

SREE VENKATESWARA COLLEGE OF ENGINEERING

An ISO 9001:: 2015 Certified Institution (Approved by AICTE, New Delhi and Affiliated to JNTU,Anantapur)Northrajupalem (Vi), Kodavaluru(M), S.P.S.R Nellore (Dt)-524316

Department of Electrical and Electronics Engineering R19 Regulation Course Outcomes (COs)

I B. Tech - I Semester

S.No	Subject Name	Subject Code		Course Outcomes
			C111.1	Make use the concepts of Matrices to solve various Engineering problems.
			C111.2	Illustrate the knowledge of Mean Value theorems for engineering applications.
	19A54101	C111.3	Apply the concepts of maxima and minima for various engineering problems.	
1	Algebra & Calculus		C111.4	Evaluate the Multiple integrals to determine areas and volumes of engineering applications.
			C111.5	Explain the importance of special functions and its applications.
			C112.1	Interpret the concepts of physical optics like interference, diffraction and polarization in various engineering applications.
Applied 19A Physics 2		C112.2	Outline the significant concepts of dielectric and magnetic materials for potential applications in the emerging micro devices.	
	Applied Physics	19A56101T	C112.3	Identify the basic concepts of electromagnetic waves and its propagation in optical fibers along with its Engineering applications.
			C112.4	Demonstrate the physics of semiconductors for electronic devices.
			C112.5	Illustrate the concepts of super conducting materials and nano-materials for scientific and engineering applications.
			C113.1	Understand the peripherals, ports and connecting cables and able to assemble the system.
		C113.2	Apply algorithmic approach to solve computational problems.	
	Problem Solving & Programming	19A05101T	C113.3	Apply modular approach for solving the problems by using the control structures.
3			C113.4	Select the individual data elements to simplify solutions and provide efficient memory utilization.
			C113.5	Develop sorting algorithms for heterogeneous data.

			C114.1	Interpret the communication and writing skills in general communication.
		-	C114.2	Develop the writing and life skills in structural manner of real time scenarios.
	Communicative English 1	19A52101T	C114.3	Relatethe knowledge of writing and speaking skills to enhance the career opportunities.
4			C114.4	Illustrate the concepts of writing and speaking skillsto develop the skills in job opportunities.
			C114.5	Use the concepts of various real time scenarios to represent in an effective model.
	Electrical &		C115.1	Demonstrate knowledge on different tools, abbreviations and symbols used in Electrical Engineering
5 Electronics 5 Engineering	Electronics Engineering Workshop	19A02101	C115.2	Illustrate how to trouble shoot the electrical equipments
	w orksnop		C115.3	Describe the wiring and earthing for residential houses
		19A56101P	C116.1	Understand the importance of optical phenomenon like Interference, diffraction and dispersion
App 6			C116.2	Comprehend the importance of optical fiber parameters in communication
	Applied Physics Lab		C116.3	Recognize the importance of energy gap in the study of conductivity and Hall Effect in a semiconductor.
			C116.4	Recognize the importance of Hysteresis loop of ferro magnetic materials
		^k 5 19A05101P	C117.1	Analyze different sorting algorithms.
	Problem Solving & Programming Lab		C117.2	Design solutions for computational problems
7			C117.3	Develop C programs which utilize the memory efficiently using programming constructs like pointers.
		19A52101P	C118.1	To remember and understand the different aspects of the English language proficiency with emphasis on LSRW skills
	Communicative		C118.2	To apply communication skills through various language learning activities
8	English 1 Lab		C118.3	To analyze the English speech sounds, stress, rhythm, intonation and syllable division for better listening and speaking comprehension.
			C118.4	To evaluate and exhibit acceptable etiquette essential in social and professional settings

