Semester-I

Subject Code & Name: HS8151- Communicative English

Course Outcomes (Cos)

C101.1	Students will be able to read articles of a general kind in magazines and newspapers.
C101.2	Students will be able to participate effectively in informal conversations; introduce themselves and their friends and express opinions in English
C101.3	Students will be able to comprehend conversations and short talks delivered in English
C101.4	Students will be able to listen to dialogues and conversations and to complete exercises based on them.
C101.5	Students will be able to write short essays of a general kind and personal letters and emails in English.

Subject Code & Name: MA8151- Engineering Mathematics – I

Course Outcomes (Cos)

C102.1	Students will be able to use both the limit definition and rules of differentiation to differentiate functions and Apply differentiation to solve maxima and minima problems.
C102.2	Students will be able to evaluate integrals both by using Riemann sums and by using the Fundamental Theorem of Calculus
C102.3	Students will be able to evaluate integrals using techniques of integration, such as substitution, partial fractions and integration by parts and Apply integration to compute multiple integrals, area, volume, integrals in polar coordinates, in addition to change of order and change of variables.
C102.4	Students will be able to determine convergence/divergence of improper integrals and evaluate convergent improper integrals
C102.5	Students will be able to apply various techniques in solving differential equations

ANNA UNIVERSITY REGULATION - 2017

Subject Code & Name: PH8151- Engineering Physics

Course Outcomes (Cos)

C103.1	The students will gain knowledge on the basics of properties of matter and its applications,
C103.2	The students will acquire knowledge on the concepts of waves and optical devicesand their applications in fibre optics,
C103.3	The students will have adequate knowledge on the concepts of thermal properties of materials and their applications in expansion joints and heat exchangers,
C103.4	The students will get knowledge on advanced physics concepts of quantum theory and its applications in tunneling microscopes
C103.5	The students will understand the basics of crystals, their structures and different crystal growth techniques.

Subject Code & Name: CY8151- Engineering Chemistry

Course Outcomes (Cos)

C104.1	To make the students conversant with boiler feed water requirements, related problemsand water treatment techniques.
C104.2	To develop an understanding of the basic concepts of phase rule and its applications to single and two component systems and appreciate the purpose and significance of alloys.
C104.3	To know the Preparation, properties and applications of engineering materials.
C104.4	To know the types of fuels, calorific value calculations, manufacture of solid, liquidand gaseous fuels.
C104.5	To apply the Principles and generation of energy in batteries, nuclear reactors, solar cells, wind mills and fuel cells.

Subject Code & Name: EE8351- Problem Solving and Python Programming

Course Outcomes (Cos)

C105.1	Students will be able to develop algorithmic solutions to simple computational problems
C105.2	Students will be able to read, write, execute by hand simple python programs
C105.3	Students will be able to decompose a python program into functions
C105.4	Students will be able to represent compound data using python lists, tuples, dictionaries.
C105.5	Students will be able to read and write data from/to files in python programs.

Subject Code & Name: GE8152- Engineering Graphics

Course Outcomes (Cos)

C106.1	Students will be able to familiarize with the fundamentals and standards of engineering graphics
C106.2	Students will be able to perform freehand sketching of basic geometrical Constructions and multiple views of objects.
C106.3	Students will be able to project orthographic projections of lines and plane surfaces.
C106.4	Students will be able to draw projections and solids and development of surfaces.
C106.5	Students will be able to visualize and to project isometric and perspective sections of simple solids.

Subject Code & Name: GE8161- Problem Solving and Python Programming Laboratory

Course Outcomes (Cos)

C107.1	Students will be able to write, test, and debug simple python programs.
C107.2	Students will be able to implement python programs with conditionals and loops.
C107.3	Students will be able to develop python programs stepwise by defining functions and calling them.
C107.4	Students will be able to use python lists, tuples, and dictionaries for representing compound data.
C107.5	Students will be able to read and write data from/to files in python.

