

#### **EEE DEPARTMENT - COURSE OUTCOMES – 2019-2020**

YEAR / SEM: I / I HS8151-COMMUNICATIVE ENGLISH

No.	Course Outcomes
C101.1	Speak and write clearly, confidently and comprehensively participate effectively in informal conversations; introduce themselves to their friends and express opinions in English.
C101.2	Cohesively and coherently write without grammatical errors, using a wide range of vocabulary and organizing the ideas logically on a given topic.
C101.3	Interpret different genres of texts adopting various reading strategies and to write comprehensively.
C101.4	Listen, view and comprehend different spoken discourses/excerpts, different accents and to write short essays of a general kind and personal letters and emails in English.
C101.5	Demonstrate the role of a variety of technologies in communicating information elaborately on the ideas and opinions relevant in different situations.

#### YEAR / SEM: I / I MA8151-ENGINEERING MATHEMATICS – I

No.	Course Outcomes
C102.1	Learn both the limit definition and rules of differentiation to differentiate functions.
C102.2	Summarize partial differentiation to solve maxima and minima problems.
C102.3	Apply integration to calculate multiple integrals, area, volume, integrals in polar coordinates, in addition to change of order and change of variables.
C102.4	Evaluate integrals using techniques of integration, such as substitution, partial fractions and integration by parts.
C102.5	Develop solutions to various techniques in solving differential equations of higher order.



#### YEAR / SEM: I / I PH8151 -ENGINEERING PHYSICS

No.	Course Outcomes
C103.1	Gain knowledge on the basics of properties of matter and its applications.
C103.2	Summarize concepts of waves and optical devices and their applications in fiber optics.
C103.3	Assess the concepts of thermal properties of materials and their applications in expansion joints and heat exchangers.
C103.4	Generalize the advanced physics concepts of quantum theory and its applications in tunneling microscopes.
C103.5	Schematize the basics of crystals, their structures and different crystal growth techniques.

#### YEAR / SEM: I / I CY8151-ENGINEERING CHEMISTRY

No.	Course Outcomes
C104.1	Define the boiler feed water requirements, list out the related problems and label the water treatment techniques.
C104.2	Analyze the basic concepts of phase rule and its applications for single and two component systems and to illustrate the purpose and significance of alloys.
C104.3	Summarize the preparation, properties and applications of engineering materials.
C104.4	Classify the types of fuels; investigate the calorific value calculations, manufacture of solid, liquid and gaseous fuels.
C104.5	Demonstrate the Principles and generation of energy in batteries, nuclear reactors, solar cells, wind mills and fuel cells.

#### YEAR / SEM: I / I GE8151-PROBLEM SOLVING AND PYTHON PROGRAMMING

No.	Course Outcomes
C105.1	Define algorithmic solutions to simple computational problems and to write, and execute simple Python programs.
C105.2	Execute simple Python programs for solving problems.



C105.3	Understand the concept of functions in Python program.
C105.4	Demonstrate compound data using Python lists, tuples, and dictionaries.
C105.5	Compose, read and write data from/to files in Python programs.

#### YEAR / SEM: I / I GE8152-ENGINEERING GRAPHICS

No	Course Outcomes
C106.1	Differentiate various conics and demonstrate multiple views from pictorial views with appropriate scales.
C106.2	Schematize orthographic projections of points, lines and planes.
C106.3	Exhibit different positions of solids with respect to the plane of projections and entities.
C106.4	Analyze various types of sectioning of solids and its development.
C106.5	Design the pictorial views of solids by isometric drawings.

## $\label{eq:semistic} \textbf{YEAR / SEM: I / I GE8161-PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY}$

No	Course Outcomes
C107.1	Write, test, and debug simple Python programs.
C107.2	Implement Python programs with conditionals and loops.
C107.3	Design and develop Python programs step-wise by defining functions and calling them.
C107.4	List out Python lists, tuples, dictionaries for representing compound data.
C107.5	Perform, read and write data from/to files in Python.



#### YEAR / SEM: I / I BS8161-PHYSICS AND CHEMISTRY LABORATORY

No	Course Outcomes
C108.1	Summarize the classical and quantum electron theories, and energy band structures.
C108.2	Analyze the basics of semiconductor physics and its applications in various devices.
C108.3	Determine the water quality parameters through volumetric and instrumental analysis.
C108.4	Determine dissolved oxygen level in the water sample.
C108.5	Determine the amount of chloride presents the water sample.