I B. Tech - II Semester

S.No	Subject Name	Subject Code		Course Outcomes
			C121.1	Draw SFD and BMD for cantilever and Simply supported beams.
	Basic Civil &		C121.2	Understand the working principles of electrical resistors and capacitors.
1	Mechanical	19A01201T	C121.3	Apply concepts of Rosetta analysis for strain measurements.
	Engineering		C121.4	Outline sources of energy, power plant economics, and environmental aspects and IC Engines
			C121.5	Possess the knowledge of system components of refrigeration and air conditioning
			C122.1	Apply the mathematical knowledge of higher-order differential equations to solve various engineering problems.
	2 Differential Equations and Vector Calculus		C122.2	Solve the linear differential equations with constant coefficients by the appropriate method
		19A54201	C122.3	Identify solution methods for partial differential equations that model physical processes.
2			C122.4	Illustrate the physical interpretation of Gradient, Divergence and Curl.
			C122.5	Apply Green's, Stokes and Divergence theorem in evaluation of double and triple integrals.
			C123.1	Outline the molecular orbital energy level diagram of different molecular species.
			C123.2	Acquire the knowledge of electrochemistry to improve the efficiency of batteries
	Chemistry	19A51102T	C123.3	Demonstrate the various preparation mechanisms of different poly mersin engineering applications.
3			C123.4	Illustrate the various spectroscopic techniques used for the identification of functional groups and applications of chemical compounds.
			C123.5	Interpret the principle of supra molecular chemistry in application of molecular machines and switches.
4		19A05201T	C124.1	Understand the peripherals, ports and connecting cables and able to assemble the system.
	Data Structures		C124.2	Apply algorithmic approach to solve computational problems.
			C124.3	Apply modular approach for solving the problems by using the control structures.

			C124.4	Select the individual data elements to simplify solutions and provide efficient memory utilization.
			C124.5	Develop sorting algorithms for heterogeneous data.
				Apply wood working skills in real world applications
	Engineering	19403101	C125.1 C125.2	Build different parts with metal sheets in real world applications
5	Workshop	17/100101	C125.3	Apply fitting operations in various applications
5			C125.4	Demonstrate soldering and brazing
			C125.5	connections
			C126.1	Develop the engineering imagination essential for successful design.
Engineering La	Engineering Graphics Lab	19A03102	C126.2	Select the utility of drafting & modeling packages in orthographic and isometric drawings.
0			C126.3	Apply the usage of 2D and 3D modeling.
	Basic Civil & Mechanical Engineering Lab	19A01201P	C127.1	Explain different working cycles of engine.
7			C127.2	Illustrate the working of refrigeration systems
			C127.3	Evaluate heat balance sheet of IC engine.
			C128.1	Demonstrate the cell constant and conductance of solutions.
Chemistry Lab	19A51102P	C128.2	Interpret the strength of an acid present in secondary batteries.	
			C128.3	Demonstrate advanced polymer materials are used in engineering applications.
		19A05201P	C129.1	Select the data structure appropriate for solving the problem.
9	Data Structures Lab		C129.2	Develop searching and sorting algorithms.
			C129.3	Illustrate the working of stack and queue.

II B. Tech - I Semester

S.No	Subject Name	Subject Code		Course Outcomes
			C211.1	Identify the analyticity of complex functions and understand the conformal mappings of complex functions.
			C211.2	Apply Cauchy's integral formula and Cauchy's integral theorem to evaluate improper integrals along contours.
	Complex Variables & Transforms	19A54302	C211.3	Make use the concepts of Laplace transform and inverse Laplace transform in solving Differential Equations arising in engineering field.
1			C211.4	Demonstrate Fourier series to study the behavior of periodic function and their applications in various fields of engineering.
			C211.5	Apply the properties of Fourier transforms and Z transforms to solve various engineering problems.
		19A02301T	C212.1	Analyze the concepts of Ohms law, series parallel combination of resistances for the analysis of DC circuits.
2	Basic Electrical Circuits		C212.2	Demonstrate the fundamentals of AC circuits.
			C212.3	Analyze sinusoidal three phase AC Circuits.
			C212.4	Apply Network theorems for the analysis of electrical circuits.
			C212.5	Evaluate the circuits by using network topology.
		19A02302	C213.1	Illustrate the concepts and operation thermal, hydro and nuclear power station to generate power.
	Power System Architecture		C213.2	Summarize the concepts of Non-renewable energy sources for solar, wind & biomass power generation.
_			C213.3	Compute the transmission line parameters using GMD and GMR.
3			C213.4	Summarize the performance of short, medium and long transmission lines.
			C213.5	Compare DC vs AC and Under-Ground vs Over - Head Distribution Systems, types of Distribution Systems.
			C214.1	Summarize various magnetic materials, their properties and applications and to Describe the Electromechanical Energy Conversion.
			C214.2	Describe the construction, operation a DC generator and to Illustrate the characteristics of DC generators.
	DC Machines & Transformers	19A02303T	C214.3	Describe the speed control, testing methods of DC Motors and parallel operation of DC machines and to Illustrate the characteristics of DC motors.
4			C214.4	Describe the construction, operation and parallel operation of transformers and to Compute the efficiency and regulation of a transformer.
			C214.5	Summarize the phase conversions and to Describe the tap changing of transformers.

