Department of Electrical and Electronics Engineering

Course outcome

Course Title:	BASIC ELECTRONICS AND DEVICES
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II/I
Regulation:	R16
Subject Code:	R1621023
Name of the Faculty:	KOLLI NAGESWAR RAO

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Outline the basic concepts of semiconductor physics.	Apply
CO 2	Analyze the operation and characteristics of diodes.	Analyze
CO 3	Demonstrate the operation and design aspects of rectifiers and regulators.	Apply
CO 4	Differentiate the characteristics of CB, CE, CC transistor configurations and biasing techniques.	Analyze
CO 5	Analyze the operation and characteristics of FET, Thyristors, Power IGBTs and Power MOSFETs.	Understand

Department of Electrical & Electronics Engineering

Course outcome

Course Title:	Thermal and hydro prime movers
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II/I
Regulation:	R16
Subject Code:	R1621025
Name of the Faculty:	Dr. Sureddy Kiran Kumar

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Analyse the operations of different internal combustion engines and calculating performance of different types of internal combustion engine.	Analyze
CO 2	Calculate the performance of steam turbines using velocity diagrams, vapour power cycles	Apply
СОЗ	analyse the fundamentals of gas turbine and methods to improve the efficiency	Analyze
CO4	Apply the various fluid dynamics equations to fluid jets, working and performance of various types of pumps.	Apply
CO 5	Calculate the performance of hydraulic turbines. Constructional and operations of various types of hydraulic turbines	Apply
CO 6	Develop the various types of hydropower plants by using different loads	Create

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	Managerial Economics and Financial Analysis
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II/I
Regulation:	R16
Subject Code:	R1621055
Name of the Faculty:	Mr. O. Naresh

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To introduce micro as well as macro, economic concepts that are useful in business decision making	Apply
CO 2	To introduce the concepts of cost and significance, limitation of Break even analysis.	Apply
CO 3	To master the basic tools of microeconomics: supply and demand analysis; firms' production and pricing decisions, market equilibrium and market structure analysis.	Apply
CO 4	The objective of this course is to acquaint the students regarding various accounting concepts and its application in managerial decision making	Apply
CO 5	To enable the students to analyze a company's financial statements and come to a reasoned conclusion about the financial situation of the company.	Analyze
CO 6	To provide the optimal decisions acquiring the knowledge on financial accounting and its analysis	Understand

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	ELECTRO MAGNETIC FIEDS
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II/I
Regulation:	R16
Subject Code:	R1621024
Name of the Faculty:	CH. Pavan Kumar

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To study the production of electric field and potentials due to different configurations of static charges.	Apply
CO 2	To study the properties of conductors and dielectrics, calculate the capacitance of various configurations and understand the concept of conduction and convection current densities.	Analyze
CO 3	To study the magnetic fields produced by currents in different configurations, application of ampere's law and the Maxwell's second and third equations.	Apply
CO 4	To study the magnetic force and torque through Lorentz force equation in magnetic field environment like conductors and other current loops.	Understand
CO 5	To develop the concept of self and mutual inductances and the energy stored.	Understand
CO 6	To study time varying and Maxwell's equations in different forms and Maxwell's fourth equation for the induced e.m.f	Analyze

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	Electrical Machines - I
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II/I
Regulation:	R16
Subject Code:	R1621022
Name of the Faculty:	G. Tejaswi

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the unifying principles of electromagnetic energy conversion.	Understand
CO 2	Understand the construction, principle of operation and performance of DC machines.	Understand
CO 3	Learn the characteristics, performance, methods of speed control and testing methods of DC motors.	Apply
CO 4	To predetermine the performance of Single-Phase transformers with equivalent circuit models.	Understand
CO 5	Understand the methods of testing of single-phase transformer.	Understand
CO 6	Analyze the three phase transformers and achieve three phase to two phase conversion.	Analyze

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	Power Systems - I
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II/II
Regulation:	R16
Subject Code:	R1622025
Name of the Faculty:	G. Tejaswi

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To study the principle of operation of different components of a thermal power stations and nuclear power station.	Apply
CO 2	To study the concepts of DC/AC distribution systems and voltage drop calculations	Understand
CO 3	To study the constructional and operation of different components of an Air and Gas Insulated substations.	Apply
CO 4	To study the constructional details of different types of cables.	Understand
CO 5	To study different types of load curves and tariffs applicable to consumers	Apply
CO 6	To study the principle of operation of different components of a thermal power stations and nuclear power station.	Analyze

Department of Electrical and Electronics Engineering

Course Title:	ELECTRICAL MACHINES-II
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II/II
Regulation:	R16
Subject Code:	R1622022
Name of the Faculty:	CH. Pavan Kumar

Course outcome

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the principle of operation and performance of 3-phase induction motor & To understand the torque producing mechanism of a single-phase induction motor	Apply
CO 2	Quantify the performance of induction motor and induction generator in terms of torque and slip	Analyze
CO 3	To understand the principle of emf generation, the effect of armature reaction and predetermination of voltage regulation in synchronous generators	Apply
CO 4	To study parallel operation of synchronous generators	Understand
CO 5	To study the control of real and reactive powers for synchronous generators	Understand
CO 6	To understand the operation, performance and starting methods of synchronous motors	Analyze

