

### Lesson Planning for the semester started w.e.f Jan 2018

Name of Institute : Aravali college of engineering & management Faridabad

Name of teacher with designation : Nitin Kali Raman Assistant Professor

Department : Electronics and communication engineering

Subject : Analog Electronics

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
Jän.18	1	Semiconductor Diode: Review of P-N junction and Characteristics	Introduction	
Jän.18	2	P-N junction as a rectifier, Switching characteristics of Diode		
Jän.18	3	Diode as a circuit element, the load-line concept		
Jän.18	4	Half-wave and full wave rectifiers		
Jän.18	5	Clipping circuits,		
Jän.18	6	Clamping circuits		
Jän.18	7	Filter circuits	Presentation	ASSIGNMENT-1
Jän.18	8	Peak to peak detector and		TEST
Jän.18	9	Voltage multiplier circuits		
Feb.18	10	<b>MOSFET:</b> Review of device structure operation and V-I characteristics		
Feb.18	11	Circuits at DC, MOSFET as Amplifier and switch,		
Feb.18	12	Biasing in MOS amplifier circuits		
Feb.18	13	Small-signal operation and models		
Feb.18	14	Single stage MOS amplifier		
Feb.18	15	MOSFET internal capacitances		ASSIGNMENT-2
Feb.18	16	High frequency model,	Presentation	TEST
Feb.18	17	Frequency response of CS amplifier		
Feb.18	18	<b>BJT:</b> Review of device structure operation and V-I characteristics,		
Feb.18	19	BJT circuits at DC, BJT as amplifier and switch		
Feb.18	20	Biasing in BJT amplifier circuit		
Feb.18	21	Small-signal operation and models, single stage BJT amplifier		
Feb.18	22	BJT internal capacitances ,		ASSIGNMENT-3
Feb.18	23	High frequency model	Presentation	TEST
Feb.18	24	Frequency response of CE amplifier		
Mär.18	25	<b>Operational Amplifier:</b> Inverting and non-inverting configurations		
Mär.18	26	Difference amplifier		
Mär.18	27	Effect of finite open loop gain and bandwidth on circuit performance		
Mär.18	28	Large signal operation of op-amp		
Mär.18	29	<b>Feedback:</b> The general feed back structure,		
Mär.18	30	Properties of negative feed back		
Mär.18	31	The four basic feed back topologies, the series-shunt feedback amplifier	Presentation	
Mär.18	32	The series-series feedback amplifier, and		
Mär.18	33	The shunt-shunt feedback amplifier		
Mär.18	34	Shunt series feedback amplifier		
Mär.18	35	<b>Differential Amplifier:</b> MOS differential pair		ASSIGNMENT-4
Mär.18	36	Small signal operation of the MOS differential pair		TEST
Mär.18	37	BJT differential pair	Presentation	
Mär.18	38	Other non-ideal characteristic of the Differential amplifier (DA), DA with active load		

**Lesson Planning for the semester started w.e.f..15th January 2018**

Name of Institute : Aravali College of Engineering & Management

Name of teacher with designation : Suhani Gambhir, AP

Department : Electronics & Communication Engineering

Subject / Class : Communication Systems / ECE 4th Sem

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
January	1	<b>INTRODUCTION TO COMMUNICATION SYSTEMS</b>		
	2	The essentials of a Communication system, modes and media's of Communication		
	3	Classification of signals and systems		
	4	Fourier Analysis of signals		
	5	Analog Communication , Digital Communication		
	6	Basic concepts of Modulation		
	7	Demodulators, Channels		
	8	Multiplexing & DE- multiplexing		
	9			Assignmnet 1
February	10	<b>AMPLITUDE MODULATION: Introduction</b>		
	11	Generation of AM waves, Demodulation of AM waves		
	12	DSBSC, Generation of DSBSC waves		
	13	Coherent detection of DSBSC waves		
	14	single side band modulation		
	15	generation of SSB waves		
	16	demodulation of SSB waves, Vestigial sideband modulation (VSB).		
	17	ANGLE MODULATION : Basic definitions		
	18	Phase modulation (PM) & frequency modulation(FM)		
	19	Narrow band frequency modulation		
	20	Wideband frequency modulation, generation of FM waves, Demodulation of FM waves		
	21			Test 1
March	23	<b>PULSE ANALOG MODULATION: Sampling theory</b>		
	24	sampling and hold circuits		
	25	Time division (TDM) and frequency division (FDM) multiplexing		
	26	Pulse amplitude modulation (PAM)		
	27	Pulse Time Modulation		
	28	Pulse Digital Modulation : Coding & Decoding techniques		
	29	Elements of pulse code modulation, noise in PCM systems		
	30	Measure of information, channel capacity, channel capacity of a PCM , system, differential pulse code modulation (DPCM),. Delta modulation (DM)		
	31		Presentation	Assignment 2
April	32	<b>Digital Modulation Techniques: ASK, FSK, .</b>		
	33	BPSK, QPSK, M-ary PSK		
	34	PC-PC data Communication		
	35	Introduction to Noise: External noise, Internal noise,		
	36	S/N ratio, noise figure.		
	37			Test 2