			C215.1	Apply the concept of diode for developing rectifiers
			C215.2	Study the characteristics of various special purpose diodes and BJT
	Semiconductor Devices and Circuits	19A04306T	C215.3	Analyze transistor amplifier using h-parameters
5		-	C215.4	Analyze the simplified hybrid model of transistor in various configurations
		C215.5	Study the characteristics of JFET, MOSFET and UJT	
			C216.1	Apply basic laws, Demorgan theorems K-map &Q-M methods to simplify logic functions.
		-	C216.2	Analyze various combinational circuits.
	Digital Electronics and Logic Design	19A04304	C216.3	Analyze various sequential circuits.
6		-	C216.4	Design simple digital systems using PLDs.
			C216.5	Compare different types of Programmable logic devices and logic families.
			C217.1	Determine the magnetization and load characteristics of a DC shunt generator.
DC Machines & Transformers Lab	19A02303P	C217.2	Describe the efficiency and performance characteristics of a dc motors	
			C217.3	Predetermination of transformer with different loads
	8 Semiconductor Devices and Circuits 19A04306P Lab		C218.1	Explain the characteristics and Applications of Diodes, BJT and FET under different configurations
ø		19A04306P	C218.2	Analyze the performance of various rectifiers with filters.
o			C218.3	Analyze the performance of various amplifiers with BJT and FET.
			C219.1	Apply suitable theorems for circuit analysis and verify the results theoretically.
9	Basic Electrical Circuits Lab	19A02301P	C219.2	Determine experimentally the two port network parameters and verify the results theoretically.
		-	C219.3	Determine the active and reactive powers experimentally and verify the results theoretically.
			C21A0.1	Summarizing the difference between lower organisms (prokaryotes) with higher organisms (eukaryotes
	Biology For		C21A0.2	Charting the applications of enzymes in industry.
10	Engineers	19A99302 - 	C21A0.3	Articulate the mechanism and process of important human functions
			C21A0.4	Analyze how genetic material is replicated and also understands how RNA and proteins are synthesized.
			C21A0.5	Study transgenic plants and animals and their production

