

**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 : Very Large Scale Integration / ECE 4th Sem

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
January	1	<b>Basic MOS transistor:</b> Enhancement mode & Depletion mode		
	2	Fabrication of NMOS, PMOS		
	3	Fabrication of CMOS technology		
	4	Fabrication of BiCMOS technology		
	5	NMOS transistor current equation		
	6	Current equation of NMOS		
	7	Second order effects		
	8	MOS transistor Model		
	9			Assignmnet 1
February	10	<b>NMOS &amp; CMOS inverter and gates:</b> NMOS inverter		
	11	CMOS inverter		
	12	Determination of pull up/pull down ratios		
	13	Stick diagram		
	14	Stick diagram of different gates		
	15	Lambda based rules		
	16	Super buffers		
	17	BiCMOS		
	18		Presentation	
	19	Steering logic		
20			Test 1	
March	21	<b>Subsystem Design and layout:</b> Combinational circuits		
	22	Structured design of combinational circuits		
	23	Dynamic CMOS, Clocking		
	24	Tally circuits – NAND – NAND		
	25	NOR-NOR, EXOR structure		
	26	Multiplexer structures		
	27	Barrel shifter		
	28			Assignmnet 2
April	29	<b>Design and combinational element:</b> NMOS PLA , Programmable logic devices		
	30	Introduction to FPGA, RTL Design of Combinational circuits		
	31	Operators in VHDL programming		
	32	Packages in VHDL programming, VHDL programming of Sequential circuits- adders, counter		
	33	VHDL programming of flipflops, FSM		
	34	VHDL programming of MUX/DEMUX		
	35	Sub-programs of different circuits		
	36	Test benches		
	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 : Sameer Ansari, AP

Department : Electronics & Communication Engineering

Subject / sem : Microwave & Radar Engg.(EE-302-F) / 6th sem

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
January	1	EMT Basics		
	2	EMT Basics contd...		
	3	Introduction to MICROWAVE		
	4	Transmission Lines		
	5	Propagation of TE mode		
	6	Propagation of TM mode		
	7	Derivation : Rectangular waveguide		
	8	TEM in rectangular waveguide		
	9	Introduction to Circular Waveguide		
	10	Planar Transmission Lines		Assignment 1
February	11	Directional Couplers		
	12	TEES, E-Plane TEE		
	13	H-Plane TEE, Hybrid TEE		
	14	S-Parameters		
	15	Attenuators and Cavity resonators		
	16	Ferrite Devices : Isolator		
	17	Circulators		
	18	Klystron		
	19	Reflex Klystron		
	20	Magnetron		
March	21			Test 1
	22	Varactor Diode, Tunnel Diode		
	23	Schottky Diode		
	24	GUNN Diode		
	25	IMPATT & TRAPATT		
	26	PIN Diodes		
	27	Parametric Amplifiers		
	28	Power Measurement		Assignment 2
April	29	RADAR Introduction		
	30	Block Diagram		
	31	RADAR Frequencies		
	32	Simple form of RADAR Equation		
	33	Prediction of Range		
	34	Pulse Repetition frequencies		
	35	Range Ambiguities	Presentation	
	36	Applications of RADAR		Test 2

### 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/ Sem : MES / 6th sem

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
Jän.18	1	Introduction of Microcontroller	Introduction	
Jän.18	2	Different types of microcontrollers: Embedded microcontrollers, External memory microcontrollers;		
Jän.18	3	Processor Architectures: Harvard V/S Princeton,		
Jän.18	4	CISC V/S RISC	Presentation	
Jän.18	5	Microcontrollers memory types		
Jän.18	6	Microcontrollers features : clocking, i/o pins		ASSIGNMENT-1
Jän.18	7	Interrupts, timers, peripherals.	Presentation	
Jän.18	8			TEST 1
Feb.18	9	MICROCONTROLLER ARCHITECTURE		
Feb.18	10	Introduction to PIC microcontrollers		
Feb.18	11	Architecture and pipelining	Presentation	
Feb.18	12	Program memory considerations		
Feb.18	13	Addressing modes	Presentation	
Feb.18	14	CPU registers		
Feb.18	15	Instruction set	Presentation	ASSIGNMENT-2
Feb.18	16	Simple operations		
Feb.18	17			TEST 2
Feb.18	18	Microcontroller 8051- Architecture		
Feb.18	19	Pin Diagram, I/O Ports	Presentation	
Feb.18	20	Internal RAM and Registers		
Feb.18	21	Interrupts		
Feb.18	22	Addressing Modes	Presentation	
Feb.18	23	Memory Organization and External Addressing		
Feb.18	24	Instruction Set		
Feb.18	25	Assembly Language Programming	Presentation	
Feb.18	26	Real Time Applications of Microcontroller- Interfacing with LCD		
Feb.18	27	ADC, DAC		ASSIGNMENT-3
Feb.18	28	Stepper Motor, Key Board and Sensors	Presentation	TEST
Mär.18	29	Embedded Systems-Introduction		
Mär.18	30	Classification, Processors		
Mär.18	31	Hardware Units, Software Embedded into System	Presentation	
Mär.18	32	Applications and Products of Embedded Systems		
Mär.18	33	Structural Units in Processor		
Mär.18	34	Memory Devices, I/O Devices	Presentation	
Mär.18	35	Buses, Interfacing of Processor Memory and I/O Devices		ASSIGNMENT-4
Mär.18	36	Case Study of an Embedded System for a Smart Card	Presentation	TEST