Subject Code & Name: BS8161- Physics and Chemistry Laboratory

Course Outcomes (Cos)

C108.1	Apply principles of elasticity, optics and thermal properties for engineering applications
C108.2	Analyze young's modulus, rigidity modulus, wavelength of different colors and particle size of minute particles
C108.3	Construct the circuits, assemble the apparatus, tabulate the readings and calculate the answers using appropriate formulae.
C108.4	Compare and conclude the calculated values with the standard values and justify their

ANNA UNIVERSITY REGULATION - 2017

Semester-II

Subject Code & Name: HS8251- Technical English

Course Outcomes (Cos)

C109.1	Students will be able to read technical texts and write area- specific textseffortlessly.
C109.2	Students will be able to listen and comprehend lectures and talks in their area of specialization successfully.
C109.3	Students will be able to speak appropriately and effectively in varied formal and informal contexts.
C109.4	Students will be able to write reports and winning job applications.
C109.5	Students will be able to participate effectively in public speaking and groupdiscussion.

Subject Code & Name: MA8251 - Engineering Mathematics –II

Course Outcomes (Cos)

C110.1	Students will have good understanding of Eigen values and eigenvectors, diagonalization of a matrix, symmetric matrices, positive definite matrices and similar matrices.
C110.2	Students will have good understanding of gradient, divergence and curl of a vector point function and related identities.
C110.3	Students will have good understanding of evaluation of line, surface and volume integrals using gauss, stokes and green's theorems and their verification.
C110.4	Students will have good understanding of analytic functions, conformal mapping and complex integration.
C110.5	Students will have good understanding of laplace transform and inverse transform of simple functions, properties, various related theorems and application to differential equations with constant coefficients

Subject Code & Name: PH8253 - Physics for Electronics Engineering

Course Outcomes (Cos)

C111.1	Gain knowledge on classical and quantum electron theories, and energy band structures.
C111.2	Acquire knowledge on basics of semiconductor physics and its applications in various devices,
C111.3	Get knowledge on magnetic and dielectric properties of materials.
C111.4	Have the necessary understanding on the functioning of optical materials for optoelectronics,
C111.5	Understand the basics of quantum structures and their applications in spintronics and carbon electronics.

Subject Code & Name: BE8252 – Basic Civil and Mechanical Engineering

Course Outcomes (Cos)

C112.1	Appreciate the Civil and Mechanical Engineering components of Projects.
C112.2	Explain the usage of construction material and proper selection of construction materials.
C112.3	Measure distances and area by surveying
C112.4	Identify the components used in power plant cycle
C112.5	Demonstrate working principles of petrol and diesel engine.
C112.6	Elaborate the components of refrigeration and Air conditioning cycle

Subject Code & Name: EE8251 – Circuit Theory

Course Outcomes (Cos)

C113.1	Ability to analyze electrical circuits
C113.2	Ability to apply circuit theorems
C113.3	Ability to analyze transients

Subject Code & Name: GE8291 – Environmental Science and Engineering

Course Outcomes (Cos)

C114.1	Environmental Pollution or problems cannot be solved by mere laws. Public participation is an important aspect which serves the environmental Protection. One will obtain knowledge on the following after completing the course.
C114.2	Public awareness of environmental is at infant stage
C114.3	Ignorance and incomplete knowledge has lead to misconceptions
C114.3	Development and improvement in std. of living has lead to serious environmental disasters

Subject Code & Name: GE8261 –Engineering Practices Laboratory

Course Outcomes (Cos)

C115.1	Fabricate carpentry components and pipe connections including plumbing works.
C115.2	Use welding equipment's to join the structures
C115.3	Carry out the basic machining operations
C115.4	Make the models using sheet metal works
C115.5	Illustrate on centrifugal pump, Air conditioner, operations of smithy, foundry and
C115.6	fittings
C115.7	Carry out basic home electrical works and appliances
C115.8	Measure the electrical quantities
C115.9	Elaborate on the components, gates, soldering practices.

Subject Code & Name: EE8261 – Electric Circuit Laboratory

Course Outcomes (Cos)

C116.1	Understand and apply circuit theorems and concepts in engineering applications.
C116.2	Simulate electric circuits.

