical and electronics engineering.
C318.3	Communicate effectively, the subjects learned in the form of seminar presentation.
C318.4	Communicate effectively, the modern trends in the field of electrical and electronics engineering.

C318.5	Discuss technical interviews effectively with proper documents.
C318.6	Ability to review, prepare and present technological developments.
C401-EE6701/HIGH VOLTAGE ENGINEERING
C401.1	Identify the causes of over voltage and its effects in power system.
C401.2	Classify the breakdown Mechanisms in Solid, Liquid, gases and Composite dielectrics
C401.3	Mention the different type of Generating circuit for high voltage D.C and A.C
C401.4	Determine A.C and D.C high voltage and current using appropriate method
C401.5	Test the transformer, insulator, circuit breakers, surge diverters and cables also discuss the insulation coordination
C401.6	Understand the power system operation, stability, control and protection.
C402-EE6702/PROTECTION AND SWITCH GEAR
C402.1	Summarize the causes and effects of faults in power system and explain the necessity of protection in power system.
C402.2	Describe the operation of various relays and summarize the various protective schemes
C402.3	List out the various faults that can occur on alternator, transformer, busbar and transmission line and select the suitable protection schemes.
C402.4	Synthesize the static relays using comparators and explain numerical relays.
C402.5	Derive the expression for RRRV, critical resistance value
C402.6	Express the various types of circuit breakers and its application.
C403-EE6703/SPECIAL ELECTRICAL MACHINES
C403.1	Explain the characteristics of synchronous reluctances motors and its applications.
C403.2	Execute the equations of torque of synchronous reluctances motors.
C403.3	Develop the control circuits for power converters.
C403.4	Describe the characteristics of PMBLDC motor
C403.5	Explain the operational characteristics of ideal PMSM.
C403.6	Explain the VA requirements of power converter for PMSM.
C404-MG6851/PRINCIPLES OF MANAGEMENT
C404.1	Describe the basic of management and its types.
C404.2	Explain the nature and purpose of planning.
C404.3	Compare the different organization structures and training and development.
C404.4	Estimate the individual and group behaviour, communication and IT.
C404.5	Apply the knowledge using the various System and process of controlling,
C404.6	Assess managerial practices and choices relative to ethical principles and standards.
C405-EE6009/FLEXIBLE AC TRANSMISSION SYSTEMS
C405.1	Understand the importance of controllable parameters and benefits of FACTS controllers.
C405.2	Know the significance of shunt, series compensation and role of FACTS devices on system control.
C405.3	Analyze the functional operation and control of GCSC, TSSC and TCSC.

C405.4	Describe the principles, operation and control of UPFC and IPFC.
C405.5	Dispatch the load economically among thermal plants.
C405.6	Explain power system security and voltage stability.
C406-EE6008/MICROCONTROLLER BASED SYSTEM DESIGN	
C406.1	Describe the basic architecture of PIC16cxx and instruction set for simple operations.
C406.2	Explain about the PIC microcontrollers interrupts and interrupt programs.
C406.3	Apply the program to interface I/O devices with controller like LCD, Keyboard, and Sensors etc.,
C406.4	Develop simple applications using ARM assembly language programs.
C406.5	Analyze ARM Organization and ARM Coprocessor interface.
C406.6	Apply the knowledge of programming concepts of 8051 Microcontroller for various applications
C407- EE6711/POWER SYSTEM SIMULATION LABORATORY	
C407.1	Determine the bus impedance and admittance matrices using C and MATLAB
C407.2	Apply numerical methods for solving load flow problems and verify using C and MATLAB
C407.3	Analyze various faults occurring in power system and simulate the faults using PSCAD.
C407.4	Analyze small signal stability of Single Machine Infinite Bus (SMIB) system and draw the swing curve using AUPOWER Lab.
C407.5	Generate the coding for economic dispatch problems and load frequency dynamics problems using MATLAB.
C407.6	Analyze small signal stability of Single Machine Infinite Bus (SMIB) system and draw the swing curve using MATLAB.
C408- EE6712/COMPREHENSION	
C408.1	Describe the basic concepts of electrical and electronics subjects
C408.2	Solve objective type questions in the field of electrical and electronics engineering
C408.3	Review, prepare and present technological developments
C408.4	Analyze the modern trends in the field of electrical and electronics engineering.
C408.5	Discuss the technical interview questions effectively.
C408.6	Choose the correct answer for competitive exam questions correctly.
C409- EE6801/ELECTRIC ENERGY GENERATION, UTILIZATION AND CONSERVATION	
C409.1	Explain the selection of motors for a given application.
C409.2	Summarize the knowledge on illumination design for energy saving.
C409.3	Illustrate the various furnaces for electrical power requirements.
C409.4	Explain the operation of solar energy collectors using energy balance equations.
C409.5	Classification of wind energy conversion systems.
C409.6	Implement the performance of wind turbine aerodynamic forces
C410- GE6075/PROFESSIONAL ETHICS IN ENGINEERING	
C410.1	Understand the basic perception of profession, professional ethics, various moral

	issues & uses of ethical theories.
C410.2	Explain various social issues, industrial standards, code of ethics and role of professional ethics in engineering field.
C410.3	Describe responsibilities of an engineer for safety and risk benefit analysis.
C410.4	Aware of professional rights and responsibilities of an engineer.
C410.5	Acquire knowledge about various roles of engineers in variety of global issues.
C410.6	Apply ethics in society and discuss the ethical issues related to engineering and realize the responsibilities, rights in the society.
C411-EE/ POWER ELECTRONICS FOR RENEWABLE ENERGY SYSTEMS	
C411.1	Examine the various types of renewable energy sources
C411.2	Acquiring the knowledge about the performance of IG, PMSG, SCIG and DFIG
C411.3	Ability to fabricate different power converters namely AC to DC , DC to DC and AC to AC converters for renewable energy sources
C411.4	Analyze various operating modes of wind electrical generators and solar energy system
C411.5	Strengthen the knowledge about maximum power point tracking algorithms
C411.6	Gain the knowledge about various grid integrated systems
C412- EE6811 / PROJECT WORK	
C412.1	Apply the fundamentals of mathematics, science and engineering knowledge to complex engineering problems.
C412.2	Apply appropriate techniques and modern engineering tools in electrical and electronics engineering and allied applications.
C412.3	Apply ethical principles in the field of electrical and electronics engineering and allied applications.
C412.4	Diverse teams in multidisciplinary settings and make effective presentation, and communicate effectively.
C412.5	Demonstrate the understanding of the engineering and management principles in multidisciplinary environments
C412.6	To engage in lifelong learning in the broadest context of technological change.