#### YEAR / SEM: I / II HS8251-TECHNICAL ENGLISH – II

No	Course Outcomes
C109.1	Speak, write and convincingly express their opinions, initiate discussions, negotiate, argue using appropriate communicative strategies.
C109.2	Write cohesively and coherently and flawlessly, avoiding grammatical errors, using a wide vocabulary range, organizing their ideas logically on a topic.
C109.3	Interpret different genres of texts, infer implied meanings and evaluate it for ideas as well as for method of presentation.
C109.4	Comprehend different spoken excerpts critically and infer unspoken and implied meanings and write reports and winning job applications.
C109.5	Demonstrate the different components of grammar and speak appropriately and effectively in varied formal and informal contexts.

#### YEAR / SEM: I / II MA8251-ENGINEERING MATHEMATICS – II

No	Course Outcomes
C110.1	Evaluate eigenvalues and eigenvectors, diagonalization of a matrix, symmetric matrices, positive definite matrices and similar matrices.
C110.2	Solve gradient, divergence and curl of a vector point function and related identities to apply concept of line, surface and volume integrals using Gauss, Stokes and Green's theorems and their verification.
C110.3	Discuss the analytic functions, conformal mapping.



C110.4	Discuss complex integration and application of residue theorem.
C110.5	Explain the concepts of Laplace transform and inverse transform of simple functions, properties, various related theorems and application to differential equations with constant coefficients.

#### YEAR / SEM: I / II PH8253-PHYSICS FOR ELECTRONICS ENGINEERING

No	Course Outcomes
C111.1	Summarize the classical and quantum electron theories, and energy band structures.
C111.2	Analyze the basics of semiconductor physics and its applications in various devices.
C111.3	Discuss the concepts of magnetic and dielectric properties of materials.
C111.4	Generalize the functioning of optical materials for Opto-electronics.
C111.5	Schematize basics of quantum structures and their applications in spintronics and carbon electronics.

# YEAR / SEM: I / II BE8252 - BASIC CIVIL AND MECHANICAL ENGINEERING

No	Course Outcomes
C112.1	Knowledge about the Civil and Mechanical Engineering components of Projects
C112.2	Explain the usage of construction material and proper selection of construction materials
C112.3	Ability to measure distances and area by surveying
C112.4	Identify the components used in power plant cycle
C112.5	Ability to know the working principles of petrol and diesel engine and the components of refrigeration and Air conditioning cycle



#### YEAR / SEM: I/II EE8251 - CIRCUIT THEORY

No	Course Outcomes	
C113.1	Ability to analyze electrical circuits	
C113.2	Ability to apply circuit theorems	
C113.3	Ability to analyze transients	
C113.4	To introduce the phenomenon of resonance in coupled circuits	
C113.5	To introduce phasor diagrams and analysis of three phase circuits	

# YEAR / SEM: I/II GE8291 - ENVIRONMENTAL SCIENCE AND ENGINEERING

No	Course Outcomes
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
C114.4	Development and improvement in std. of living has lead to serious environmental disasters
C114.5	Analyze the ill effects of growing population and the related social problems.

#### YEAR / SEM: I / II GE8261-ENGINEERING PRACTICES LABORATORY

No	Course Outcomes
C115.1	Fabricate carpentry components and pipe connections including plumbing works.
C115.2	Develop the models using sheet metal works.
C115.3	Illustrate on centrifugal pump, air conditioner, operations of smith, foundry and fittings.
C115.4	Perform basic home electrical works and appliances and measuring the electrical quantities.



C115.5 Make use of electronic components, logic gates and soldering practices in electrical and electronic circuit designs.

