

SARANATHAN COLLEGE OF ENGINEERING (Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

INDEX

Criterion 2.6.1

Programme: CIVIL			
COURSE NAME	COURSE CODE	NBA CODE	COURSE OUTCOMES (CO) Students will be able to
COMPUTER AIDED BUILDING DRAWING	CE8211	C116	Familiarize with principles of planning, orientation and complete joinery details for paneled and glazed doors and windows.
			Develop plan, elevation and section of buildings with load bearing walls.
			Create various types of plans for buildings with sloped roof and draw their corresponding elevation and section.
			Draw the plan, elevation and sectional view of R.C.C. framed structures with flat roof.
			Propose the drawing of R.C.C. framed structure with sloped roof.
			Draft the various views of Industrial Buildings - North light Roof Truss.
STRENGTH OF	CE8301	C201	Familiarize the concepts of stresses and strains.
MATERIALS			Analyze the principal stresses and principal planes.
			Determine shear force and bending moment in beams and understand concept of theory of simple bending.
		Calculate the deflection of beams by different methods and selection of method for determining slope or deflection.	
			Design of circular shafts and helical springs by applying basic equation of torsion.
			Analyze the pin jointed plane and space trusses.
CONSTRUCTION	CE8311	C207	Acquire knowledge in testing of fine aggregates.
MATERIALS			Obtain knowledge in testing of coarse aggregate.
LABORATORY			Attain knowledge in testing of concrete.
			Gain knowledge in testing of bricks.
			Acquire knowledge in testing of blocks.
			Attain knowledge in the area of testing of construction materials and components of construction elements experimentally.
STRUCTURAL ANALYSIS I	CE6501	C301	Distinguish between static indeterminacy and kinematic indeterminacy.
			Solve and analyze the indeterminate pin jointed frames and indeterminate rigid jointed frames.

