



The Javery Engineering College

*(Approved by AICTE, New Delhi & Affiliated to Anna University)
Mecheri, Mettur Tk. Salem Dt - 636 453.*

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

PROGRAMME: B.E. ELECTRICAL AND ELECTRONICS ENGINEERING

VISION

- ❖ To produce globally competent and socially responsible Electrical and Electronics Engineers to meet the Industry needs.

MISSION

- ❖ To establish quality learning facilities.
- ❖ To produce Quality Electrical Engineers to compete globally.
- ❖ To nurture innovative research on cutting edge technologies.
- ❖ To inculcate the positive attitude and spirit of ethical practices.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

- ❖ Find employment in Core Electrical and Electronics Engineering and service sectors.
- ❖ Get elevated to technical lead position and lead the organization competitively.
- ❖ Enter into higher studies leading to post-graduate and research degrees. Become consultant and provide solutions to the practical problems of core organization.
- ❖ Become an entrepreneur and be part of electrical and electronics product and service industries.

PROGRAM OUTCOMES (POs)

- ❖ Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- ❖ Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- ❖ Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.



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and synthesis of the information to provide valid conclusions.

- ❖ Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- ❖ The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- ❖ Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- ❖ Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- ❖ Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- ❖ Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- ❖ Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- ❖ Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- ❖ Ability to understand the principles and working of electrical components, circuits, systems and control that are forming a part of power generation, transmission, distribution, utilization, conservation and energy saving. Students can assess the power management, auditing, crisis and energy saving aspects.
- ❖ Ability to apply mathematical methodologies to solve problems related with electrical engineering using appropriate engineering tools and algorithms.
- ❖ Ability to use knowledge in various domains to identify research gaps and hence to



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COURSE OUTCOMES (COs)

Regulation	2017
Sem	01
Subject Code	HS8151
Subject Name	Communicative English
Course Outcome	<ul style="list-style-type: none">• Read articles of a general kind in magazines and newspapers.• Participate effectively in informal conversations; introduce themselves and their friends and express opinions in English.• Comprehend conversations and short talks delivered in English.• Write short essays of a general kind and personal letters and emails in English.

Regulation	2017
Sem	01
Subject Code	MA8151
Subject Name	Engineering Mathematics – I
Course Outcome	<ul style="list-style-type: none">• Use both the limit definition and rules of differentiation to differentiate functions.• Apply differentiation to solve maxima and minima problems.• Evaluate integrals both by using Riemann sums and by using the Fundamental Theorem of Calculus.• Apply integration to compute multiple integrals, area, volume, integrals in polar coordinates, in addition to change of order and change of variables.• Evaluate integrals using techniques of integration, such as substitution, partial fractions and integration by parts.• Determine convergence/divergence of improper integrals and evaluate convergent improper integrals.• Apply various techniques in solving differential equations.



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Sem	01
Subject Code	PH8151
Subject Name	Engineering Physics
Course Outcome	<ul style="list-style-type: none">• The students will gain knowledge on the basics of properties of matter and its applications.• The students will acquire knowledge on the concepts of waves and optical devices and their applications in fibre optics.• The students will have adequate knowledge on the concepts of thermal properties of materials and their applications in expansion joints and heat exchangers.• The students will get knowledge on advanced physics concepts of quantum theory and its applications in tunneling microscopes.• The students will understand the basics of crystals, their structures and different crystal growth techniques.

Regulation	2017
Sem	01
Subject Code	CY8151
Subject Name	Engineering Chemistry
Course Outcome	<ul style="list-style-type: none">• The knowledge gained on engineering materials, fuels, energy sources and water treatment techniques will facilitate better understanding of engineering processes and applications for further learning.

Regulation	2017
Sem	01
Subject Code	GE8151



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Course Outcome	<ul style="list-style-type: none">• Develop algorithmic solutions to simple computational problems.• Read, write, execute by hand simple Python programs.• Structure simple Python programs for solving problems.• Decompose a Python program into functions.• Represent compound data using Python lists, tuples, and dictionaries.• Read and write data from/to files in Python Programs.
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Regulation	2017
Sem	01
Subject Code	GE8152
Subject Name	Engineering Graphics
Course Outcome	<ul style="list-style-type: none">• Familiarize with the fundamentals and standards of Engineering graphics.• Perform freehand sketching of basic geometrical constructions and multiple views of objects.• Project orthographic projections of lines and plane surfaces.• Draw projections and solids and development of surfaces.• Visualize and to project isometric and perspective sections of simple solids.