Semester-III

Subject Code & Name: EE8351 - Digital Logic Circuits

Course Outcomes (Cos)

C202.1	Understand the fundamental concept and techniques of digital electronics and examine the structure of various number systems and digital Logic families its application in digital design.
C202.2	Apply the knowledge of digital circuit concepts (Boolean Algebra, K-maps) to optimize digital circuit for the given parameter to develop various combinational circuits.
C202.3	Construct the synchronous sequential logic circuit using various types of Flip Flops.
C202.4	Develop the synchronous sequential circuits and illustrate the concepts of various hazards problems and Programmable Logic devices.
C202.5	Examine the fundamental concepts of VHDL and Execute the basic digital electronics circuits design through VHDL simulation in the laboratory environment

Subject Code & Name: EE8391 – Electromagnetic Theory

Course Outcomes (Cos)

C203.1	Explain the basic mathematical concepts related to electromagnetic fields & Electrostatic fields
C203.2	Interpret the concepts of electrical potential, energy density and their applications
C203.3	Illustrate the concepts of magneto statics, magnetic flux density, scalar and vector potential and its applications
C203.4	Explain the concepts of Faradays law, Induced emf and Maxwell's equations to analyze the electrodynamics fields.
C203.5	Outline the basic concepts of electromagnetic waves, parameters and Electromagnetic fields and design Electrical equipment and systems.

Subject Code& Name: EE8301 - Electrical Machines-I

Course Outcomes (Cos)

C204.1	Study the techniques of magnetic-circuit analysis and magnetic materials.
C204.2	Study the constructional details, principle of operation, prediction of performance, methods of testing the transformers and three phase transformer connections.
C204.3	Study the working principles of electrical machines using the concepts of electromechanical energy conversion principles and derive expressions for generated voltage and torque developed in all Electrical Machines
C204.4	Study the working principle, types and determination of characteristics of DC Generators.
C204.5	Study the working principle, starting, methods of speed control and estimation of various losses of DC Motors.

Subject Code &Name: EC8353 - Electron Devices and Circuits

Course Outcomes (Cos)

C205.1	ExplaintheStructureofbasicelectronicdevicesanditscharacteristics.
C205.2	Construction and working of various active and passive devices like MOSFET, UJT, BJT and JFET.
C205.3	Analysis of BJT in various modes of operation in gain and frequency response and small signal amplifier circuits.
C205.4	Demonstrate the different stages of amplifier, differential amplifier cascade amplifier, power amplifier.
C205.5	Explain the functions of various oscillator circuits and positive and negative feedback circuits.

Subject Code& Name: ME8792 - Power Plant Engineering

Course Outcomes (Cos)

C206.1	Explain the different blocks in coal based power plant
C206.2	Summarize the working of diesel, gas turbine and combined cycle power plant
C206.3	Explain the layout and various types of reactors in Nuclear Power Plant
C206.4	Illustrate the operation of various types of renewable power plant
C206.5	Summarize the tariffs and performance parameter of the power plant

ANNA UNIVERSITY REGULATION - 2017

Subject Code &Name: EC8311 – Electronics Laboratory

Course Outcomes (Cos)

C207.1	To understand the behavior of semiconductor devices by applying different kinds of experimentation.
C207.2	To analyze the outputs of various electronic circuits through graphical analysis.
C207.3	To conduct experiments as individuals, or as a team to enhance their technical skills.
C207.4	To make an effective report based on practical experiments.

Subject Code &Name: EE8311 - Electrical Machines Laboratory-I

Course Outcomes (Cos)

C208.1	Analyze the characteristics of DC generator and DC motor on No load and loaded conditions
C208.2	Examine the various losses and efficiency of DC machines and transformer
C208.3	sketchtheloadcharacteristicsofsinglephaseandthreephasetransformer
C208.4	Develop the equivalent circuit of single phase transformer
C208.5	Explain the concepts of starters and connection of three phase transformer
C208.6	Exhibit ethical principles in engineering practices
C208.7	Perform task as an individual and /or team member to manage the task in time
C208.8	Express the Engineering activities with effective presentation and report.
C208.9	Interpret the findings with appropriate technological /research citation.

Semester IV

Subject Code& Name: EE8401 – Electrical Machines - II

Course Outcomes (Cos)

C210.1	Outline the construction and working principle of Synchronous Generator and MMF curves and armature windings.
C210.2	Illustrate the principle of operation and performance of Synchronous motor
C210.3	Outline the construction and working principle of Three-phase Induction Motor
C210.4	Explain the starters and speed control method of three phase Induction motor.
C210.5	Demonstrate the construction and working principle of Special Machines and single-phase induction motor.