#### YEAR / SEM: I / II EE8261 – ELECTRIC CIRCUITS LABORATORY

No	Course Outcomes
C116.1	Understand and apply circuit theorems and concepts in engineering applications
C116.2	Simulate electric circuits
C116.3	To simulate various electric circuits using Pspice/ Matlab/e-Sim / Scilab
C116.4	To gain practical experience on electric circuits
C116.5	To verify all the theorems

## YEAR / SEM: II / III MA8353 TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS

No	Course Outcomes
C201.1	Understand how to solve the given standard partial differential equations
C201.2	Solve differential equations using Fourier series analysis which plays a vital role in engineering applications
C201.3	To solve some of the physical problems of two dimension heat flow problem
C201.4	Understand the mathematical principles on transforms and partial differential equations would provide them the ability to formulate and solve some of the physical problems of engineering
C201.5	Use the effective mathematical tools for the solutions of partial differential equations by using Z transform techniques for discrete time systems

### YEAR / SEM: II / III EE8351 - DIGITAL LOGIC CIRCUITS

No	Course Outcomes
C202.1	Ability to study various number systems and simplify the logical expressions and using Boolean functions
C202.2	Ability to design combinational and sequential circuits
C202.3	Ability to design various synchronous and asynchronous circuits



C202.4	Ability to introduce asynchronous sequential circuits and PLDs
C202.5	Ability to introduce digital simulation for development of application oriented logic circuits and ability to simulate using software packages

#### YEAR / SEM: II / III EE8391- ELECTROMAGNETIC THEORY

No	Course Outcomes
C203.1	Ability to understand the basic mathematical concepts related to electromagnetic vector fields, electrostatic fields, electrical potential, energy density and their applications
C203.2	Ability to acquire the knowledge in magneto static fields, magnetic flux density, vector potential and its applications.
C203.3	Ability to understand the different methods of emf generation and Maxwell's equations
C203.4	Ability to understand the basic concepts electromagnetic waves and characterizing parameters
C203.5	Ability to understand and compute Electromagnetic fields and apply them for design and analysis of electrical equipment and systems

#### YEAR / SEM: II / III EE8301 - ELECTRICAL MACHINES – I

C204.1	Ability to analyze the magnetic-circuits
C204.2	Ability to acquire the knowledge in constructional details of transformers.
C204.3	Ability to understand the concepts of electromechanical energy conversion
C204.4	Ability to acquire the knowledge in working principles of DC Generator.
C204.5	Ability to acquire the knowledge in working principles of DC Motor and various losses taking place in D.C. Machines

### YEAR / SEM: II / III EC8353 - ELECTRON DEVICES AND CIRCUITS

No	Course Outcomes
C205.1	Able to explain the structure and working operation of basic electronic



	devices
C205.2	Able to identify and differentiate both active and passive elements
C205.3	Analyze the characteristics of different electronic devices such as diodes and transistors
C205.4	Choose and adapt the required components to construct an amplifier circuit
C205.5	Employ the acquired knowledge in design and analysis of oscillators

### YEAR / SEM: II / III ME8792 - POWER PLANT ENGINEERING

No	Course Outcomes
C206.1	Explain the layout, construction and working of the components inside a thermal power plant.
C206.2	Explain the layout, construction and working of the components inside a Diesel, Gas and Combined cycle power plants
C206.3	Explain the layout, construction and working of the components inside nuclear power plants
C206.4	Explain the layout, construction and working of the components inside Renewable energy power plants.
C206.5	Analyze and solve energy and economic issues in power sectors

### YEAR / SEM: II / III EC8311 - ELECTRONICS LABORATORY

C207.1	Enable the students to understand the behavior of semiconductor device based on
	experimentation
C207.2	Ability to analyze astable and monostablemultivibrators
C207.3	Develop differential amplifiers using FET
C207.4	Inter frequency and phase measurements using CRO
C207.5	Construct RC, LC phase shift oscillators and experiment with passive filters



#### YEAR / SEM: II / III EE8311- ELECTRICAL MACHINES LABORATORY-I

No	Course Outcomes
C208.1	Expose the students to the operation of D.C. machines
C208.2	Expose the students to the operation of Transformers
C208.3	Ability to understand and analyze DC Generator
C208.4	Ability to understand and analyze DC Motor
C208.5	Ability to understand and analyze Transformers

#### YEAR / SEM: II / IV MA8491 - NUMERICAL METHODS

No	Course Outcomes
C209.1	Understand the basic concepts and techniques of solving algebraic and transcendental equations
C209.2	Appreciate the numerical techniques of interpolation and error approximations in various intervals in real life situations
C209.3	Apply the numerical techniques of differentiation and integration for engineering problems
C209.4	Understand the knowledge of various techniques and methods for solving first and second order ordinary differential equations
C209.5	Solve the partial and ordinary differential equations with initial and boundary conditions by using certain techniques with engineering applications