Regulation	2017
Sem	01
Subject Code	GE8161
Subject Name	Problem Solving And Python Programming Laboratory
Course Outcome	<ul style="list-style-type: none">• Write, test, and debug simple Python programs.• Implement Python programs with conditionals and loops.• Develop Python programs step-wise by defining functions and calling them.• Use Python lists, tuples, dictionaries for representing compound data.• Read and write data from/to files in Python.



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Regulation	2017
Sem	01
Subject Code	BS8161
Subject Name	Physics And Chemistry Laboratory
Course Outcome	<ul style="list-style-type: none">• Apply principles of elasticity, optics and thermal properties for engineering applications.• The students will be outfitted with hands-on knowledge in the quantitative chemical analysis of water quality related parameters.

Regulation	2017
Sem	02
Subject Code	HS8251
Subject Name	Technical English
Course Outcome	<ul style="list-style-type: none">• Read technical texts and write area- specific texts effortlessly.• Listen and comprehend lectures and talks in their area of specialization successfully.• Speak appropriately and effectively in varied formal and informal contexts.• Write reports and winning job applications.

Regulation	2017
Sem	02
Subject Code	MA8251
Subject Name	Engineering Mathematics – II
Course Outcome	<ul style="list-style-type: none">• Eigen values and eigenvectors, diagonalization of a matrix, Symmetric matrices, Positive definite matrices and similar matrices.• Gradient, divergence and curl of a vector point function and related



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	<ul style="list-style-type: none">• Evaluation of line, surface and volume integrals using Gauss, Stokes and Green's theorems and their verification.• Analytic functions, conformal mapping and complex integration.• Laplace transform and inverse transform of simple functions, properties, various related theorems and application to differential equations with constant coefficients.
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Regulation	2017
Sem	02
Subject Code	PH8253
Subject Name	Physics For Electronics Engineering
Course Outcome	<ul style="list-style-type: none">• gain knowledge on classical and quantum electron theories, and energy band structures,• acquire knowledge on basics of semiconductor physics and its applications in various devices,• get knowledge on magnetic and dielectric properties of materials,• have the necessary understanding on the functioning of optical materials for optoelectronics,• understand the basics of quantum structures and their applications in spintronics and carbon electronics.

Regulation	2017
Sem	02
Subject Code	BE8252
Subject Name	Basic Civil and Mechanical Engineering
Course Outcome	<ul style="list-style-type: none">• On successful completion of this course, the student will be able to• appreciate the Civil and Mechanical Engineering components of



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	<ul style="list-style-type: none"> • explain the usage of construction material and proper selection of construction materials. • measure distances and area by surveying • identify the components used in power plant cycle. • demonstrate working principles of petrol and diesel engine. • elaborate the components of refrigeration and Air conditioning cycle.
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Regulation	2017
Sem	02
Subject Code	EE8251
Subject Name	Circuit Theory
Course Outcome	<ul style="list-style-type: none"> • Ability to analyse electrical circuits • Ability to apply circuit theorems • Ability to analyse transients

Regulation	2017
Sem	02
Subject Code	GE8291
Subject Name	Environmental Science And Engineering
Course Outcome	<ul style="list-style-type: none"> • 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. • Public awareness of environmental is at infant stage. • Ignorance and incomplete knowledge has lead to misconceptions • Development and improvement in std. of living has lead to serious environmental disasters

Regulation	2017
Sem	02
Subject Code	GE8291



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Subject Name	Engineering Practices Laboratory
Course Outcome	<ul style="list-style-type: none">• Fabricate carpentry components and pipe connections including plumbing works.• Use welding equipments to join the structures.• Carry out the basic machining operations.• Make the models using sheet metal works.• Illustrate on centrifugal pump, air conditioner, operations of smithy, foundary and fittings.• Carry out basic home electrical works and appliances.• Measure the electrical quantities.• Elaborate on the components, gates, soldering practices.