Subject Code &Name: EE8402 - Transmission and Distribution

Course Outcomes (Cos)

C211.1	Illustrate the structure of power system and calculation procedure of various parameters in transmission line.
C211.2	Calculate the ABCD parameters, Voltage regulation and Efficiency of different transmission lines.
C211.3	Summarize the various types of insulators and mechanical design procedure of overhead transmission system.
C211.4	Distinguish the different types of cables and grading methods in underground transmission system.
C211.5	Discuss the concepts of distribution system and layout of substation, concepts of HVDC and FACTS.

Subject Code& Name: EE8403 - Measurement & Instrumentation

Course Outcomes (Cos)

C212.1	Compare the basic functional block elements in Different measuring Instruments and the errors in the measurement system.
C212.2	Illustrate the construction and working of electrical and electronics instruments.
C212.3	Explain the Design AC and DC bridge circuits to determine the values of resister, inductor and capacitors.
C212.4	Summarize the knowledge on various types of storage and display devices.
C212.5	Identify the concepts of various transducers and data acquisition systems.

Subject Code & Name: EE8451 - Linear Integrated Circuits and Applications

Course Outcomes (Cos)

C213.1	Infer the process in IC fabrication procedure
C213.2	Analyze the characteristics of op-amp
C213.3	Illustrate the importance of signal analysis using op-amp based circuits
C213.4	Explain the functional blocks and the applications of special ICs like timers, PLL circuits
C213.5	ExplainthefunctionalblocksofapplicationIcslikeregulator,SMPS,Functiongenerator

Subject Code & Name: IC8451 - Control Systems

Course Outcomes (Cos)

C214.1	Model the various systems by mathematical equations and find transfer function
C214.2	Explain the basic components of feedback control systems and summarize the various errors
C214.3	Identify the performance parameters of the system through the time domain and frequency domain approach
C214.4	Infer the stability of the system in time domain and frequency domain & apply different compensation techniques to improve the stability of the system
C214.5	Explain the state space variables in effect of state feedback of system.

Subject Code & Name: EE8411 - Electrical Machines Laboratory-II

Course Outcomes (Cos)

C215.1	Pre-determinetheregulationofbothsalientandnon-salientpoleAlternatorsbyEMF,MMFandZPFMethods
C215.2	AnalyzetheCharacteristicsofsynchronousmotorusingVandinvertedVcurves
C215.3	Determinetheefficiencyandequivalentcircuitparameterof Singleandthreephase induction motor and Analyze the losses of Induction Motor
C215.4	Analyzetheresponseofspeedvariationinslip-ringInductionmotorforchangeinrotorresistance
C215.5	DeterminetheefficiencyandAnalyzethelossesofSinglePhaseInductionMotor
C215.6	Exhibit ethical principles in engineering practices
C215.7	Perform task as an individual and /or team member to manage the task in time
C215.8	ExpresstheEngineeringactivitieswitheffectivepresentationandreport.
C215.9	Interpretthefindingswithappropriatetechnological/researchcitation.

Subject Code & Name: EE8461 – Linear and Digital IntegratedCircuits Laboratory

Course Outcomes (Cos)

C216.1	Implement Boolean function using logic gates
C216.2	Implement Code conversion using logic gates
C216.3	Designandimplement4bit Shift Registers
C216.4	Design and implement applications of Op-Amp
C216.5	Design and implement counters using specific counter IC
C216.6	Exhibit ethical principles in engineering practices
C216.7	Perform task as an individual and /or team member to manage the task in time
C216.8	ExpresstheEngineeringactivitieswitheffectivepresentationandreport.
C216.9	Interpretthefindingswithappropriatetechnological/researchcitation.

Subject Code &Name: EE8412 - Technical Seminar

Course Outcomes (Cos)

C217.1	Function effectively as an individual and Make effective presentation on Engineering/technology.
C217.2	Review, prepare and present technological developments in the field of electrical and electronics engineering.
C217.3	Design documentation and write effective reports on seminar topics
C217.4	Exhibit ethical principles in engineering practices
C217.5	Perform task as an individual and /or team member to manage the task in time
C217.6	Express the Engineering activities with effective presentation and report.
C217.7	Interpret the findings with appropriate technological/research citation.