#### YEAR / SEM: II / IV EE8401 - ELECTRICAL MACHINES – II

No	Course Outcomes
C210.1	Ability to understand the construction and working principle of Synchronous Generator and able to understand MMF curves and armature windings and to predetermine the performance characteristics of Synchronous Machines
C210.2	Ability to acquire knowledge on Synchronous motor



C210.3	Ability to understand the construction and working principle of Three phase Induction Motor
C210.4	Ability to know starting, speed control and braking of three phase induction motor
C210.5	Ability to understand the construction and working principle of single phase induction motor and Special Machines

#### YEAR / SEM: II / IV EE8402 - TRANSMISSION AND DISTRIBUTION

No	Course Outcomes
C211.1	To understand the importance and the functioning of transmission line parameters
C211.2	To acquire knowledge on the performance of Transmission lines and to become familiar with the function of different components used in Transmission and Distribution levels of power system and modeling of these components
C211.3	To understand the concepts of Lines and Insulators
C211.4	To acquire knowledge on Underground Cables
C211.5	To understand the importance of distribution of the electric power in power system

## YEAR / SEM: II / IV EE8403 - MEASUREMENTS AND INSTRUMENTATION

No	Course Outcomes
C212.1	To acquire knowledge on Basic functional elements of instrumentation
C212.2	To understand the concepts of Fundamentals of electrical and electronic instruments
C212.3	Ability to compare between various measurement techniques
C212.4	To acquire knowledge on Various storage and display devices
C212.5	To understand the concepts Various transducers and the data acquisition systems and ability to model and analyze electrical and electronic Instruments and understand the operational features of display Devices and Data Acquisition System



## YEAR / SEM: II / IV EE8451 - LINEAR INTEGRATED CIRCUITS AND APPLICATIONS

No	Course Outcomes
C213.1	Ability to acquire knowledge in IC fabrication procedure. Ability to understand and analyze, linear integrated circuits their Fabrication and Application
C213.2	Ability to analyze the characteristics of Op-Amp
C213.3	To understand the importance of Signal analysis using Op-amp based circuits
C213.4	Functional blocks and the applications of special ICs like Timers, PLL circuits, regulator Circuits
C213.5	To understand and acquire knowledge on the Applications of Op-amp

#### YEAR / SEM: II / IV IC8451 - CONTROL SYSTEMS

No	Course Outcomes
C214.1	Ability to develop various representations of system based on the knowledge of Mathematics, Science and Engineering fundamentals
C214.2	Ability to do time domain and frequency domain analysis of various models of linear system and ability to understand use of PID controller in closed loop system
C214.3	Ability to interpret characteristics of the system to develop mathematical model
C214.4	Ability to design appropriate compensator for the given specifications
C214.5	Ability to come out with solution for complex control problem

# YEAR / SEM: II / IV EE8411 -ELECTRICAL MACHINES LABORATORY – II

No	Course Outcomes
C215.1	Ability to understand and analyze EMF and MMF methods
C215.2	Ability to analyze the characteristics of V and Inverted V curves
C215.3	Ability to understand the importance of Synchronous machines



C215.4	Ability to understand the importance of Induction Machines
C215.5	Ability to acquire knowledge on separation of losses

#### YEAR / SEM: II / IV EE8461 - LINEAR AND DIGITAL INTEGRATED CIRCUITS LABORATORY

No	Course Outcomes
C216.1	Ability to understand and implement Boolean Functions
C216.2	Ability to understand the importance of code conversion
C216.3	Ability to Design and implement 4-bit shift registers
C216.4	Ability to acquire knowledge on Application of Op-Amp
C216.5	Ability to Design and implement counters using specific counter IC

### YEAR / SEM: II / IV EE8412 TECHNICAL SEMINAR

No	Course Outcomes
C217.1	Encourage the students to study advanced engineering developments
C217.2	Prepare and present technical reports
C217.3	Encourage the students to use various teaching aids such as overhead projectors, power point presentation and demonstrative models
C217.4	Ability to review, prepare and present technological developments
C217.5	Ability to face the placement interviews

## YEAR / SEM: III / V EE8501 POWER SYSTEM ANALYSIS

No	Course Outcomes
C301.1	Model the power system under steady state operating condition
C301.2	Understand and apply iterative techniques for power flow analysis
C301.3	Model and carry out short circuit studies on power system



C301.4	Study the unsymmetrical faults
C301.5	Model and analyze stability problems in power system

#### YEAR / SEM: III / V EE8551 MICROPROCESSORS AND MICROCONTROLLERS

No	Course Outcomes
C302.1	Study the internal architecture of microprocessor
C302.2	Acquire knowledge in Addressing modes & instruction set of 8085 & 8051.
C302.3	Explanation and understand the architecture of Microprocessor and Microcontroller
C302.4	Understand the importance of Interfacing
C302.5	Develop the Microprocessor and Microcontroller based applications.