			Draw the shear force diagram and bending moment
			diagram for three hinged and two hinged arches.
			Calculate the support moments and reactions of a
			continuous beam by slope deflection method.
			Explain the NEylor's Simplification method.
			Describe Begg's deforemeter.
RAILWAYS AIRPORTS AND	CE6604	C313	Describe about various activities regarding railway planning.
HARBOUR			Explain about the construction and maintenance of railways
			Describe about the various activities regarding airport
			planning.
			Explain about the various design aspects of airports.
			Describe about various activities regarding harbour
			planning.
			Design various civil engineering aspects of harbour.
HOUSING	CE6007	C405	Make use of basic terms of housing, housing laws and
PLANNING AND			control regulations
MANAGEMENT			Identify public, private and non-government
			organizations
			Identify different types of sites
			Design and evaluate projects
			Choose effective materials for construction
			Make use of finance assistance given by government
Programme: CSE			
Programme: CSE COURSE NAME	COURSE CODE	NBA CODE	COURSE OUTCOMES (CO) Students will be able to
Programme: CSE COURSE NAME PROBLEM SOLVING	COURSE CODE GE8151	NBA CODE C105	COURSE OUTCOMES (CO) Students will be able to Develop Algorithmic solutions to simple Computational
Programme: CSE COURSE NAME PROBLEM SOLVING AND PYTHON	COURSE CODE GE8151	NBA CODE C105	COURSE OUTCOMES (CO) Students will be able to Develop Algorithmic solutions to simple Computational Problems
Programme: CSE COURSE NAME PROBLEM SOLVING AND PYTHON PROGRAMMING	COURSE CODE GE8151	NBA CODE C105	COURSE OUTCOMES (CO) Students will be able to Develop Algorithmic solutions to simple Computational Problems Read,write,execute by hand simple python programs
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Programme: CSE COURSE NAME PROBLEM SOLVING AND PYTHON PROGRAMMING DATABASE MANAGEMENT SYSTEMS	COURSE CODE GE8151 CS6302 CS6504	NBA CODE C105 C203 C205	COURSE OUTCOMES (CO) Students will be able toDevelop Algorithmic solutions to simple Computational ProblemsRead,write,execute by hand simple python programsStructure Simple python programs for solving problemsDecompose a python programs into functionsRepresent Compound data using Python lists,tuples and DictionariesRead & Write Data from /to Files in python programsDesign database application using fundamentals of Database Management Systems.Use the relational model and ER diagramsApply concurrency control and recovery mechanisms for practical problemsDesign the Query Processor and Transaction Processor Apply security concepts to databases.Analyze concept of retrieval from webIdentify Software and Hardware Components of Graphics System and Display Techniques.
Programme: CSE COURSE NAME PROBLEM SOLVING AND PYTHON PROGRAMMING DATABASE MANAGEMENT SYSTEMS	COURSE CODE GE8151 CS6302 CS6504	NBA CODE C105	COURSE OUTCOMES (CO) Students will be able toDevelop Algorithmic solutions to simple Computational ProblemsRead,write,execute by hand simple python programsStructure Simple python programs for solving problemsDecompose a python programs into functionsRepresent Compound data using Python lists,tuples and DictionariesRead & Write Data from /to Files in python programsDesign database application using fundamentals of Database Management Systems.Use the relational model and ER diagramsApply concurrency control and recovery mechanisms for practical problemsDesign the Query Processor and Transaction ProcessorApply security concepts to databases.Analyze concept of retrieval from webIdentify Software and Hardware Components of Graphics System and Display Techniques.Draw Two Dimensional Graphics. Apply Two
Programme: CSE COURSE NAME PROBLEM SOLVING AND PYTHON PROGRAMMING DATABASE MANAGEMENT SYSTEMS	COURSE CODE GE8151 CS6302 CS6504	NBA CODE C105	COURSE OUTCOMES (CO) Students will be able toDevelop Algorithmic solutions to simple Computational ProblemsRead,write,execute by hand simple python programsStructure Simple python programs for solving problemsDecompose a python programs into functionsRepresent Compound data using Python lists,tuples and DictionariesRead & Write Data from /to Files in python programsDesign database application using fundamentals of Database Management Systems.Use the relational model and ER diagramsApply concurrency control and recovery mechanisms for practical problemsDesign the Query Processor and Transaction ProcessorApply security concepts to databases.Analyze concept of retrieval from webIdentify Software and Hardware Components of Graphics System and Display Techniques.Draw Two Dimensional Graphics. Apply Two Dimensional Geometric Transformations and Clipping

			Draw Three Dimensional Graphics. Apply Three
			Dimensional Geometric Transformations.
			Apply Three Dimensional Viewing and Clipping
			Apply Illumination and Color Models
			Apply inumination and color Models.
	176604	004.0	Design Animation Sequence.
MOBILE	116601	C310	Explain the basics of mobile Computing
COMPOTING			Describe the functionality of Mobile IP and Transport
			Layer
			systems
			Illustrate the Adhoc networks concepts and its routing
			protocols
			Describe wireless and mobile communications systems
			able to choose an appropriate mobile system .
			Make use of Mobile Operating systems in developing mobile applications
ARTIFICIAL	C\$6659	C313	Learn problem formulation and algorithms like
INTELLIGENCE	000000	0010	BFS.DFS. Hill Climbing and Heuristic functions and solve
			Constraint Satisfaction Problems
			Explain MinMax and Alpha Beta Pruning, Knowledge
			representation and Resolution using Predicate Logic
			Describe Inference, Forward and Backward chaining
			Explain Fuzzy reasoning, Bayesian theory and Dempster
			Shafer theory
			Explain Planning and Machine Learning using Strips and K Strips
			Describe the expert system architecture with any of
			the examples like MYCIN, DART, XCON
GRID AND CLOUD	CS6703	C403	Outline the concept of Grid and Cloud Architectures.
COMPUTING			Illustrate the data intensive grid service models and
			grid computing techniques.
			Demonstrate the concept of virtualization in cloud.
			Experiment with the programming model for globus
			Interpret the badoon framework in the grid and cloud
			environment.
			Illustrate the security models & IAM Practices in the
			cloud computing.
Programme: ECE	1	I	
COURSE NAME	COURSE CODE	NBA CODE	COURSE OUTCOMES (CO) Students will be able to
COMMUNICATIVE	HS8151	C101	Enable the learners to develop their basic
ENGLISH			communication skills in English based on LSRW skills.
			Inculcate the habit of reading and writing leading to
			effective and efficient communication.
			Read articles of general kind in magazines and news
			papers.
			Participate effectively in informal conversations;
1	1	1	incroduce chemselves and their menus and express