Regulation	2017
Sem	03
Sub Code	EE8351
Sub Name	Digital Logic Circuits
Course Outcome	<ul style="list-style-type: none">• Ability to design combinational and sequential Circuits.• Ability to simulate using software package.• Ability to study various number systems and simplify the logical expressions using Boolean functions• Ability to design various synchronous and asynchronous circuits.• Ability to introduce asynchronous sequential circuits and PLDs• Ability to introduce digital simulation for development of application oriented logic circuits.

Regulation	2017
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Sub Code	EE8391
Sub Name	ElectromagneticTheory
CourseOutcome	<ul style="list-style-type: none">• Ability to understand the basic mathematical concepts related to electromagnetic vector fields.• Ability to understand the basic concepts about electrostatic fields, electrical potential, energy density and their applications.• Ability to acquire the knowledge in magneto static fields, magnetic flux density, vector potential and its applications.• Ability to understand the different methods of emf generation and Maxwell's equations• Ability to understand the basic concepts electromagnetic waves and characterizing parameters• Ability to understand and compute Electromagnetic fields and apply them for design and analysis of electrical equipment and systems.



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Regulation	2017
Sem	03
Sub Code	MA8353
Sub Name	Transforms And Partial Differential Equations
Course Outcome	<ul style="list-style-type: none">• Upon successful completion of the course, students should be able to:• Understand how to solve the given standard partial differential equations.• Solve differential equations using Fourier series analysis which plays a vital role in engineering applications.• Appreciate the physical significance of Fourier series techniques in solving one and two dimensional heat flow problems and one dimensional wave equations.• 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.• Use the effective mathematical tools for the solutions of partial differential equations by using Z transform techniques for discrete time systems

Regulation	2017
Sem	03
Sub Code	EE8301
Sub Name	Electrical Machines-I



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Course Outcome	<ul style="list-style-type: none">• Ability to analyze the magnetic-circuits.• Ability to acquire the knowledge in constructional details of transformers.• Ability to understand the concepts of electromechanical energy conversion.• Ability to acquire the knowledge in working principles of DC Generator.• Ability to acquire the knowledge in working principles of DC Motor• Ability to acquire the knowledge in various losses taking place in D.C. Machines
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Regulation	2017
Sem	03
Sub Code	EC8353
Sub Name	Electron Devices And Circuits
Course Outcome	<ul style="list-style-type: none">• Explain the structure and working operation of basic electronic devices.• Able to identify and differentiate both active and passive elements• Analyze the characteristics of different electronic devices such as diodes and transistors• Choose and adapt the required components to construct an amplifier circuit.• Employ the acquired knowledge in design and analysis of oscillators

Regulation	2017
Sem	03
Sub Code	EC8311



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Course Outcome	<ul style="list-style-type: none">• Ability to understand and analyse electronic circuits.
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Regulation	2017
Sem	03
Sub Code	ME8792
Sub Name	Power Plant Engineering
Course Outcome	<p>Upon the completion of this course the students will be able to</p> <ul style="list-style-type: none">• Explain the layout, construction and working of the components inside a thermal power plant.• Explain the layout, construction and working of the components inside a Diesel, Gas and Combined cycle power plants.• Explain the layout, construction and working of the components inside nuclear power plants.• Explain the layout, construction and working of the components inside Renewable energy power plants.• Explain the applications of power plants while extend their knowledge to power plant economics and environmental hazards and estimate the costs of electrical energy production

Regulation	2017
Sem	03
Sub Code	EE8311
Sub Name	Electrical Machines Laboratory-I



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Course Outcome	<ul style="list-style-type: none">• Ability to understand and analyze DC Generator• Ability to understand and analyze DC Motor• Ability to understand and analyse Transformers
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Regulation	2017
Sem	04
Sub Code	MA8491
Sub Name	Numerical Methods
Course Outcome	<ul style="list-style-type: none">• Upon successful completion of the course, students should be able to:• Understand the basic concepts and techniques of solving algebraic and transcendental equations.• Appreciate the numerical techniques of interpolation and error approximations in various intervals in real life situations.• Apply the numerical techniques of differentiation and integration for engineering problems.• Understand the knowledge of various techniques and methods for solving first and second order ordinary differential equations.• Solve the partial and ordinary differential equations with initial and boundary conditions by using certain techniques with engineering applications.