### YEAR / SEM: III / V EE8552 POWER ELECTRONICS

No	Course Outcomes
C303.1	Acquire knowledge about basic operating principles of various power semiconductor switching devices.
C303.2	Understand high efficient and high reliable power conversion methods
C303.3	Understand the operation of various power electronic converters and their control Analyse AC-AC and DC-DC and DC-AC converters.
C303.4	Able to apply principles and methods to practical applications.
C303.5	Study the converters for real time applications

### YEAR / SEM: III / V EE8591 DIGITAL SIGNAL PROCESSING

No	Course Outcomes
C304.1	Understand the importance of Fourier transform, digital filters and DS
	Processors.



C304.2	Understand and analyze the discrete time systems.
C304.3	Analyze the transformation techniques & their computation.
C304.4	Understand the types of filters and their design for digital implementation.
C304.5	Acquire knowledge on programmability digital signal processor & quantization
	effects

### YEAR / SEM: III / V CS8392OBJECT ORIENTED PROGRAMMING

No	Course Outcomes
C305.1	Develop Java programs using OOP principles.
C305.2	Develop Java programs with the concepts inheritance and interfaces.
C305.3	Develop and implement Java programs for simple applications that make use of classes, packages and interfaces. Develop and implement Java programs with array list, exception handling and multithreading.
C305.4	Design applications using file processing, generic programming and event handling
C305.5	Develop interactive Java programs using swings

## YEAR / SEM: III / V OMD551 BASICS OF BIO MEDICAL INSTRUMENTATION

No	Course Outcomes
C306.1	Discuss the different bio potential and its propagation.
C306.2	Categorize the different electrode placement for various physiological recording
C306.3	Design bio amplifier for various physiological recording
C306.4	Understand various techniques for non-physiological measurements.
C306.5	Compare the different biochemical measurements



## YEAR / SEM: III / V EE8511 CONTROL AND INSTRUMENTATION LABORATORY

No	Course Outcomes
C307.1	Understand control theory and apply them to electrical engineering problems.
C307.2	Analyze the various types of converters.
	design compensators
C307.3	Understand the basic concepts of bridge networks.
C307.4	Study the basics of signal conditioning circuits
C307.5	Study the simulation packages.

#### YEAR / SEM: III / V HS8581 PROFESSIONAL COMMUNICATION

No	Course Outcomes
C308.1	Make effective presentations
C308.2	Participate confidently in Group Discussions.
C308.3	Attend job interviews and be successful in them
C308.4	Develop adequate Soft Skills required for the workplace
C308.5	Develop their confidence and help them attend interviews successfully.

#### YEAR / SEM: III / V CS8383 OBJECT ORIENTED PROGRAMMING LAB

No	Course Outcomes
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C309.1	Develop and implement Java programs for simple applications that make use of classes,
	packages and interfaces.
C309.2	Develop and implement Java programs with array list, exception handling and multithreading
C309.3	Design applications using file processing, generic programming and event handling



C309.4	Develop applications using generic programming and event handling.
C309.5	Build software development skills using java programming for real-world applications

### YEAR / SEM: III / VI EE8601SOLID STATE DRIVES

No	Course Outcomes
C310.1	Understand and suggest a converter for solid state drive.
C310.2	Analyze the operation of the converter/chopper fed dc drive.
C310.3	Analyze the operation and performance of AC motor drives.
C310.4	Select suitability drive for the given application
C310.5	Analyze and design the current and speed controllers for a closed loop solid state DC motor drive.

### YEAR / SEM: III / VI EE8602 PROTECTION AND SWITCH GEAR

No	Course Outcomes
C311.1	Study the protective schemes and types of faults in power system.
C311.2	Understand and analyze Electromagnetic and Static Relays.
C311.3	study about the apparatus protection, static and numerical relays
C311.4	Analyze the characteristics and functions of static relays and protection schemes.
C311.5	Acquire knowledge on functioning of circuit breaker.