NETWORKS			types of networks
			Choose the required functionality at each layer for
			given application
			Identify solution for each functionality at each layer
			Trace the flow of information from one node to
			another node in the network
			Learn the congestion control algorithms
			Learn the various application layer protocols.
SPEECH	EC6007	C405-	Design innovative projects in the area of speech signal
PROCESSING		E31	processing
			Extract various features which describes the
			characteristics of speech signal and compare various
			speech parameters.
			Choose an appropriate statistical speech model for a
			given application.
			Develop a speech recognition system for various
			applications.
			Design various types of speech synthesis systems.
			Analyze the speech signal by applying various digital
			signal processing techniques.
Programme:EEE			
COURSE NAME	COURSE		COURSE OUTCOMES (CO) Students will be able to
			Describe the conventional method of surveying
MECHANICAL	ULUZJI	C114	Eveloin the various building materials used and the
ENGINEERING			components in the building
			Explain the mechanics forces acting on the structures
			and list the types of bridge and dam
			Identify the functions and working of components like
			pumps and turbines that are used in various power
			plants
			Demonstrate the working principles of petrol and
			diesel engine and the functions of boiler
			Explain the usage and working of different components
			of refrigeration and air conditioning cycles
ELECTROMAGNETIC	EE6302	C203	Explain the sources and effects of electromagnetic
THEORY			fields and apply the basic mathematical concepts to
			analyze the vector fields
			Discuss the electric field intensity due to discrete and
			appropriate laws
			Explain the concent of electric notential polarization
			energy density, capacitance for different applications
			Describe the concepts of magnetic fields, magnetic
			materials, magnetization, magnetic torque, inductance,
			energy density and its applications
			Describe and apply Faraday's law, Maxwell's equations
			for electromagnetic field applications and differentiate
			field and circuit theory related applications

			Describe and analyze electromagnetic wave propagation, power in conductor, free-space, dielectric medium and its applications
POWER SYSTEM ANALYSIS	EE6501	C301	Explain the concept of the nature of the modern power system, including the behavior of the constituent components and sub-systems
			Apply load flow analysis to an electrical power network and interpret the results of the analysis
			Analyze the network under balanced fault conditions and interpret the results
			Analyze a network under unbalanced fault conditions and interpret the results
			Describe the concept of transient stability of a single machine/infinite bus system using both analytical and time simulation methods
			Explain the factors which determine transient stability in both single machine and multi-machine systems
POWER ELECTRONICS AND DRIVES	EE6611	C316	Design the triggering circuits for Thyristor and can analyze the static and dynamic switching behavior of power semiconductor devices
LABORATORY			Classify the different configurations of power converters according to the power application
			Analyze the working and characteristics of step up and step down choppers
			Evaluate the performance of IGBT based single phase
			Analyze the working of different configurations three
			phase AC voltage controller with resistive load
			Analyze the simulation results for 1Φ&
			3Φsemiconverter, 1Φ &3Φfullconverter, dc-dc
			Converters, ac voltage controllers for various load condition
PROTECTION AND SWITCHGEAR	EE6702	C402	Interpret the principles of protection schemes for various natures of faults
			Infer the various types of relays to detect the presence of faults, its location and to initiate the action for quick removal of the faults in power systems
			Examine the protection schemes for various electrical apparatus using electromagnetic relays
			Examine and apply the static and numerical relays for power system protection
			Inspect the arc quenching phenomena for fault condition and illustrates various current zero interruption theories
			Summarize, compare and select the types of circuit breakers according to the various occurrences of faults
ELECTRIC ENERGY	EE6801	C409	Interpret the basics of electric traction and their
			Evolution the types of lamps and design the illumination
CONSERVATION			systems for variuous lighting schemes
			Discuss the types of electric heating and welding