Regulation	2017
Sem	04
Sub Code	EE8401
Sub Name	Electrical Machines–II



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Course Outcome	<ul style="list-style-type: none">• Ability to understand the construction and working principle of Synchronous Generator• Ability to understand MMF curves and armature windings.• Ability to acquire knowledge on Synchronous motor.• Ability to understand the construction and working principle of Three phase Induction Motor• Ability to understand the construction and working principle of Special Machines• Ability to predetermine the performance characteristics of Synchronous Machines
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Regulation	2017
Sem	04
Sub Code	EE8402
Sub Name	Transmission And Distribution
Course Outcome	<ul style="list-style-type: none">• To understand the importance and the functioning of transmission line parameters.• To understand the concepts of Lines and Insulators.• To acquire knowledge on the performance of Transmission lines.• To understand the importance of distribution of the electric power in power system.• To acquire knowledge on Underground Cabilitys• To become familiar with the function of different components used in Transmission and Distribution levels of power system and modelling of these components.

Regulation	2017
Sem	04



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Sub Name	Measurements And Instrumentation
Course Outcome	<ul style="list-style-type: none"> • To acquire knowledge on Basic functional elements of instrumentation • To understand the concepts of Fundamentals of electrical and electronic instruments • Ability to compare between various measurement techniques • To acquire knowledge on Various storage and display devices • To understand the concepts Various transducers and the data acquisition systems • Ability to model and analyze electrical and electronic Instruments and understand the operational features of display Devices and Data Acquisition System.

Regulation	2017
Sem	04
Sub Code	EE8451
Sub Name	Linear Integrated Circuits And Applications
Course Outcome	<ul style="list-style-type: none"> • Ability to acquire knowledge in IC fabrication procedure • Ability to analyze the characteristics of Op-Amp • To understand the importance of Signal analysis using Op-amp based circuits. • Functional blocks and the applications of special ICs like Timers, PLL circuits, regulator Circuits. • To understand and acquire knowledge on the Applications of Op-amp • Ability to understand and analyse, linear integrated circuits their Fabrication and Application.



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Regulation	2017
Sem	04
Sub Code	IC8451
Sub Name	Control Systems
Course Outcome	<p>At the end of the course, the student should have the :</p> <ul style="list-style-type: none">• Ability to develop various representations of system based on the knowledge of Mathematics, Science and Engineering fundamentals.• Ability to do time domain and frequency domain analysis of various models of linear system.• Ability to interpret characteristics of the system to develop mathematical model.• Ability to design appropriate compensator for the given specifications.• Ability to come out with solution for complex control problem.• Ability to understand use of PID controller in closed loop system.

Regulation	2017
Sem	04
Sub Code	EE8412
Sub Name	Technical Seminar
Course Outcome	<ul style="list-style-type: none">• Ability to review, prepare and present technological developments• Ability to face the placement interviews

Regulation	2017
Sem	04



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Sub Code	EE8411
Sub Name	Electrical Machines Laboratory -II
Course Outcome	At the end of the course, the student should have the : <ul style="list-style-type: none">• Ability to understand and analyze EMF and MMF methods• Ability to analyze the characteristics of V and Inverted V curves• Ability to understand the importance of Synchronous machines• Ability to understand the importance of Induction Machines• Ability to acquire knowledge on separation of losses

Regulation	2017
Sem	04
Sub Code	EE8461
Sub Name	Linear And Digital Integrated Circuits Laboratory
Course Outcome	At the end of the course, the student should have the : <ul style="list-style-type: none">• Ability to understand and implement Boolean Functions.• Ability to understand the importance of code conversion• Ability to Design and implement 4-bit shift registers• Ability to acquire knowledge on Application of Op-Amp• Ability to Design and implement counters using specific counter IC.