## YEAR / SEM: III / VI EE8691 EMBEDDED SYSTEMS

No	Course Outcomes
C312.1	Understand and analyze Embedded systems



C312.2	Study about the bus Communication in processors.
C312.3	Operate various Embedded Development Strategies
C312.4	Acquire knowledge on various processor scheduling algorithms
C312.5	Suggest an embedded system for a given application.

#### YEAR / SEM: III / VI EE8002 DESIGN OF ELECTRICAL APPARATUS

No	Course Outcomes
C313.1	Understand basics of design considerations for rotating and static electrical machines and design of field system for its application
C313.2	Design sing and three phase transformer.
C313.3	Design armature and field of DC machines
C313.4	Design stator and rotor of induction motor
C313.5	Design and analyze synchronous machines.

### YEAR / SEM: III / VI EE8005 SPECIAL ELECTRICAL MACHINES

No	Course Outcomes
C314.1	Acquire the knowledge on construction and operation of stepper motor.
C314.2	Acquire the knowledge on construction and operation of stepper switched reluctance motors.
C314.3	Acquire the knowledge on construction and operation of permanent magnet brushless D.C. motors.
C314.4	Acquire the knowledge on construction and operation of permanent magnet synchronous motors
C314.5	Select a special Machine for a particular application



#### YEAR / SEM: III / VI EE8661 – POWER ELECTRONICS AND DRIVES LABORATORY

No	Course Outcomes
C315.1	Practice and understand converter and inverter circuits and apply software for engineering problems.
C315.2	Experiment about switching characteristics various switches.
C315.3	Analyze about AC to DC converter circuits.
C315.4	Analyze about DC to AC circuits.
C315.5	Acquire knowledge on AC to AC converters and acquire knowledge on simulation software.

## YEAR / SEM: III / VI EE8681 MICROPROCESSORS AND MICROCONTROLLERS LABORATORY

No	Course Outcomes
C316.1	Understand and apply computing platform and software for engine.
C316.2	Programming logics for code conversion
C316.3	Acquire knowledge on A/D and D/A.
C316.4	Understand basics of serial communication
C316.5	Understand and impart knowledge in DC and AC motor interfacing and understand basics of software simulators.

#### YEAR / SEM: III / VI EE8611 MINIPROJECT

No	Course Outcomes
C317.1	Develop the own innovative prototype of ideas.
C317.2	Find out solution by formulating proper methodology for project work
C317.3	Provides an opportunity to pursue their interest in Electrical Engg., through design, research, theoretical and experimental approach.



C317.4	To enable the students to identify a topic of interest and complete the preliminary work of
	undertaking case studies, data collection and feasibility studies.
C317.5	Get guidance to formulate and develop a design proposal and to effectively communicate the
	same

### YEAR / SEM: IV / VII EE6701 HIGH VOLTAGE ENGINEERING

No	Course Outcomes
C401.1	Ability to understand and analyze power system operation and stability and to understand various causes of over voltages and its effects on power system and breakdown mechanism
C401.2	Ability to understand breakdown mechanisms in solids, liquids and dielectrics
C401.3	Ability to understand generation of high voltages and high currents
C401.4	Ability to understand the methods of measurement of over voltages and currents
C401.5	Ability to analyze and model HV testing of electrical power apparatus

### YEAR / SEM: IV / VII EE6702 PROTECTION AND SWITCHGEAR

No	Course Outcomes
C402.1	Ability to understand and analyze power system operation
C402.2	Ability to understand power system protection
C402.3	Ability to understand power system control
C402.4	Ability to analyze power system stability
C402.5	Ability to understand the concepts of relays

#### YEAR / SEM: IV / VII EE6703 SPECIAL ELECTRICAL MACHINES

No	Course Outcomes
C403.1	Able to analyze the operation of synchronous reluctance motor and their application to power system



C403.2	Ability to design the control strategy of stepping motors
C403.3	Ability to model, control and performance of switched reluctance motor
C403.4	Ability to model, analyze and design the permanent magnet brushless DC motors and their application to power system
C403.5	Can able to analyze the operation and performance of permanent magnet synchronous motors