			Infer the phenomenon of solar radiation and explain
			the types of solar energy collectors
			Explain the basic principles, components of wind
			energy conversion systems
			Discuss the types of wind turbines and analyze the
			aerodynamic force acting on the blades
Programme: ICE	1	1	
COURSE NAME	COURSE CODE	NBA CODE	COURSE OUTCOMES (CO) Students will be able to
ENGINEERING	MA8251	C110	Eigen values and eigen vectors, diagonalisation of a
MATHEMATICS - II			matrix, Symmetric matrices, Positive definite matrices
			and similar matrices
			a vector point function and related identies
			Evaluation of line, surface and volume integrals using
			Gauss, Stokes and Green's theorems and their
			verification.
			Analytic function, conformal mapping and bilinear transformation
			Solve contour integration using Cauchys Residue theorem
			laplace transform and inverse transform of simple
			functions, properties, various related theorems and
			application to differential equations with constant
			coefficients.
	EE8351	C203	Assess and gain knowledge in various number systems,
CIRCUITS			simplify the logical expressions using Boolean
			Design and analysis of combinational logic circuits
			Design Analyze and evaluate the synchronous circuits
			Design, analyze and evaluate the asynchronous circuits
			Ability to understand the concent of digital simulation
			for development of application oriented logic circuits.
			Development of simple programs using VHDL.
ANALYTICAL	EI6501	C303	Infer various techniques and methods of analysis which
INSTRUMENTS			occur in the various regions of the spectrum.
			Estimate the various methods of analysis of industrial
			gases.
			Estimate the importance of chemical methods of analysis.
			Compute the instrumentation systems and their
			applications to various industries.
			Classify the various chromatography techniques.
			Describe about nuclear magnetic resonance and
			microscopic techniques.
	EI6611	C316	Know the overview of power generation in various
			piants Compute verieve neuronatore lite file a la viene
			Lompute various parameters like flow, level, pressure
			Identify the firing rate demand in newer generation
			nucliury the ming rate demand in power generation