### Lesson Planning for the semester started w.e.f..15th January 2018

Name of Institute : Aravali College of Engineering & Management

Name of teacher with designation : Suhani Gambhir, AP

Department : Electronics & Communication Engineering

Subject / Class : Digital Electronics / ECE 4th Sem

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment	
January	1	<b>Section A:</b> Number systems, decimal, octal, binary, hexadecimal and their conversions*, Signed binary numbers, Different gates their explanation			
	2	Universality of NAND and NOR			
	3	Different types of codes - BCD, Excess 3, Gray Code, Error detecting codes - Parity check			
		4	Error correcting codes - Hamming Code		
	5	Kmap upto 4 variables, Implementation with Nor & Nand gates			
	6	K map upto 5 variables, don't care conditions, redundant group concept, pos form			
	7	K map with don't care conditions, Numericals on Kmap			
	8	QMc method, QMc method with don't care condition, POS form		Assignmnet 1	
February	10	<b>Section B:</b> Combinational and sequential circuits, Half and full adders			
	11	Full adder using 2 HA, Half Sub, Full subtractors			
	12	Full Sub using 2 HS, BCD Adder			
	13	Multiplexer basics & Multiplexer tree			
	14	Mux reduction, Demultiplexers			
	15	Encoders and priority encoders			
	16	Decoders and their applications			
	17	Binary multiplier			
	18	4 bit magnitude Comparator			
	19	Implementation of code converters			
	20	Design analysis			
	21			Test 1	
	22	Questions on design analysis			
	March	23	<b>Section C :</b> Basics of sequential circuits & latch and flip flops		
24		Basic SR and D flip flop, Jk and T flip flops			
25		Conversions of flip flops			
26		Registers and their types			
27		Counters and their types			
28		Asynch up, down Counters			
29		Synch Counters up, down			
30		Types of Synch Counters - Ring & Trailed ring		Assignmnet 2	
April		32	<b>Section D :</b> Designing through counters		
		33	Hazards		
	34	Race free state assignments, Reduction of state and flow table			
	35	Programable logic using PALs and PLAs, Circuit with latches and design procedure			
	36		Presentation		
	37	Design with multiplexers, Design at RTL level			

### Lesson Planning for the semester started w.e.f..15th January 2018

Name of Institute : Aravali College of Engineering & Management

Name of teacher with designation : Shweta, AP

Department : Electronics & Communication Engineering

Subject / Class : Electro Magnetic field Theory / ECE 4th Sem

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
January	1	Coordinate System		
	2	Scalar and Vector, Cartesian Coordinate System		
	3	Cylindrical & Spherical Coordinate System		
	4	Conversions from one coordinate system to other		
	5	Conversions from one coordinate system to other contd.....		
	6	Divergence and Curl		
	7	Divergence Theorem		
	8	Stoke's Theorem		Assignmnet 1
February	9	Electrostatic Fields & Coulomb's Law		
	10	Gauss's Law, Electric Dipole and Flux Lines		
	11	Properties of Materials, Convection & Conduction Current		
	12	Polarization, Polarization in Dielectric		
	13	Boundary Conditions		
	14	Poission's Equation		
	15	Laplace's Equation		
	16	Method of Images		
	17		Presentation 1	
March	18	Introduction on Magnetostatics		
	19	Maxwell's Equation		
	20	Maxwell's Equation in Differential and Integral Form		
	21	Ampere's Circuit Law and its application		
	22	Maxwell's equation for static fields, Magnetic Scalar & Vector Potential		
	23	Magnetic forces		
	24	Forces due to magnetic field		
	25	Magnetic moment and Torque		
	26	Magnetic Dipole, Magnetization in materials		
	27	Magnetic boundary conditions		
	28	Magnetic theory		
29		Presentation 2		
April	30	Introduction to Wave propagation		
	31	Transformer and Electromotive forces		
	32	Displacement Current, Maxwell's Equation in Final Form		
	33	Wave propagation i n lossy dielectric		
	34	Plane waves in Losless Dielectric, free space, good conductor		
	35	Poynting Theorem		
	36	Reflection of Plane Wave at Normal Incedence		
	37	Transmission Line Parameters		Test
	38	Transmission Line Equations, Input impedance & SWR		