ANNA UNIVERSITY REGULATION - 2017

Semester V

Subject code/Subject Name: EE8501 - Power system Analysis

Course Outcomes (Cos)

C301.1	Discover the per unit values and formulate network matrices for the given power system network.
C301.2	Solve the power flow analysis of any power system network using different numerical techniques.
C301.3	Examine the symmetrical fault in the Power system using thevenin's representation and bus building algorithm.
C301.4	Construct the unsymmetrical fault sequence networks using symmetrical components transformation matrix for the given power system
C301.5	Predict the stability of power system by applying equal area criterion & Swing equation concepts

Subject Code& Name: EE8551-Microprocessors and Microcontrollers

Course Outcomes (Cos)

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 like Interrupts, Timer, IO ports etc. with necessary timing diagram and compare the programming concepts with 8085.
C302.4	Illustrate how the different peripherals are interfaced with Microprocessor & Microcontroller.
C302.5	Apply the knowledge of programming concepts of 8051 Microcontroller for various applications like keyboard display interface, servo motor etc.

Subject Code &Name: EE8552 - Power Electronics

Course Outcomes (Cos)

C303.1	Explain various power semiconductor devices and their switching characteristics.
C303.2	Analyse and choose various AC – DC converters for real time applications.
C303.3	Describe the basic topologies, operation and switching techniques of DC to DC converters.
C303.4	Differentiate different modulation techniques and harmonic reduction methods for inverters.
C303.5	Illustrate the working of AC to AC converters and their applications.

Subject Code & Name: EE8591 - Digital Signal Processing

Course Outcomes (Cos)

C304.1	Classify the different types of Signals and Systems
C304.2	Explain the LTI systems with different inputs using Z transform
C304.3	Apply DFT &FFT for the analysis of digital signals
C304.4	DevelopIIRfiltersfromanalogfiltersandbuildFIRfiltersusingwindowsandsamplingtechnique
C304.5	ClassifytheDSPProcessoranditsarchitecturefordifferentapplications

Subject Code & Name: EE8511 - Control and Instrumentation Laboratory

Course Outcomes (Cos)

C307.1	Analyze the characteristics of P, PI and PID controllers experimentally and analyze the stability of the control system using MATLAB
C307.2	Compute the transfer function of a Field controlled DC motor experimentally and analyze the response of Lag, Lead and Lag-Lead Compensators
C307.3	Analyze the transient response of Position Control system experimentally and analyze the Characteristics of Synchro-Transmitter- Receiver and to Use MATLAB for the Simulation of Control Systems.
C307.4	Ability to analyze the basic concepts of bridge networks and to analyze the Dynamics of Sensors/Transducers
C307.5	Measure the Power and Energy experimentally and analyze signal conditioning circuits and to Use MATLAB for Process Simulation
C307.6	Exhibit ethical principles in engineering practices
C307.7	Perform task as an individual and / or team member to manage the task in time
C307.8	Express the Engineering activities with effective presentation and report.
C307.9	Interpret the findings with appropriate technological / research citation.

Semester VI

Subject Code & Name: EE8601 - Solid State Drives

Course Outcomes (Cos)

C310.1	ClassifythevarioustypesofdrivesandloadtorquecharacteristicsandApplythemultiquadrantdynamicsinhoistloadsystem.
C310.2	Illustrate the operation of steady state analysis of single phase and threephasefullycontrolledconverterandChopperfedseparatelyexciteddcmotordrivesanddiscuss the various control strategies of converter
C310.3	Explaintheoperationandcharacteristicsofvariousmethodsofsolidstatespeedcontrolofinductionmotor.
C310.4	Describe the operationofvariousmodesofV/fcontrolofsynchronousmotordrivesanddifferenttypesofpermanentmagnetsynchronous motor drives.
C310.5	Design a current and speed controller and develop the transfer function for DC motor, load and converter, closed loop control with current and speed feedback.