Department of Electrical and Electronics Engineering

Course Title:	ELECTRICAL MEASUREMENTS
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II/II
Regulation:	R16
Subject Code:	R1622021
Name of the Faculty:	K.RAMYA

Course outcome

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Acquire knowledge of the characteristics of measuring instruments and their classification	Understand
CO 2	Be conversant in construction, working of measuring instruments and their proficient us	Understand
CO3	Acquire knowledge various methods of electrical parameters measurement.	Understand
CO4	Be competent to handle various instruments for the measurement of electrical quantities.	Understand
CO 5	Concept of ballistic galvanometer	Analyze
CO 6	Demonstrate Cathode Ray Oscilloscope (CRO)	Understand

Department of Electrical and Electronics Engineering

Course Title:	POWER ELECTRONICS
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III/I
Regulation:	R16
Subject Code:	R1631025
Name of the Faculty:	T. Pardha Saradhi

Course outcome

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To study the characteristics of various power semiconductor devices and to design firing circuits for SCR.	Apply
CO 2	To understand the operation of single phase full-wave converters and analyse harmonics in the input current.	Analyze
CO 3	To study the operation of three phase full–wave converters.	Apply
CO 4	To understand the operation of different types of DC-DC converters.	Understand
CO 5	To understand the operation of inverters and application of PWM techniques for voltage control and harmonic mitigation.	Understand
CO 6	To analyze the operation of AC-AC regulators.	Analyze

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	Renewable Energy Sources
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III/I
Regulation:	R16
Subject Code:	R1631022
Name of the Faculty:	G. Tejaswi

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To study the solar radiation data, Extraterrestrial radiation, radiation on earth's surface.	Apply
CO 2	To study solar thermal collections.	Analyze
CO 3	To study solar photo voltaic systems	Apply
CO 4	To study maximum power point techniques in solar PV and wind energy.	Understand
CO 5	To study wind energy conversion systems, Betz coefficient, tip speed ratio.	Understand
CO 6	To study basic principle and working of hydro, tidal, biomass, fuel cell and geothermal systems.	Analyze

Department of Electrical and Electronics Engineering

Course Title:	ELECTRICAL MEASUREMENTS LAB
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III/I
Regulation:	R16
Subject Code:	R1631028
Name of the Faculty:	T. Pardha Saradhi

Course outcome

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Calibrate Single phase energy meter, Phantom Loading	Apply
CO 2	Measure the Resistance, Inductance, Capacitance using Bridges	Analyze
CO 3	Calculate the Power by 1-Phase Wattmeter, 3-phase Reactive power, 3 Voltmeter 3 Ammeter.	Apply
CO 4	Measure the parameters of choke coil, % ratio error of a CT	Understand
CO 5	Test transformer oil for its effectiveness	Understand

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	POWER ELECTRONIC CONTROLLERS & DRIVES	
Programme:	B.Tech	
Academic Year	2019-20	
Year/Semester:	III/II	
Regulation:	R16	
Subject Code:	R1632021	
Name of the Faculty:	T. Pardha Saradhi	

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To learn the fundamentals of electric drive and different electric braking methods.	Apply
CO 2	To analyze the operation of Single-phase converter-controlled dc motors and four quadrant operation of dc motors using dual converters.	Analyze
CO 3	To discuss the converter control of dc motors in various quadrants.	Apply
CO 4	To understand the concept of speed control of induction motor by using AC voltage controllers and voltage source inverters.	Understand
CO 5	To learn the principles of static rotor resistance control and various slip power recovery schemes.	Apply
CO 6	To understand the speed control mechanism of synchronous motors.	Understand

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	Power System Analysis
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III/II
Regulation:	R16
Subject Code:	R1632022
Name of the Faculty:	K.RAMYA

COURSE OUTCOMES(COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To understand the role of power system analysis tools on the planning and operation of power system	Apply
CO 2	To develop one line diagram of the given power system.	Apply
СОЗ	To compute Ybus and Zbus matrices for power system networks	Apply
CO4	To formulate the power flow problem and solve the same using different methods.	Apply
CO 5	To apply symmetrical component techniques for unsymmetrical fault analysis.	Analyze
CO 6	To solve the swing equation of a power system using different numerical techniques	Understand

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	Power Electronics LAB
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III/II
Regulation:	R16
Subject Code:	R1632026
Name of the Faculty:	T. Pardha Saradhi

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO 1	Analyze Characteristics of IGBT, MOSFET, SCR , Firing Circuits of SCR	Apply
CO 2	Estimate the performance of converters for resistive and inductive loads	Analyze
CO 3	Analyze the performance of AC voltage controller with resistive and inductive loads	Apply
CO 4	Examine the working of Buck and Boost converter, Single Phase Square wave Bridge and PWM inverter	Understand

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	Switch Gear & Protection
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV/I
Regulation:	R16
Subject Code:	R1641024
Name of the Faculty:	T. Pardha Saradhi