### Lesson Planning for the semester started w.e.f 16th January 2018

Name of Institute : Aravali College of Engineering and Management

Name of teacher with designation : Deeksha Bhatla, Assistant Professor

Department : Management

Subject / Class : Engineering Economics/ ECE 4th Sem

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
January	1	<b>Section-A</b> Definition of Economics - various definitions, Nature of Economic problem,		
January	2	Production possibility curve Economic laws and their nature.		
January	3	Relation between Science, Engineering, Technology and Economics.		
January	4	Concepts and measurement of utility,		
January	5	Law of Diminishing Marginal Utility		
January	6	Law of equi-marginal utility - its practical application and importance.		
February	7	Law of equi-marginal utility - its practical application and importance.		
February	8	<b>Section-B</b> Meaning of Demand, Individual and Market demand schedule,		
February	9	Law of demand, shape of demand curve,		
February	10	Elasticity of demand, measurement of elasticity of demand,		
February	11	factors affecting elasticity of demand		
February	12	practical importance of elasticity of demand.		Assignment-1
February	13	applications of the concept of elasticity of demand.		
February	14	Meaning of production		
February	15	factors of production;		
February	16	Law of variable proportions		
February	17	Returns to scale,		
February	18	Internal and External economies and diseconomies of scale.		
February	19			TEST-1
March	20	<b>Section-C</b> Various concepts of cost - Fixed cost, variable cost,		
March	21	Average cost, marginal cost,		
March	22	money cost, real cost opportunity cost.		
March	23	Shape of average cost, marginal cost,		
March	24	Total cost in short run and long run.		
March	25	Meaning of Market,		
March	26	Types of Market - Perfect Competition, Monopoly,		
March	27	Oligopoly,		
March	28	Monopolistic Competition (Main features of these markets)		
April	29	<b>Section-D</b> Supply and Law of Supply,		
April	30	Role of Demand & Supply in Price Determination and		Assignment-2
April	31	effect of changes in demand and supply on prices.		
April	32	Nature and characteristics of Indian economy (brief and elementary introduction)		
April	33	Privatization - meaning, merits and demerits.		
April	34	Globalisation of Indian economy - merits and Demerits.		
April	35	Elementary Concepts of VAT,		
April	36	WTO		
April	37			TEST-2

### Lesson Planning for the semester started w.e.f 16th January 2018

Name of Institute : Aravali College of Engineering & Management

Name of teacher with designation : Mr Surender saini( Assistant Professor)

Department : Electronics & Communication Engineering

Subject/Sem : Signal & Systems / 4th sem

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
		<b>SECTION A</b>		
January	1	Signals: Definition, types of signals and their representations	Presentation on various types of signals	Assignment based on Topic Covered
	2	continuous-time/discrete-time, periodic/nonperiodic, even/odd		
	3	energy/power, deterministic/ random		
	4	one-dimensional/multi-dimensional; commonly used signals (in continuous-t		
	5,6	unit impulse, unit step, unit ramp (and their inter-relationships)		
	7	exponential, rectangular pulse, sinusoidal		
	8,9	operations on continuous-time and discretetime signals (including transform		
	10	Numerical problem solutions based on signals analysis		
		<b>SECTION B</b>		
February	11	Fourier Transforms (FT): (i) Definition, conditions of existence of FT	Solutions of various types of numerical problems based on FT and DTFT	Class Test
	12	properties, magnitude and phase spectra		
	13	Some important FT theorems, Parseval's theorem		
	14	Inverse FT, relation between LT and FT		
	15	(ii) Discrete time Fourier transform (DTFT)		
	16	inverse DTFT		
	17	convergence, properties and theorems		
	18	Comparison between continuous time FT and DTFT		
	19	Numerical problem solutions based on Fourier transform and inverse fourier		
		<b>SECTION C</b>		
March	20	Time and frequency domain analysis of systems	Solutions of various types of numerical problems	Sessional-I
	21	Analysis of first order and second order systems		
	22	continuous-time (CT) system analysis using LT		
	23	system functions of CT systems, poles and zeros		
	24	block diagram representations		
	25	discrete-time system functions, block diagram representation		
	26	illustration of the concepts of system bandwidth and rise time through the an		
	27	Numerical problems		
		<b>SECTION D</b>		
April	28	Laplace-Transform (LT) and Z-transform (ZT)	Solutions of various types of numerical problems based on LT and Z-Transform	Sessional-II
	29	(i) One-sided LT of some common signals		
	30	important theorems and properties of LT		
	31	inverse LT, solutions of differential equations using LT		
	32	Bilateral LT		
	33	Regions of convergence (ROC)		
	34	(ii) One sided and Bilateral Z-transforms		
	35	ZT of some common signals		
	36	ROC, Properties and theorems		
	37	solution of difference equations using one-sided ZT		
	38	s- to z-plane mapping		