			Know the control of drum level using various
			techniques
			Describes the management of burner
			Outline the control of turbine
LOGIC AND	EI6702	C402	Know about the Programmable Logic Controller (PLC)
			and their programming languages.
CONTROL SYSTEM			Know about the applications of PLC.
			Describe about Computer Controlled Systems.
			Identify the architecture and local control unit of Distributed Control System (DCS).
			Gives the basic knowledge in the interfaces used in DCS.
			Know about the importance and applications of PLC and DCS used in process industries.
COMPUTER CONTROL OF	EI6801	C411	Analyze the discrete time systems in state variable form
PROCESSES			Explain system identification techniques
			Explain direct discrete design techniques
			Discuss and demonstrate multi-loop regulatory control
			Discuss multi variable regulatory control
			Apply computer control to any practical systems
Programme: IT			
COURSE NAME	COURSE CODE	NBA CODE	COURSE OUTCOMES (CO) Students will be able to
ENGINEERING	GE8152	C106	Draw basic geometrical curves using free hand sketch
GRAPHICS			Represent multiple orthographic views of an given object using free hand sketch
GRAPHICS			Represent multiple orthographic views of an given object using free hand sketch Project points, lines and planes in first angle projection by rotating method
GRAPHICS			Represent multiple orthographic views of an given object using free hand sketch Project points, lines and planes in first angle projection by rotating method Project inclined views of any given solids by rotating object method
GRAPHICS			Represent multiple orthographic views of an given object using free hand sketch Project points, lines and planes in first angle projection by rotating method Project inclined views of any given solids by rotating object method Project sectioned view and to develop lateral surface of given solid
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GRAPHICS PROGRAMMING AND DATA	CS6301	C202	Represent multiple orthographic views of an given object using free hand sketchProject points, lines and planes in first angle projection by rotating methodProject inclined views of any given solids by rotating object methodProject sectioned view and to develop lateral surface of given solidSketch isometric and perspective views of given solidDesign problem solution using object oriented techniques
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GRAPHICS PROGRAMMING AND DATA STRUCTURES II WEB	CS6301	C202	Represent multiple orthographic views of an given object using free hand sketchProject points, lines and planes in first angle projection by rotating methodProject inclined views of any given solids by rotating object methodProject sectioned view and to develop lateral surface of given solidSketch isometric and perspective views of given solidDesign problem solution using object oriented techniquesExplain the concepts of data abstraction, encapsulation and inheritanceDescribe the concepts of generic programmingExplain the concepts of C++ appropriatelyExplain the graph algorithmsApply the different data structures to problem solutionsDesign Web pages using HTML/DHTML and style sheets
GRAPHICS PROGRAMMING AND DATA STRUCTURES II WEB PROGRAMMING	CS6301 IT6512	C202	Represent multiple orthographic views of an given object using free hand sketchProject points, lines and planes in first angle projection by rotating methodProject inclined views of any given solids by rotating object methodProject sectioned view and to develop lateral surface of given solidSketch isometric and perspective views of given solidDesign problem solution using object oriented techniquesExplain the concepts of data abstraction, encapsulation and inheritanceDescribe the concepts of generic programmingExplain the graph algorithmsApply the different data structures to problem solutionsDesign Web pages using HTML/DHTML and style sheets Learn the client side scripting.

			Create dynamic web pages using server side scripting.
			Write Client Server applications.
			Write application using C#.
COMPILER DESIGN	CS6660	C313	Learned the design and implement a prototype compiler.
			Develop lexical rules and grammars for a programming language. Use lex tools to create a lexical analyzer
			Implement the parsing techniques Top-down parsing
			for the given programming construct described in Context Free Grammar.
			Implement the parsing techniques Bottom-up parsing for the given programming construct described in
			Context Free Grammar Yacc tools to create a parser.
			Apply different error recovery routines to recover the errors seen at different phases of compilation. Describe
			the concepts of storage administration for different programming environments.
			Applied the various optimization techniques .Using the
			different compiler construction tools for various
	176702	C402	software developments
	116702	C403	
DATA MINING			Compare a various business analysis tools
			Outline the data mining concepts
			compare and summarize the various Association rule mining algorithms
			Describe the classification algorithms
			Explain the clustering techniques
BUSINESS	IT6010	C411E45	Explain about Business Intelligence Architecture,Life
INTELLIGENCE			cycle and Projects
			Explain about various Knowledge Delivery techniques
			Explain about various Efficiency Analysis Methods
			Explain about various Business Intelligence Applications
			Explain about Future trends of Business Intelligence
			Explain about Machine Learning
Programme: MECH			
COURSE NAME	COURSE CODE	NBA CODE	COURSE OUTCOMES (CO) Students will be able to
BASIC ELECTRICAL,	BE8253	C112	Calculate total and branch current, voltage and power
			In a DC circuits for domestic and industrial premises.
ENGINEERING			wiring
			Explain the working principle and operation of DC
			Machines, AC machines and Transformer
			Describe the concept and use of PN diode, BJT, FET and
			Explain the importance of Transducer and their types
			Select annonriate instruments for electrical
			measurement for a specific application