COURSE OUTCOMES(COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To provide the basic principles and operation of various types of circuit breakers	Apply
CO 2	To study the classification, operation and application of different types of	Apply
	Electromagnetic protective relays.	
CO 3	To explain protective schemes, for generator and transformers and various protective schemes used for feeders and bus bars.	Analyze
CO 4	To explain the principle and operation of different types of static relays.	Analyze
CO 5	To study different types of over voltages in a power system and principles of different protective schemes for insulation co-ordination.	Apply

Department of Electrical and Electronics Engineering

Course outcome mapping with PO's and PSO's

Course Title:	Utilization of Electrical Energy
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV/I
Regulation:	R16
Subject Code:	R1641021
Name of the Faculty:	G.Tejaswi

COURSE OUTCOMES(COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To understand the operating principles and characteristics of traction motors with respect to speed, temperature, loading conditions.	Apply
CO 2	To acquaint with the different types of heating and welding techniques.	Apply
CO 3	To study the basic principles of illumination and its measurement.	Analyze
CO 4	To understand different types of lightning system including design.	Analyze
CO 5	To understand the basic principle of electric traction including speed- time curves of different traction services.	Apply
CO 6	To understand the method of calculation of various traction system for braking, acceleration and other related parameters, including demand side management of energy.	Understand

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	Special Electrical Machines
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV/I
Regulation:	R16
Subject Code:	R164102G
Name of the Faculty:	G. Tejaswi

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To explain theory of operation and control of switched reluctance motor.	Apply
CO 2	To explain the performance and control of stepper motors, and their applications.	Apply
CO 3	To describe the operation and characteristics of permanent magnet dc motor.	Analyze
CO 4	To distinguish between brush dc motor and brush less dc motor.	Analyze
CO 5	To explain the theory of travelling magnetic field and applications of linear motors.	Apply

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	INSTRUMENTATION
Programme:	B.Tech
Academic Year	2018-2019
Year/Semester:	IV/I
Regulation:	R16
Subject Code:	R164102D
Name of the Faculty:	K.RAMYA

COURSE OUTCOMES(COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To understand the performance characteristics of measuring instruments	Understand
CO 2	Understand and explain the classification of transducers and construction and operating principle of lvdt, thermo couples	Understand
CO3	Explain Concept of measuring temperature, velocity, flow,	Understand
CO4	Understand and explain the classifications of DVM	Understand
CO 5	Complete explaination of CRO	Understand
CO 6	Understand and explain signal analyzers	Understand

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	POWER SYSTEM OPERATION & CONTROL
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV/I
Regulation:	R16
Subject Code:	R1641023
Name of the Faculty:	CH. Pavan Kumar

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
C01	To understand optimal dispatch of generation with and without losses.	Apply
CO 2	To study the optimal scheduling of hydro thermal systems.	Analyze
CO 3	To study the optimal unit commitment problem.	Apply
CO 4	To study the load frequency control for single area system with and without controllers	Understand
CO 5	To study the load frequency control for two area system with and without controllers	Understand
CO 6	To understand the reactive power control and compensation of transmission lines	Analyze

Department of Electrical and Electronics Engineering

Course outcome

Course Title:	Electrical Distribution Systems
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV/II
Regulation:	R16
Subject Code:	R1642023
Name of the Faculty:	G.Tejaswi

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Describe the various factors and characteristics of loads connected to distribution system	Apply
CO 2	Design the substation and feeders	Apply
CO 3	Determine the voltage drop and power loss of distributionlines.	Analyze
CO 4	Conduct fault analysis to select protective devices and its	Analyze
CO 5	Design capacitive compensation for power factor improvement.	Apply
CO 6	Illustrate voltage control equipment and their effects onvoltage	Apply

Department of Electrical and Electronics Engineering

Course Title:	FLEXIBLE ALTERNATING CURRENT TRANSMISSION SYSTEMS
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV/II
Regulation:	R16
Subject Code:	R1632021
Name of the Faculty:	T. Pardha
	Saradhi

Course outcome

COURSE OUTCOMES (COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To learn the basics of power flow control in transmission lines using FACTS controllers	Apply
CO 2	To explain operation and control of voltage source converter.	Analyze
CO 3	To understand Shunt compensation methods to improve stability and reduce power oscillations of a power system using static VAR compensators	Understand
CO 4	To learn the methods of compensation using series compensators	Apply
CO 5	To explain operation of Unified Power Flow Controller (UPFC).	Analyze

Department of Electrical and Electronics Engineering

Course outcome

HVDC Transmission B.Tech

Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV/II
Regulation:	R16
Subject Code:	R1642022
Name of the Faculty:	CH. Pavan Kumar

COURSE OUTCOMES (COs):

Course Title:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To Understand basic concepts of HVDC Transmission	Apply
CO 2	To analyze the converter configuration	Analyze
CO 3	To Know the control of converter and HVDC Transmission	Apply
CO 4	To Understand the significance of reactive power control and AC/Dc load flow	Understand
CO 5	To Know different converter faults, protection and effect of harmonics.	Understand
CO 6	To leave low pass and high pass filters	Analyze