**Lesson Plan Even semester started w.e.f...15th Jan 2018...**

Name of Institute : Aravali college of engineering & management Faridabad

Name of teacher with designation : Surender Saini( Assistant Professor)

Department : Electronics and communication engineering

Subject/ Sem : Digital System Design / 6th sem

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
January		<b>SECTION A</b>	Through Presentation on Various Topics	Assignment based on Topic Covered
	1	Introduction to VHDL---		
	2	Introduction to Computer Aided Design Tools for Digital Systems		
	3	Hardware Description Languages		
	4	Data Objects, classes and Data Types		
	5	Operators, Logical Operators		
	6	Overloading, Types of Delays		
	7	Entity and Architecture Declaration		
	8	Introduction to behavioral style of modeling		
	9	Introduction to Dataflow and Structural models		
	10			Class Test
February		<b>SECTION B</b>	Simulation of digital circuits	
	11	VHDL Statements		
	12	Assignment Statements,		
	13	Sequential statements and process		
	14	Conditional statements, case statements		
	15	Array and Loops, Resolution		
	16	Functions, package and Libraries		
	17	Concurrent Statements, Subprograms		
	18	Structural Modeling , component Declaration		
	19	Structural Layout and Generics		
March		<b>SECTION C</b>	Practice on VHDL Code	
	20	Combinational and Sequential circuit Design		
	21	VHDL model and simulation of Combinational circuits such as Mux		
	22	De-Mux , Encoders, Decoders		
	23,24	Code convertors, comparators		
	25	Implementation of Boolean function etc		
	26,27	VHDL model and simulation of Sequential circuits such as Shift registers		
	28	Counters		
April		<b>SECTION D</b>	Through Presentation on Various Topics	
	29	Design of Microcomputer and Programmable Devices		
	30	Basic Components of a computer, Specifications,		
	31	Architecture of a simple Microcomputer system,		
	32	Implementation of a simple microcomputer system using VHDL		
	33	Programmable logic devices: ROM, PLAs,		
	34	PALs ,GAL		
	35	PEEL, CPLDs and FPGA		
	36	Design implementation using CPLDs and FPGAs		

**Lesson Plan semester started w.e.f...15TH JAN 2017...**

Name of Institute : Aravali college of engineering & management Faridabad

Name of teacher with designation : Aasha Chauhan( Assistant Professor)

Department : Electronics and communication engineering

Subject/ Sem : Control System(EE-304-F) / 6th sem

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
<b>January</b>		<b>SECTION A</b>		
	1	Introductory Concepts		
	2	System/Plant model, types of models		
	3	Illustrative examples of plants		
	4	Inputs and outputs, controller servomechanism, regulating system		
	5	Illustrative examples of open-loop and feedback control systems		
	6	Effects of feedback on sensitivity (to parameter variations), stability		
	7	External disturbance (noise), overall gain Linear time-invariant (LTI) system, time-varying system, causal system		
	8	State space analysis		
	9	Numericals		Assignment based on Topic Covered
<b>February</b>		<b>SECTION B</b>		Class Test
	10 & 11	Concept of transfer function, relationship between transfer function and impulse response.		
	12	Block diagram algebra		
	13	Numericals on block diagram		
	14	Signal flow graphs : Mason's gain formula	Through Numerical Practice on Various Topics	
	15	Numericals on Mason's gain formula, Characteristic equation		
	16 & 17	Derivation of transfer functions of electrical and electromechanical systems		
		<b>SECTION C</b>		
	18	Root locus concept,		
<b>March</b>	19	Development of root loci for various systems	Through Revision on all Topics	Sessional-I
	20	Numerical practice		
	21	Graph of root locus		
	22	Typical test signals, time response of first order systems to various standard inputs		
	23	Numericals on time response		
	24	Time response of 2nd order system to step input		
	25	Numericals		
	26	Transient response specifications		
	27	Numericals		
	28	Time domain specifications of a general and an under-damped 2nd order system		Assignment-II
	29	Steady state error and error constants		
	30	Numericals on time constant		
<b>April</b>		<b>SECTION D</b>	Through Numerical Practice on Various Topics	Sessional-II
	31	Bode plots		
	32	Polar, Nyquist plot		
	33	Stability, Gain-margin and Phase Margin, relative stability,		
	34	Proportional, integral and derivative controllers, illustrative examples.		
	35	Synchros, AC and DC techo-generators, servomotors		
	36	Stepper motors, & their applications, magnetic amplifier		