II B. Tech - II Semester

S.No	Subject Name	Subject Code		Course Outcomes
			C221.1	Solve algebraic and transcendental equations by using numerical methods.
		C221.2	Estimate Phenomena value by using interpolation techniques.	
	Numerical Methods & Probability Theory	19A54304	C221.3	Solve the ordinary differential equations and integration through numerical differentiation and integration.
1			C221.4	Apply the probability basic concepts to predict the information about data.
			C221.5	Evaluate expected mean lifetime, failure rates, and service rates of equipment by using probability distribution.
			C222.1	Analyze AC circuits along with resonance and locus diagrams.
			C222.2	Relate network topology for analyzing the circuit.
2	Electrical Circuit Analysis	19A02401T	C222.3	Illustrate the transient response of R-L, R-C, R-L-C circuits for D.C. and A.C. excitation.
			C222.4	Apply Fourier transforms to electrical circuits excited by non-sinusoidal sources.
			C222.5	Demonstrate different types of filters to study their characteristics.
	Engineering Electromagnetics 19/		C223.1	Illustrate the laws and the equations concerned with static electric fields for the design of Xerography, Laser Printers, Ink Jet Printers and Electrostatic Painting etc.
		19A02402	C223.2	Compare the difference between the behavior of conductors and dielectrics in electric fields for selecting suitable material for the application.
3			C223.3	Describe the equations concerned with static magnetic fields for the design of loud speakers.
			C223.4	Evaluate the inductance of various configurations to choose suitable inductor for the application.
			C223.5	Analyze the interaction between electricity and magnetism in power transmission.
			C224.1	Distinguish the types of power semiconductor devices and analyze their switching characteristics.
		19A02403	C224.2	Demonstrate the operation of controlled rectifiers, and analyze its characteristics and the performance parameters.
	Power Electronics		C224.3	Differentiate the switching techniques and basics topologies of DC-DC switching regulators.
4			C224.4	Apply the different modulation techniques to pulse width modulated inverters to identify the suitable harmonic reduction methods for the applications.
			C224.5	Demonstrate the operation of AC voltage controller and cyclo-converters differentiate their various

				configurations in AC-AC applications.
			C225.1	Analyze the parameters of multi stage amplifiers.
			C225.2	Illustrate the concept of negative feedback on amplifier characteristics and different oscillators.
	Analog Electronic Circuits	19A04405	C225.3	Compute the parameters of various large signal amplifiers.
5			C225.4	Interpret the characteristics and applications of operational amplifier.
			C225.5	Design the linear applications of an op-amp.
			C226.1	Apply the features of python language in various real applications.
			C226.2	Select appropriate data structure of python for solving a problem.
	Python Programming	19A05304T	C226.3	Design programs for manipulating strings.
6	Tigranning		C226.4	Design object oriented programs using python for solving real world problems
			C226.5	Apply modularity to programs
	Universal Human Values	19A52301	C227.1	To develop a holistic perspective based on self- exploration about themselves (human being), family, society and nature/existence.
			C227.2	To understand (or developing clarity) the harmony in the human being, family, society and nature/existence
7			C227.3	To strengthen self-reflection.
			C227.4	To develop commitment and courage to act.
		19A02401P	C228.1	Design the electrical circuit concepts by interpreting the simulation results.
	Electrical Circuit Analysis Lab		C228.2	Evaluate three phase active and reactive power of three phase balanced loads using PSPICE software.
8			C228.3	Analyze the RL, RC and RLC series circuits for a specified transient response using PSPICE software
			C229.1	Analyze various amplifier circuits.
0	Electronic Circuits Lab	19A04406	C229.2	Design OPAMP based analog circuits.
, ,			C229.3	Design and implement Combinational and Sequential logic circuits
10	Environmental	10400201	C22A0.1	To know the importance of public awareness
10	Science	19A99301	C22A0.2	To know about the biodiversity and its conservation

		C22A0.3	To know about the various sources of solid waste and preventive measures.
		C22A0.4	To know about the wild life protection and forest conservation acts.
	C22A0.5	To identify the natural assets and related case studies.	

III B. Tech - I Semester

S.No	Subject Name	Subje ct Codo		Course Outcomes
		Coue	C311.1	Summarize the windings, factors effect and magnetic fields for AC Machine.
			C311.2	Illustrate the construction, working, performance characteristics and starting methods of a three phase Induction motor.
	AC Machines	9A02501T	C311.3	Choose the 1-phase motors used for various domestic and industrial applications.
1			C311.4	Analyze the various regulation methods and Parallel Operation in three phase synchronous generators.
			C311.5	Discuss the operation, performance characteristics and hunting methods of three phase synchronous motor.
	Control Systems	19A02502	C312.1	Analyze the differential equations for mechanical and electrical systems and obtain the transfer function from block diagrams, servo motors and signal flow graphs
			C312.2	Analyze the time domain specifications, steady state errors and to learn time response analysis of first and second order systems
			C312.3	Summarize the concepts Routh's stability and Root locus to find the stability of the system
2			C312.4	Summarize the frequency domain specifications from Bode, Polar, Nyquist plots and evaluate the frequency domain specifications.
			C312.5	Summarize the concept of state space analysis, controllability and Observability and to obtain the transfer function.
			C313.1	Interpret the communication and writing skills in general communication.
		104 53/017	C313.2	Develop the writing and life skills in structural manner of real time scenarios.
3	English Language Skills	19A520011	C313.3	Relate the knowledge of writing and speaking skills to enhance the career opportunities.
			C313.4	Illustrate the concepts of writing and speaking skillsto develop the skills in job opportunities.