#### YEAR / SEM: IV / VII MG6851 PRINCIPLES OF MANAGEMENT

No	Course Outcomes
C404.1	Discuss and communicate management evaluation and how it affect future
C404.2	Able to identify and evaluate the influence of historical forces on management
C404.3	Integrate management principles into management practices
C404.4	Evaluate leadership styles to anticipate the consequences of each leadership style
C404.5	Gather and analyze both qualitative and quantitative information to isolate and formulate best control methods

#### YEAR / SEM: IV / VII EE6005 POWER QUALITY

No	Course Outcomes
C405.1	Ability to know more about various power quality problems
C405.2	Ability to understand about voltage sags and interruptions and to mitigate voltage sag problem
C405.3	Ability to model overvoltage problem with computer software tools
C405.4	Ability to evaluate the effects of harmonics
C405.5	Ability to know the principle of operation of various power quality monitoring devices



## YEAR / SEM: IV / VII EE6008 – MICROCONTROLLER BASED SYSTEM DESIGN

No	Course Outcomes
C406.1	Get a clear idea of PIC architecture and how to program a PIC microcontroller
C406.2	Understand how to program a PIC microcontroller for handling interrupts and timers
C406.3	Get a clear idea of how to interface various peripherals to PIC microcontroller
C406.4	Understand ARM architecture and how to program an ARM processor
C406.5	Implement embedded applications using ARM processor

# YEAR / SEM: IV / VII EE6711 POWER SYSTEM SIMULATION LABORATORY

No	Course Outcomes
C407.1	Can infer the parameters of transmission Lines
C407.2	Able to design the bus admittance and impedance matrices to find solution of networks.
C407.3	Ability to design and implement the transient and small signal stability analysis model for Single-Machine Infinite Bus System and Multi machine Power Systems
C407.4	Can be able to design the electromagnetic transients model for power systems
C407.5	Design the power system network for economic dispatch

### YEAR / SEM: IV / VII EE6712 COMPREHENSION

No	Course Outcomes
C408.1	Define the concepts in circuits and networks, DC & AC machines
C408.2	Solve the steady state stability of first order & second order system, select logic circuits for digital systems
C408.3	Able to understand the power electronic devices and its applications
C408.4	Able to know the power system operation and control, protection and switchgear



C408.5 Can get the clear idea about the measurement and instrumentation devices and circuits

# YEAR / SEM: IV / VIII E6801 ELECTRIC ENERGY GENERATION, UTILIZATION AND CONSERVATION

No	Course Outcomes
C409.1	Ability to understand and analyze about the various types of electric drives and traction system
C409.2	Ability to understand the energy saving concept of different ways of illumination
C409.3	Can able to understand the different methods of electric heating and electric welding methods
C409.4	Ability to handle the engineering aspects of solar power generation and utilization
C409.5	Ability to handle the engineering aspects of wind power generation and utilization

#### YEAR / SEM: IV / VIII EE6009 – POWER ELECTRONICS FOR RENEWABLE ENERGY SYSTEMS

No	Course Outcomes
C410.1	Gives the ability to understand and analyze power system operation, stability, control and protection
C410.2	Gives the ability to handle engineering aspects of electrical energy generation and utilization
C410.3	Gives the ability to understand the grid connected issues when integrating with grid
C410.4	Gives the ability to understand and the maximum power point tracking with renewable energy system
C410.5	Ability to understand hybrid system

## YEAR / SEM: IV / VIII GE6075 – PROFESSIONAL ETHICS IN ENGINEERING

No	Course Outcomes
C411.1	Students should be able to apply ethics in society



C411.2	Able to understand about the human, professional ethics and can be able to apply in their life
C411.3	Students can realize their responsibilities and rights of engineers in the society
C411.4	Able to understand the characteristics of leadership and social responsibility
C411.5	Students can be able to set the awareness of Environmental ethics to protect the environment

#### YEAR / SEM: IV / VIII EE6811 PROJECT WORK

No	Course Outcomes
C412.1	Identify an application or a methodology which can be developed or formulated by applying the acquired knowledge.
C412.2	Categorize the executable project modules according to the project flow and design the modules.
C412.3	Choose efficient tools for implementing and executing the design of each module.
C412.4	Integrate all the modules and test them for efficient working through effective team work.
C412.5	Demonstrate the project, elaborate the entire tasks and compile the project report.