ENGINEERING	ME8391	C202	Infer the fundamentals of thermodynamics such as
THERMODYNAMICS			system, properties, process, state, cycles and
			equilibrium, Zeroth & First law of thermodynamics
			Apply the First law of thermodynamics for various
			processes of mass and energy transfer in open and
			closed systems
			Apply the second law of thermodynamics and entropy
			concepts in calculating the effectiveness of heat
			engines and refrigerators
			Analyze the rankine cycles and its efficiency
			improvement using steam tables and mollier diagrams
			Define the properties of Ideal and real gases and derive
			relations between them
			Make use of Psychrometry charts to study various
			psychrometric processes
COMPUTER AIDED	ME6501	C301	Distinguish between the various parametric modeling
DESIGN			transformations to reflect the engineering
			requirements.
			Explain the various representations of curves and its
			uses.
			Distinguish between the various modeling techniques
			and their applications.
			Describe the uses of shading, colouring models and
			also about the computer animation techniques
			Explain the concept of assembly with interference
			checking, position and orientation to ensure that parts
			will not interfere throughout their complete range of
			motion.
			Distinguish the various CAD standards to transfer
			images, files and graphics.
DESIGN AND	ME6612	C317	Able to understand the concept of initial design,
FABRICATION			modelling, software to be used.
PROJECT			Identify the different machines available in our
			department to fabricate the model.
			Knowledge about the feasible study to convert the
			designed model into a working model.
			Develop a strong base about purchasing the required
			components to fabricate their project.
			Teamwork to fabricate their designed model by using
			the machines available in our department along with
			the guidance of the supervisor and supporting staff.
			Students will be able to measure their own ability and
			performance in demonstrating their fabricated model
	N4EC702	C402	within the supulated time.
	IVIE6702	C402	Develop a simulation model for simple physical
			Systems and explain mechatrolics design process.
			outime appropriate sensors and actuators for an engineering application
			Urite cimple microcentreller programs
			write simple microcontroller programs.
			Interpret linearization of nonlinear systems and
			elements of data acquisition.

			Knowledge on various applications of design of mechatronics systems.
			Able to design mechatronics system with the help of
			Microprocessor, PLC and other electrical and
			Electronics Circuits.
ENGINEERING	MG6863	C410	Apply the appropriate engineering economics analysis
ECONOMICS			method(s) for problem solving: present worth, annual
			cost, rate-of-return, payback, break-even, benefit-cost
			Evaluate the cost effectiveness of individual
			engineering projects using the methods learned and
			draw inferences for the investment decisions.
			Compute the depreciation of an asset using standard
			depreciation techniques to assess its impact on present
			or future value.
			Apply all mathematical approach models covered in
			Solving engineering economics problems
			the private and public sectors. Recognise the limits of
			mathematical models for factors hard to quantify.
			Knowledge Make or Buy decision.
Programme: ME CON		ON SYSTEM	JS J
COURSE NAME	COURSE CODE	NBA CODE	COURSE OUTCOMES (CO) Students will be able to
ADVANCED	CU5191	C102	Explain the antenna fundamental concepts
RADIATION			Design an aperture antenna
SYSTEMS			Design procedure and concepts of antenna arrays
			Design antenna for various applications
			Design a micro strip antenna and understand the basic
			concepts of modern antenna for automobiles.
			Knowledge of modern antenna design
DIGITAL	CU5071	C111PE2	Explain the basic principles of digital communication
			Cain knowledge about receivers for AWGN channel
RECEIVENS			Cain knowledge about receivers for fading channel
			Analyze the concents of sunchronization
			Analyze the concepts of synchronization.
			techniques.
			Analyze and design the equalizers for various
			applications
MILLIMETER WAVE	CU5301	C201	Explain the characteristics and applications of
COMMUNICATIONS		C201	
		0201	millimeter wave communication
		0201	millimeter wave communication Analyze Millimeter devices and circuits
		2201	millimeter wave communication Analyze Millimeter devices and circuits Modulations for millimeter wave communications and its design considerations
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		0201	millimeter wave communication Analyze Millimeter devices and circuits Modulations for millimeter wave communications and its design considerations. Analyze MM WAVE MIMO SYSTEMS Design antenna for Millimeter wave frequencies