Regulation	2017
Sem	05
Sub Code	EE8501
Sub Name	Power System Analysis
Course Outcome	<ul style="list-style-type: none">• Ability to model the power system under steady state operating



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	<ul style="list-style-type: none">• Ability to understand and apply iterative techniques for power flow analysis• Ability to model and carry out short circuit studies on power system• Ability to model and analyze stability problems in power system• Ability to acquire knowledge on Fault analysis.• Ability to model and understand various power system components and carry out power flow, short circuit and stability studies.
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Regulation	2017
Sem	05
Sub Code	EE8551
Sub Name	Microprocessors And Microcontrollers
Course Outcome	<ul style="list-style-type: none">• Ability to acquire knowledge in Addressing modes & instruction set of 8085 & 8051.• Ability to need & use of Interrupt structure 8085 & 8051.• Ability to understand the importance of Interfacing• Ability to explain the architecture of Microprocessor and Microcontroller.• Ability to write the assembly language programme.• Ability to develop the Microprocessor and Microcontroller based applications.

Regulation	2017
Sem	05
Sub Code	EE8511
Sub Name	Control And Instrumentation Laboratory



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Course Outcome	<ul style="list-style-type: none"> • Ability to understand control theory and apply them to electrical engineering problems. • Ability to analyze the various types of converters. • Ability to design compensators • Ability to understand the basic concepts of bridge networks. • Ability to the basics of signal conditioning circuits. • Ability to study the simulation packages.
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Regulation	2017
Sem	05
Sub Code	CS8392
Sub Name	Object Oriented Programming
Course Outcome	Upon completion of the course, students will be able to: <ul style="list-style-type: none"> • Develop Java programs using OOP principles • Develop Java programs with the concepts inheritance and interfaces • Build Java applications using exceptions and I/O streams • Develop Java applications with threads and generics classes • Develop interactive Java programs using swings

Regulation	2017
Sem	05
Sub Code	HS8581
Sub Name	Professional Communication
Course Outcome	Make effective presentations <ul style="list-style-type: none"> • Participate confidently in Group Discussions. • Attend job interviews and be successful in them. • Develop adequate Soft Skills required for the workplace



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Regulation	2017
Sem	05
Sub Code	EE8591
Sub Name	Digital Signal Processing
Course Outcome	<ul style="list-style-type: none">• Ability to understand the importance of Fourier transform, digital filters and DS Processors.• Ability to acquire knowledge on Signals and systems & their mathematical representation.• Ability to understand and analyze the discrete time systems.• Ability to analyze the transformation techniques & their computation.• Ability to understand the types of filters and their design for digital implementation.• Ability to acquire knowledge on programmability digital signal processor & quantization effects.

Regulation	2017
Sem	05
Sub Code	EE8552
Sub Name	Power Electronics
Course Outcome	<ul style="list-style-type: none">• Ability to analyse AC-AC and DC-DC and DC-AC converters.• Ability to choose the converters for real time applications

Regulation	2017	
Sem	05	
Sub Code	OMD551	OPEN ELECTIVE-I



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Course Outcome	<ul style="list-style-type: none">• To Learn the different bio potential and its propagation.• To get Familiarize the different electrode placement for various physiological recording• Students will be able design bio amplifier for various physiological recording• Students will understand various technique non electrical physiological measurements• Understand the different biochemical measurements
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Regulation	2017
Sem	05
Sub Code	CS8383
Sub Name	Object Oriented Programming Laboratory
Course Outcome	<ul style="list-style-type: none">• Upon completion of the course, the students will be able to• Develop and implement Java programs for simple applications that make use of classes, packages and interfaces.• Develop and implement Java programs with arraylist, exception handling and multithreading .• Design applications using file processing, generic programming and event handling.