Subject Code & Name: EE8602 - Protection and Switchgear

Course Outcomes (Cos)

C311.1	Students will be able to study the causes of abnormal operating conditions (faults, lightning and switching surges) of the apparatus and system.
C311.2	Students will be able to study the characteristics and functions of relays.
C311.3	Students will be able to study the apparatus protection.
C311.4	Students will be able to study the static and numerical relays.
C311.5	Students will be able to study the functioning of circuit breakers.

Subject Code & Name: EE8691 - Embedded Systems

Course Outcomes (Cos)

C312.1	Outline the basic build process of embedded systems, structural units in embedded processor and selection of processor and memory devices depending upon the applications.
C312.2	Explain the different types of I/O device ports, buses and different interfaces for data transfer in embedded networking.
C312.3	Demonstrate the different techniques like state machine model, sequential program model and concurrent model in Embedded Product Development Life Cycle(EDLC)
C312.4	ExplainthebasicconceptofRealTimeOperatingSystemsandschedulingofdifferenttaskandcompare the features of different types of Real Time Operating Systems
C312.5	Summarize the concepts of Embedded systems in real time applications

Subject Code & Name: EE8002 - Design of electrical apparatus

Course Outcomes (Cos)

C313.1	Compare Electrical Engineering materials; determine heat dissipation due to Conduction, convection and radiation.
C313.2	Design core, yoke, winding and cooling system of transformers.
C313.3	Calculate mmf for slots and teeths, apparent flux density, main dimensions and winding details of DC machines.
C313.4	Develop output equation of AC machines, design stator and rotor of induction machines
C313.5	Understand the stator and rotor design of synchronous machines analyze their thermal behavior, design field systems for turbo alternators

Subject Code& Name: EE8006 - Power Quality

Course Outcomes (Cos)

C315.1	Analyze the various sources, causes and effects of power quality issues in electrical power system and their measures.
C315.2	Ability to acquire knowledge on the various causes of voltage sag swell and its mitigation techniques.
C315.3	Explain the concepts of voltage, current distortions and causes location of harmonics.
C315.4	Ability to understand the design of passive filters on compensation techniques.
C315.5	Discuss the concepts of power quality monitoring and FACTS devices.

Subject Code & Name: OMD551 - Basics of Biomedical Instrumentation

Course Outcomes (Cos)

C306.1	To Learn the different bio potential and its propagation.
C306.2	To get Familiarize the different electrode placement for various physiological recording.
C306.3	Students will be able design bio amplifier for various physiological recording
C306.4	Students will understand various technique non electrical physiological measurements
C306.5	Understand the different biochemical measurement

Subject Code &Name: EE8661 - Power Electronics and Drives Laboratory

Course Outcomes (Cos)

C315.1	To apply the basic semiconductor devices to conduct different experiments
C315.2	To analyze the outputs of given circuits using power electronics.
C315.3	To conduct experiments as individuals, or Team for the given circuit using power electronics.
C315.4	To make an effective report based on conducting experiments.

Subject Code & Name: EE8681 - Microprocessors and Microcontrollers Laboratory

Course Outcomes (Cos)

C316.1	To apply the basic knowledge of Microprocessors and Microcontrollers to conduct different experiments.
C316.2	To analyze the outputs of given problems using Microprocessors and Microcontrollers.
C316.3	To conduct experiments as individuals, or team for the given problem using Microprocessors and Microcontrollers.
C316.4	To make an effective report based on conducting experiments.

Subject Code& Name: EE8611 - Mini Project

Course Outcomes (Cos)

C317.1	Evaluate the final year project work and find solution by formulating proper methodology.

Semester VII

Subject Code &Name: EE8701 - High voltage Engineering

Course Outcomes (Cos)

C401.1	Understand 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	Design different type of Generating circuit for high voltage D.C and high voltage A.C.
C401.4	Measure 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

Subject Code &Name: EE8702 - Power system operation and control.

Course Outcomes (Cos)

C402.1	Students will be able to understand the significance of power system operation and control.
C402.2	Students will be able to acquire knowledge on real power-frequency interaction.
C402.3	Students will be able to understand the reactive power-voltage interaction.
C402.4	Students will be able to study the economic operation of power system.
C402.5	Students will be able to design SCADA and its application for real time operation.

Subject Code &Name: EE8703 - Renewable energy sources.