COMMUNICATION NETWORK	NC5291	C203PE6	Learn the need and concept of security and Apply number theory in security mechanisms.
SECURITY			Analyze symmetric and asymmetric key cryptography
			Explain authentication methods and digital signature standard
			Learn various protocols used for trusted identity
			Explain security at different layers
			Analyze firewall and S/MIME

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COURSE OUTCOMES FOR THE SUBJECT - LINEAR INTEGRATED CIRCUITS																		
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			C	214.1	4.1 Midlyce the bosic building blocks of linear integrated circuits. 4.2 Design linear and non linear applications of OP AMPS													
			C	214.3	esign appli	ications us	ing analog	multiplier	and PLL						_/_			
			C	214.4	esign ADC a	and DAC usi	ng OP AMPS	Cincuite										
			C	214.5	knalyze spec	ial functi	on ICs	circuits										
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EC8453 - Linear Integrated circuits

Program Educational Objectives (PEOs)

Graduates of Electronics and Communication Engineering will

PEO1: have a strong foundation in the required sciences in order to pursue studies in Electronics and Communication Engineering.

PEO2: have a broad exposure to the students in various topics related to Electronics and Communication Engineering fields, to enable them to excel in their professional career / higher studies.

PEO3: possess **innovative skills** in order to solve the technical problems which will arise in their professional life.

PEO4: have professional and ethical attitude and an ability to visualize the engineering issues in a broader social context.

Program Specific Outcomes (PSOs)

Graduates of Electronics and Communication Engineering will be able to:

PSO1: Comprehend and demonstrate the principles and concepts of Semiconductor theory, Signal Processing & Embedded systems in the fields of Consumer Electronics, Medical Electronics and Defense Electronics.

PSO2: Apply emerging Information and Communication Engineering Techniques to solve real time problems.

Course Outcomes (COs)

C214.1 Analyze the basic building blocks of linear integrated circuits.

C214.2 Design linear and non linear applications of OP - AMPS

C214.3 Design applications using analog multiplier and PLL

C214.4 Design ADC and DAC using OP – AMPS

C214.5 Generate waveforms using OP – AMP Circuits

C214.6 Analyze special function ICs

		Programme Outcomes											PSOs			
CO	5				-	DOC	POT	POS	P09	PO10	PO11	PO12	PSO1	PSO2		
	PO1	PO2	PO3	PO4	P05	P06	10/	100			2	2	2	2		
C214.1	2	2	2	2	2	2	-	-		-	2	2	2	. 2		
C1112	2	2	2	2	2	2	-	-	-	-	1	2				
C214.2			2	2	2	2	-	-	-	-	2	2	2	1 2		
C214.3	2				2	2	-	-	-	-	2	2	2	2		
C214.4	2	2	2	2					-	-	2	2	2	2		
C214.5	2	2	2	2	2	2	-		<u> </u>			2	2	2		
C214.6	2	2	2	2	2	2	-	-	-	-				1		
14.0		2	2	2	2	2	-	-	-	-	2	2	2	2		

Record Note book

Course Outcomes (COs)

	the state of the s
C217.1	Evaluate the circuit parameters, design and construct both Enter
	using OPAMP IC741 and analyze the performance metrics
C217.2	Evaluate the circuit parameters to construct the oscillators and amplitude
	amplifiers IC741 and analyze the performance of the same
C217.3	Evaluate the design parameters of the filters using Opamp IC/41 and performed
	analyzing the frequency response
C217.4	Analyze the principle operation of PLL - construct a frequency multiplier energy
C217.4	and R-2R Ladder Type D- A Converter using Op-amp.
C217.5	Evaluate the design parameters of DC power supply circuits, construct and analyze the
	performance of power supply circuits using LM317 and IC723.
0017.6	Analyze the performance of filters, multivibrators, A/D converters and Analog multipliers
C217.0	using SPICE simulation tool.