			C313.5	Use the concepts of various real time scenarios to represent in an effective model.
			C314.1	Identify the limitations, modern trends in design, and properties of materials used in the electrical machines.
	Electrical Machine		C314.2	Demonstrate the design parameters of DC Machine.
	Design	19A02504	C314.3	Develop Design aspects of transformers.
4			C314.4	Analyze the output equation of induction motor and design stator and rotor circuits of a induction motor.
			C314.5	Illustrate the design salient pole and non-salient pole alternators for given specifications.
			C315.1	Describe the limitations of conventional transmission systems.
			C315.2	Develop the equivalent circuit of HVDC link.
	HVDC and FACTS	19A02503a	C315.3	Describe various methods for the control of HVDC systems.
5			C315.4	Analyze the circuits of shunt, VAR, series configurations.
			C315.5	Analyze the transmission control strategies.
		- 19A03506a	C316.1	Summaries the concepts of electrical vehicle propulsion and energy sources.
			C316.2	Describe the various power electronic converters and AC drives.
6	Introduction to Hybrid and Electric Vehicles		C316.3	Discuss the impact of modern drive trains in energy supplies, hybrid, electric drive train topologies
U			C316.4	Demonstrate the various electric and hybrid vehicles in the present market.
			C316.5	Develop the basic schemes of electric vehicles and hybrid electric vehicles.
			C317.1	Determine the efficiency of a single phase and three phase induction motors
	AC Machines Lab	19A02501P	C317.2	Determine the voltage regulation of synchronous generator.
1			C317.3	Analyze the characteristics of synchronous machine with different excitations
	English Language Skills Lab	19A52601P	C318.1	understand the different aspects of the English language proficiency with emphasis on LSRW skills

8			C318.2	Analyze the English speech sounds, stress, rhythm, intonation and syllable division for better listening and speaking comprehension
			C318.3	Evaluate and exhibit acceptable etiquette essential in social and professional settings
			C319.1	Determine the turn on – turn off characteristics of various power electronic devices.
9	Power Electronics & Simulation Lab	19A02506	C319.2	Sketch the characteristics of voltage controllers ,converters and inverters with R and RL loads
			C319.3	Analyze the performance characteristics of SCR, single phase ac voltage controller, DC Jones chopper and series inverter using MATLAB
	Socially Relevant Project	19A02507	C31A0.1	Summarize the fundamental engineering knowledge of science and engineering domain
10			C31A0.2	Demonstrate the knowledge of basic science and engineering applications.
			C31A0.3	Analyze the critical problem solving ability of a given application.
11	Research Methodology	19A99601	C31A1.1	Identify the research problem and efficient tools for designing project modules thorough literature survey.
			C31A1.2	Develop executable project modules after considering the requirements specified in the design phase.
			C31A0.3	Demonstrate the completed project work with the project report.