Course Outcomes (Cos)

C403.1	Understand the current energy scenario, environment aspect and renewable energy resources in India
C403.2	Understand the basic concept of wind energy conversion system and basics of grid Integration
C403.3	Understand the solar energy conversion system and different types of solar plants.
C403.4	Experiment with standalone and grid connected PV system.
C403.5	Explain the basic of renewable sources like Hydro, biomass and Geothermal.

Subject Code & Name: GE8074 - Human Rights

Course Outcomes (Cos)

C406.1	Understand the origin and evolution of human rights and its importance.
C406.2	Explore the concept and theories associated with human rights
C406.3	Analyze the functions of various International bodies which protects the rights of a person in the society
C406.4	Understand the basic constitutional provision of our country
C406.5	Evaluate the role of NGO's, Media, Educational Institutions, and Social Movements in implementing human right

Subject Code & Name: EE8010 - Power system transients.

Course Outcomes (Cos)

C407.1	Explain the concept of transients and compute the solution of transient current equation for RL and RLC system.
C407.2	Understand and analyze switching transients.
C407.3	Understand and analyze lightning transients.
C407.4	Understand the importance of propagation reflection and refraction of travelling waves.
C407.5	Understand the voltage transients caused by faults, concept of circuit breaker action, load rejection on integrated power systems.

ANNA UNIVERSITY REGULATION - 2017

Subject Code& Name: EE8711 - Power System Simulation Laboratory
Course Outcomes (Cos)

C409.1	Students will be able to study the computation of transmission line parameters, formation of bus admittance and impedance matrices.
C409.2	Students will be able to study the power flow analysis using Gauss-Seidel and Newton-Raphson methods
C409.3	Students will be able to study the symmetrical and unsymmetrical fault analysis
C409.4	Students will be able to study the load – frequency dynamics of single and two-area power systems, transient stability analysis of SMIB system and electromagnetic transients in power systems.
C409.5	Students will be able to study the economic dispatch in power systems.

Subject Code& Name: EE8712 - Renewable Energy Simulation Laboratory
Course Outcomes (Cos)

C410.1	To apply the basic knowledge of Renewable Energy source to conduct different kind of experiments.
C410.2	To analyze the outputs of given Renewable Energy source Related problems.
C410.3	To conduct experiments as individuals, or team for the given problem using Modern tools.
C410.4	To make an effective report based on conducting experiments and Viva Voce.

Semester VIII

Subject Code & Name: MG8591-Principles of Management
Course Outcomes (Cos)

C409.1	Discuss the evolution of management, functions and roles of managers.
C409.2	Explain the different types of planning process and tools used for planning.
C409.3	Elaborate different organization structures and functions of human resources manager.
C409.4	Illustrate the different theories of motivation and leadership.
C409.5	Describe the control techniques and the role of technology in management

Subject Code& Name: EI8073 - Biomedical Instrumentation
Course Outcomes (Cos)

C413.1	Explain the different physiological systems of human.
C413.2	Summarize various electrical and non-electrical parameters measuring devices.
C413.3	Illustrate non electrical parameters measurement methods.
C413.4	Infer the graphical and imaging applications in biomedical system.
C413.5	Summarize the life assisting and therapeutic devices.

Subject Code &Name: GE8076 - Professional Ethics in Engineering
Course Outcomes (Cos)

C411.1	Students will be able to study the morals, values and ethics.
C411.2	Students will be able to study the engineering ethics.
C411.3	Students will be able to realize engineering as social experimentation.
C411.4	Students will be able to study about safety, responsibilities and rights.
C411.5	Students will be able to study the global issues..

Subject Code &Name: EE8811- Project Work
Course Outcomes (Cos)

C414.1	Develop the ability to do the literature survey systematically to identify the research gap. Develop the ability to train the students in preparing reports and to face reviews and viva voce examination.
C414.2	Develop the ability to demonstrate the problem formulated from the research gap identified through literature review.
C414.3	Develop the ability to experiment / examine a specific problem by formulating proper methodologies.
C414.4	Develop the ability to appraise and select the successful solution for the problem.
C414.5	On completion of the project work, students will be able to serve as effective team member, to take up challenging practical problems and find solution by formulating proper methodology.