Regulation	2017
Sem	06
Sub Code	EE8602
Sub Name	Protection And Switchgear



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Course Outcome	<ul style="list-style-type: none">• Ability to understand and analyze Electromagnetic and Static Relays.• Ability to suggest suitability circuit breaker.• Ability to find the causes of abnormal operating conditions of the apparatus and system.• Ability to analyze the characteristics and functions of relays and protection schemes.• Ability to study about the apparatus protection, static and numerical relays.• Ability to acquire knowledge on functioning of circuit breaker.
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Regulation	2017
Sem	06
Sub Code	EE8691
Sub Name	Embedded Systems
Course Outcome	<ul style="list-style-type: none">• Ability to understand and analyze Embedded systems.• Ability to suggest an embedded system for a given application.• Ability to operate various Embedded Development Strategies• Ability to study about the bus Communication in processors.• Ability to acquire knowledge on various processor scheduling algorithms.• Ability to understand basics of Real time operating system



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Regulation	2017
Sem	06
Sub Code	EE8601
Sub Name	Solid State Drives
Course Outcome	<ul style="list-style-type: none">• Ability to understand and suggest a converter for solid state drive.• Ability to select suitability drive for the given application.• Ability to study about the steady state operation and transient dynamics of a motor load system.• Ability to analyze the operation of the converter/chopper fed dc drive.• Ability to analyze the operation and performance of AC motor drives.• Ability to analyze and design the current and speed controllers for a closed loop solid state DC motor drive.

Regulation	2017
Sem	06
Sub Code	EE8661
Sub Name	Power Electronics And Drives Laboratory
Course Outcome	<ul style="list-style-type: none">• Ability to practice and understand converter and inverter circuits and apply software for engineering problems.• Ability to experiment about switching characteristics various switches.• Ability to analyze about AC to DC converter circuits.• Ability to analyze about DC to AC circuits.• Ability to acquire knowledge on AC to AC converters• Ability to acquire knowledge on simulation software



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Regulation	2017
Sem	06
Sub Code	EE8681
Sub Name	Microprocessors And Microcontrollers Laboratory
Course Outcome	<ul style="list-style-type: none">• Ability to understand and apply computing platform and software for engineering problems.• Ability to programming logics for code conversion.• Ability to acquire knowledge on A/D and D/A.• Ability to understand basics of serial communication.• Ability to understand and impart knowledge in DC and AC motor interfacing.• Ability to understand basics of software simulators.

Regulation	2017
Sem	06
Sub Code	EE8611
Sub Name	Mini Project
Course Outcome	<ul style="list-style-type: none">• On Completion of the mini project work students will be in a position to take up their final year project work and find solution by formulating proper methodology.



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Regulation	2017	
Sem	06	PROFESSIONAL ELECTIVE-I
Sub Code	EE8004	
Sub Name	Modern Power Converters	
Course Outcome	<ul style="list-style-type: none">• Ability to suggest converters for AC-DC conversion and SMPS	

Regulation	2017	
Sem	06	PROFESSIONAL ELECTIVE-II
Sub Code	EE8005	
Sub Name	Special Electrical Machine	
Course Outcome	<ul style="list-style-type: none">• Ability to analyze and design controllers for special Electrical Machines.• Ability to acquire the knowledge on construction and operation of stepper motor.• Ability to acquire the knowledge on construction and operation of stepper switched reluctance motors.• Ability to construction, principle of operation, switched reluctance motors.• Ability to acquire the knowledge on construction and operation of permanent magnet brushless D.C. motors.• Ability to acquire the knowledge on construction and operation of permanent magnet synchronous motors.• Ability to select a special Machine for a particular application	

Regulation	2017	
Sem	07	
Sub Code	EE8701	



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Course Outcome	<ul style="list-style-type: none">• Ability to understand Transients in power system.• Ability to understand Generation and measurement of high voltage.• Ability to understand High voltage testing.• Ability to understand various types of over voltages in power system.• Ability to measure over voltages.• Ability to test power apparatus and insulation coordination
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Regulation	2017
Sem	07
Sub Code	EE8702
Sub Name	Power System Operation And Control
Course Outcome	<ul style="list-style-type: none">• Ability to understand the day-to-day operation of electric power system.• Ability to analyze the control actions to be implemented on the system to meet the minute-to-minute variation of system demand.• Ability to understand the significance of power system operation and control.• Ability to acquire knowledge on real power-frequency interaction.• Ability to understand the reactive power-voltage interaction.• Ability to design SCADA and its application for real time operation



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Regulation	2017
Sem	07
Sub Code	EE8703
Sub Name	Renewable Energy Systems
Course Outcome	<ul style="list-style-type: none">• Ability to create awareness about renewable Energy Sources and technologies.• Ability to get adequate inputs on a variety of issues in harnessing renewable Energy.• Ability to recognize current and possible future role of renewable energy sources.• Ability to explain the various renewable energy resources and technologies and their applications.• Ability to understand basics about biomass energy.• Ability to acquire knowledge about solar energy.