III B. Tech - II Semester

S.No	Subject Name	Subject Code	Course Outcomes(COs)	
			C321.1	Interpret the concept of various signals, systems and Fourier series for Continuous time signals.
			C321.2	Apply Fourier transform and Sampling Theorem for Continuous time signals.
1	Signals & Systems	19A04301	C321.3	Apply DTFT for various discrete time signals.
			C321.4	Analyze the characteristics of linear systems.
			C321.5	Analyze Laplace and Z-transform for continuous and discrete time systems.
	Digital Computer Platforms	19A02601T	C322.1	Design the 8086 Microprocessor with Assembling language programming and interfacing with various modules

			C322.2	Understand the Interfacing of 8086 with various advanced communication devices
2			C322.3	Designing of 8051 Microcontroller with Assembling language programming and interfacing with various modules
			C322.4	To know about Assembly Language Programs for the Digital Signal Processors and usage of Interrupts
			C322.5	To understand Xilinx programming and understanding of Spartan FPGA board
			(2222.1	Construct Y bus matrix for the given power system
			C323.1	network.
		19A02602	C323.2	Analyze contingency analysis for power system networks using Z Bus method.
	Power System Analysis		C323.3	Interpret Power Flow solutions using Gauss Seidel Method for given power system network.
3			C323.4	Demonstrate Short circuit analysis of a power system.
			C323.5	Classify types of stabilities and its improvements of a given power system.
	Power Quality 19A02603		C324.1	Distinguish various power quality issues, power quality monitoring in a power system.
4		19A02603a	C324.2	Demonstrate the Active Shunt compensation , Active series compensation, DVR and DSTATCOM,
			C324.3	Illustrate the Unified Power Quality compensators, Loads that cause power quality problems.
			C324.4	Distinguish Passive Power Filters, shunt Active power filters, Series Active power filters, Hybrid Active power filters.
			C324.5	Relate the Power quality improvement methods in electrical power system.
			C325.1	Illustrate the application of mechatronics in automation industry
	Introduction to Mechatronics	19A03604a	C325.2	Classify various types of sensors.
5			C325.3	Classify various actuation systems.
			C325.4	Examining the architecture of microprocessors, microcontrollers and PLC.
5			C325.5	Understanding design of mechotronics .
	Monogorial Eggeneric-	anagerial Economics nd Financial Analysis	C326.1	Analyze the Elasticity and degree of elasticity
	And Financial Analysis		C326.2	Apply the least-cost combination of inputs
	•		C326.3	Analyze the optimum output levels to maximize profit in different markets

6				Summarize the Contrast and compare different
			C326.4	investment appraisal methods
			C326.5	Outline the financial performance of an enterprise by using financial statements
			C327.1	Evaluate the characteristics of AC servomotors, DC servo motors, magnetic amplifier and synchros. (BL-5)
-	Control Systems & Simulation Lab	19A02605	C327.2	Determine the error obtained in control system with the effect of P, PI, PID controllers. (BL-2)
7			C327.3	Calculate the stability of a Bode plot, Root locus, Nyquist of Linear time invariant systems using MATLAB.(BL-3)
			C328.1	Design and implement programs on 8086 microprocessor.
Q	Digital Computer Platforms Lab	19A02601P	C328.2	Demonstrate the concepts related to I/O and memory interfacing
8			C328.3	Analyze interfacing and programming of GPIO ports in C using MSP430
	Socially Relevant Project	19A02606	C329.1	Summarize the fundamental engineering knowledge of science and engineering domain
Q			C329.2	Demonstrate the knowledge of basic science and engineering applications.
,			C329.3	Analyze the critical problem solving ability of a given application.
		dia 19A99501	C32AO.1	Summarize the fundamental engineering knowledge of science and engineering domain
10	Constitution of India		C32AO.2	Demonstrate the knowledge of basic science and engineering applications.
10			C32AO.3	Analyze the critical problem solving ability of a given application.
11	Comprehensive Online Examination	19A02607	C32A1.1	Summarize the fundamental engineering knowledge of science and engineering domain
			C32A1.2	Demonstrate the knowledge of basic science and engineering applications.
			C32A1.3	Analyze the critical problem solving ability of a given application.