CO / PO MAPPING

	PO	PO 12	PSO1	PS02										
	1	2	3	4	5	6	1	δ	9	10	11	14		-
C217.1	3	3	3	3	3	2	-	-	-	-	3	2	2	
C217.2	3	3	3	3	3	2	-	-	-	-	3	2	2	3
C217.3	3	3	3	3	3	2	-	-	-	-	3	2	2	3
C217.4	3	3	3	3	3	2	-	-	-	-	3	2	2	3
C217.5	3	3	3	3	3	2	-	-	-	-	3	2	2	3
C217.6	3	3	3	3	3	2	-	-	-	-	3	2	2	3
Average	3	3	3	3	3	2	-	-	-	-	3	2	2	3

STAFF

HOD /ECE

EC 8462

LINEAR INTEGRATED CIRCUITS LAB

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Coarse Code Po1 Po2 Po3 Po4 Po5 Po6 Po7 Po8 Po9 Po10 Po11 Po12 Ps01 Ps02 Ps03 Ps04 Ps05 Ps06 Ps07 Ps08 Ps09 Ps010 Ps011 Ps012 Ps012 Ps012 Ps012 Ps012 Ps013 Ps013 Ps013 Ps013 Ps013 Ps014 Ps014	Program Educational Objectives (PEOs) In et crasuars of Lectronics and Communication Engineering will PEO1: have a strong Guandation in the required sciences in order to pursue studies in Electronics and Communication Engineering. PEO3: posses innovative skills in order to solve the technical problems which will arise in their professional life. PEO3: have a broad exposure to the students in various topics related to Electronics and communication Engineering. PEO3: posses innovative skills in order to solve the technical problems which will arise in their professional and ethical attitude and an ability to visualize the engineering issues in a broader social context. Program Specific Outcomes (PSOs) PSO1: Comprehend and demonstrate the principles and concepts of Semiconductor theory. Signal Processing & Embedded systems in the fields of Consumer Electronics, Medical Electronics and Defence Electronics. PSO2: Apply emerging Information and Communication Engineering Techniques to solve real time problems. Course Outcomes (COS) AE Evel end \$\overline{2}\$ strips course_, Studante with backled to analyze the performance merging Information and Communication Engineering Techniques to solve real time problems. (217.1] Evaluate the circuit parameters, design and construct both linear applications using Orang (217.2] Defence Electronics of the same (217.3] (217.4] Evaluate the elegis parameters, design and construct and amplifiers using operational amplifiers using operational angle the performance of the same (217.4] Defence the same (217.4] (217.5] Evaluate the elegis parameters, of OS power supply circuits, construct and analyze the performance of power (217.6]
	5.3 2002 2 3.34 1.2.3.2002 2 3.4 14.32002 2 3.4 14.32002 4 6.78	Branch: ECE A Subject: EC84,62 Lincor Date Day Date Date Date Date Date Date Date Date Date Date Date Date Date Date Date Date Date Date 12.12.19 2.31 2.31 2.31 18.12.19 2.31 2.31 2.31 20.12.000 4 6.78 2.31 20.12.000 4 6.78 2.31 20.12.000 4 6.78 2.31 20.12.000 4 6.78 2.31 20.12.000 4 6.78 2.31 20.12.000 4 6.78 2.31 20.12.000 4 6.78 2.31 10.2.2.000 4 6.78 3.4 11.2.2.000 4 6.78 3.4 11.2.2.000 4 6.78 3.4 11.2.2.000 4 6.78 3.4 11.2.2.000 4 6.78 3.4

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