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

Name of Institute : Aravali College of Engineering & Management Faridabad

Name of teacher with designation : Ms Seema Rawat (Assistant Professor)

Department : Computer Science Engineering

Subject / Sem : Computer Networking / 6th sem

Month	Class	Topic/Chapter covered	Academic activity	Test/assignment
Jan	1 to 8	Introduction to Computer Networks, Example networks ARPANET, Internet, Private Networks, Network Topologies: Bus-, Star-, Ring-, Hybrid, Tree -, Complete -, Irregular-Topology, Types of Networks : Local Area Networks, Metropolitan Area Networks, Wide Area Networks, Layering architecture of networks, OSI model, Functions of each layer, Services and Protocols of each layer, OSI model, Functions of each layer, Services and Protocols of each layer, Introduction, History of TCP/IP, Layers of TCP/IP, Protocols, Internet Protocol, Transmission Control Protocol, User Datagram Protocol, IP Addressing, IP address classes	Presentation on 2G, 3G and 4G	<ol style="list-style-type: none"> <li>1. What do you mean by Network? What are its types? Briefly describe.</li> <li>2. What do you understand by the term 'Topology'? What are its types? Explain with the help of diagrams. What are its advantage and disadvantage?</li> <li>3. What is OSI reference model? How many layers in it? What are the working &amp; protocols of each layer? Explain.</li> <li>4. What is Connection Oriented and Connectionless Services?</li> <li>5. Differentiate various types of Networks. (LAN, WAN, MAN).</li> </ol>
Feb	9 to 15	IP Addressing, IP address classes, Subnet Addressing, Internet Control Protocols, ARP, RARP, ICMP, Application Layer, Domain Name System, Email – SMTP, POP, IMAP; FTP, NNTP, HTTP, Overview of IP version 6. Introduction to LANs, Features of LANs, Components of LANs, Usage of LANs, LAN Standards, IEEE 802 standards,	Presentation on IP6	Numericals on IP addressing, Short note on email Protocols, Explain Different IEEE 802 Standards
March	16 to 23	, Channel Access Methods, Aloha, CSMA, CSMA/CD, Token Passing, Ethernet, Layer 2 & 3 switching, Fast Ethernet and Gigabit Ethernet, Token Ring, LAN interconnecting devices: Hubs, Switches, Bridges, Routers, Gateways. Wide Area Networks: Introduction of WANs, Routing, Congestion Control, WAN Technologies, Distributed Queue Dual Bus (DQDB), Synchronous Digital Hierarchy (SDH)/ Synchronous Optical Network (SONET), Asynchronous Transfer Mode (ATM),		<ol style="list-style-type: none"> <li>1. What is ALOHA? How it works? How efficiency of ALOHA is measured? How it can be improved?</li> <li>2. Differentiate various types of LAN standards.</li> <li>3. How CSMA/CD improves the performance of CSMA?</li> <li>4. What are components of LAN?</li> <li>5. Differentiate the following LAN Devices i) Hubs ii) Switches iii) Bridge .iv) Router v) Gateway iv) Token bus and Token ring</li> <li>6. What are the features and usage of LAN?</li> <li>7. What is Routing? How (routing) congestion control takes place in Routing? How it works on WAN?</li> <li>8. Explain different types of routing.</li> <li>9. What is ATM? Discuss frame structure with advantage and disadvantage of ATM.</li> </ol>

April	24 to 36	<p>Frame Relay.,Wireless Links.  Introduction to Network Management: Remote Monitoring Techniques: Polling, Traps, Performance Management, Class of Service, Quality of Service, Security management, Firewalls, VLANs, Proxy Servers, Introduction to Network Operating Systems: Client-Server infrastructure, Windows NT/2000.</p>	Presentation on firewalls	<p>8. What is Client Server Infrastructure? How it is different from peer to peer.  9. What do you mean by VLANs?  10. What are popular remote monitoring techniques?  11. Explain features of a network OS (Operating system).  12. Explain the following:  a. Quality of services  b. Remote Monitoring Techniques  c. Firewalls  13. What is the concept of firewall? How they are installed? What extent they are effective as far as security is concerned?  14. How Quality of services is managed in networks?</p>
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