Regulation	2017
Sem	07
Sub Code	OML751 OPEN ELECTIVE-II
Sub Name	Testing Of Materials
Course Outcome	<ul style="list-style-type: none">• . Identify suitable testing technique to inspect industrial component• Ability to use the different technique and know its applications and limitations



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Regulation	2017	
Sem	07	
Sub Code	EE8010	PROFESSIONAL ELECTIVE-IV
Sub Name	Power Systems Transients	
Course Outcome	<ul style="list-style-type: none">• Ability to understand and analyze switching and lightning transients.• Ability to acquire knowledge on generation of switching transients and their control.• Ability to analyze the mechanism of lightning strokes.• Ability to understand the importance of propagation, reflection and refraction of travelling waves.• Ability to find the voltage transients caused by faults.• Ability to understand the concept of circuit breaker action, load rejection on integrated power system	

Regulation	2017	
Sem	07	
Sub Code	GE8071	PROFESSIONAL ELECTIVE-III
Sub Name	Disaster Management	
Course Outcome	<ul style="list-style-type: none">• The students will be able to• Differentiate the types of disasters, causes and their impact on environment and society• Assess vulnerability and various methods of risk reduction measures as well as mitigation• Draw the hazard and vulnerability profile of India, Scenarios in the Indian context, Disaster damage assessment and management.	



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Regulation	2017
Sem	07
Sub Code	EE8711
Sub Name	Power System Simulation Laboratory
Course Outcome	<ul style="list-style-type: none">• Ability to understand power system planning and operational studies.• Ability to acquire knowledge on Formation of Bus Admittance and Impedance Matrices and Solution of Networks.• Ability to analyze the power flow using GS and NR method• Ability to find Symmetric and Unsymmetrical fault• Ability to understand the economic dispatch.• Ability to analyze the electromagnetic transients.

Regulation	2017
Sem	07
Sub Code	EE8712
Sub Name	Renewable Energy Systems Laboratory
Course Outcome	<ul style="list-style-type: none">• Ability to understand and analyze Renewable energy systems.• Ability to train the students in Renewable Energy Sources and technologies.• Ability to provide adequate inputs on a variety of issues in harnessing Renewable Energy.• Ability to simulate the various Renewable energy sources.• Ability to recognize current and possible future role of Renewable energy sources• Ability to understand basics of Intelligent Controllers.



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Regulation	2017	
Sem	08	PROFESSIONAL ELECTIVE-VI
Sub Code	EE8018	
Sub Name	Microcontroller Based System Design	
Course Outcome	<ul style="list-style-type: none">• Ability to understand and apply computing platform and software for engineering problems.• Ability to understand the concepts of Architecture of PIC microcontroller• Ability to acquire knowledge on Interrupts and timers.• Ability to understand the importance of Peripheral devices for data communication.• Ability to understand the basics of sensor interfacing• Ability to acquire knowledge in Architecture of ARM processors.	

Regulation	2017	
Sem	08	PROFESSIONAL ELECTIVE-V
Sub Code	EE8015	
Sub Name	Electric Energy Generation,Utilization And Conservation	
Course Outcome	<ul style="list-style-type: none">• To understand the main aspects of generation, utilization and conservation.• To identify an appropriate method of heating for any particular industrial application.• To evaluate domestic wiring connection and debug any faults occurred.• To construct an electric connection for any domestic appliance like refrigerator as well as to design a battery charging circuit for a specific household application	



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Regulation	2017
Sem	08
Sub Code	EE8811
Sub Name	Project Work
Course Outcome	<ul style="list-style-type: none">• On Completion of the project work students will be in a position to take up any challenging practical problems and find solution by formulating proper methodology.