IV B. Tech - I Semester

S.No	Subject Name	Subject Code		Course Outcomes(COs)
			C411.1	Describe the concepts and principles of Measuring Instruments to measure the voltage and current.
1	Measurements & Sensors	19A02701	C411.2	Illustrate the working principles of single phase, three phase wattmeters, energy meter to measure power and energy in circuits.
			C411.3	Illustrate the working principles of single phase, three phase wattmeters, energy meter to measure power and energy in circuits.
			C411.4	Determine the resistance, inductance and Capacitance for AC and DC bridges.
			C411.5	Analyze the concepts of Digital Measuring Instruments to measure voltage and current.
	Power System Protection	19A02702	C412.1	Demonstrate the concepts and principle of Circuit Breakers for power system protection.
			C412.2	Illustrate the operation of electromagnetic, Static and Microprocessor based relays for sensing the faults .
2			C412.3	Summarize the various protection methods for generators and transformers.
-			C412.4	Interpret the protective schemes for feeders and transmission lines .
			C412.5	Describe the generation and protection of over voltages in power systems .
		C413.1	Illustrate the Economic Operation of a power system.	
		19A02703a	C413.2	Demonstrate the mathematical models of turbines and governors.
	Power System Operation & Control		C413.3	Describe the load frequency control of a power system.
3			C413.4	Discuss the reactive power control.
			C413.5	Describe the necessity of deregulation aspects and demand side management problems in the modern power system era
		ital 19A04704b	C414.1	Define basic signals and its operations, Classify discrete time signals and systems.
	Principles of Digital Signal Processing		C414.2	Understand various basic operations on signals
4		C414.3	Apply the transform techniques to solve the problems	

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			C414.4	Analyze the Decimation in time and frequency algorithms
			C414.5	Understand the importance of IIR and FIR digital Filters
			C415.1	Demonstrate the fundamental knowledge of Management, administration, organization.
			C415.2	Understand the role of management in Production
	Management Science	19A52701b	C415.3	Explain the importance of human resources for an organization.
5			C415.4	Outline the strategy formulation and implementation and project management techniques.
			C415.5	Explain the contemporary issues in the management.
	Decement Street area of	19A02705	C416.1	Calculate the sequence impedances, sub- transient reactance, symmetrical and unsymmetrical faults of synchronous machine
	Simulation Lab		C416.2	Determine the parameters of equivalent circuit of three winding transformer.
6			C416.3	Develop a MATLAB program for formation of Ybus, Zbus and Gauss seidel ,Fast decoupled load flow studies.
			C417.1	Calibrate single phase Energy meter, Power Factor meter, Ammeter and Voltmeter.
7	Measurements Lab	19A02706	C417.2	Determine the values of Resistance, Inductance and Capacitance using Kelvin's , Anderson's and Schering Bridges
			C417.3	Determine the values of Choke coil Parameters using 3 voltmeter and 3 Ammeter methods.
	Industrial Training/Skill Development/Research Project	19A02707	C418.1	Apply new technology or sharpen skills in relevant field.
8			C418.2	Relate the skills attained in association with industry working in relevant technology.
			C418.3	Build an Industry level project during the training.

IV B. Tech - II Semester

S.No	Subject Name	Subject Code	Course Outcomes(COs)		
			C421.1	To know about factors effecting the primary feeder loading	
			C421.2	understand about modelling of various types of loads and shunt capacitor	
1	Electrical Distribution System Automation	19A02801a	C421.3	evaluate distribution load flow pattern using sweeping algorithms	
			C421.4	understand about installation of capacitors at various locations	
			C421.5	understand about database structures and interfacing	
2	Energy conservation and management	19A03802a	C422.1	Identify the function of energy manager.	
			C422.2	Analyze performance characteristics of transformers, capacitors, and electric motors.	
			C422.3	Determine efficiency of boilers, furnaces and other thermal systems.	
			C422.4	Explain energy conservation measures in major utilities.	
			C422.5	Design elements of energy pricing.	
			C423.1	Identify the research problem and efficient tools for designing project modules thorough literature survey.	
	Project	19A02803	C423.2	Develop executable project modules after considering the requirements specified in the design phase.	
3			C423.3	Demonstrate the completed project work with the project report.	