

Lesson Plan

Discipline : ECE
Semester : 8TH
Subject : Embedded System Design

Week	Theory	
	Lecture Day	Topic (including assignment / test)
1 st	1 st	Introduction to Microcontrollers
	2 nd	Embedded microcontrollers
	3 rd	External memory microcontroller
2 nd	1 st	Harvard architecture features in detail
	2 nd	Princeton architecture
	3 rd	CISC architecture
3 rd	1 st	Difference between RISC & CISC
	2 nd	First tutorial sheet; Memory types and difference between EEPROM
	3 rd	Features of microcontroller
4 th	1 st	Basic features ESD
	2 nd	Assignment 1
	3 rd	PIC architecture and pipelining
5 th	1 st	Discussion of tutorial sheet 1
	2 nd	Program Memory: 2K and 4K
	3 rd	Assignment 1
6 th	1 st	Direct and indirect addressing modes
	2 nd	Instruction set of PIC
	3 rd	simple operations of PIC programming
7 th	1 st	Timer0,1,2 and interrupt logic
	2 nd	Timing diagram for read and write operation
	3 rd	Serial port communication and modules
8 th	1 st	I/O port expansion
	2 nd	UART operation
	3 rd	registers and data handling
9 th	1 st	Revision

	2 nd	Memory mapped I/O
	3 rd	Assignment2
10th	1 st	subroutines
	2 nd	loops
	3 rd	Ram Addressing
11th	1 st	Lookup table
	2 nd	Bit addressing
	3 rd	Aircraft demonstration
12th	1 st	ultrasonic distance measurement
	2 nd	Temperature sensor prog.
	3 rd	Buzzer prog.
13th	1 st	LCD interfacing
	2 nd	Keyboard interfacing
	3 rd	ADC types
14th	1 st	DAC types
	2 nd	pressure sensor
	3 rd	Need of indirect addressing mode, registers
15th	1 st	Assignment3
	2 nd	Interfacing of stepper motor
	3 rd	Revision

Lesson Plan

Discipline : ECE
Semester : 8th
Subject : Multimedia Communication

Week	Theory	
	Lecture Day	Topic (Including assignment / test)
1 st	1 st	UNIT-1 Multimedia Communications: Introduction,
	2 nd	Multimedia Networks
	3 rd	Multimedia Networks
2 nd	1 st	Multimedia Applications
	2 nd	Multimedia Applications
	3 rd	Multimedia Information Representation: Introduction
3 rd	1 st	Digitization Principles
	2 nd	Representation of Text
	3 rd	Representation of Images
4 th	1 st	Representation of Audio
	2 nd	Representation of Video
	3 rd	Class Test
5 th	1 st	UNIT-2 Text & Image Compression: Various Compression Principles.
	2 nd	Text Compression: Static Huffmann Coding,
	3 rd	Dynamic Huffman Coding,
6 th	1 st	Arithmetic Coding,
	2 nd	Lempel-Ziv Coding
	3 rd	Image Compression: Graphics Interchange Format, Tagged Image File Format,
7 th	1 st	Class Test
	2 nd	Digitized Document,
	3 rd	Digitized Pictures,
8 th	1 st	JPEG(Introduction)
	2 nd	JPEG(Introduction)
	3 rd	Class Test
9 th	1 st	UNIT-3 Audio Compression: Differential PCM
	2 nd	Adaptive Diffential PCM,
	3 rd	Code excited LPC
10 th	1 st	MPEG Audio Coders
	2 nd	Dolby Audio Coders

	3 rd	Video Compression: Basic Principles
11 th	1 st	Class Test
	2 nd	Basic Principles
	3 rd	Video Compression Standard H.261
12 th	1 st	H.263,
	2 nd	MPEG(Basic Introduction)
	3 rd	Class Test
13 th	1 st	UNIT-4 Internet applications: Domain Name System, Name Structure And Administration
	2 nd	DNS Resource Records
	3 rd	DNS Resource Records
14 th	1 st	Electronic Mail Message Structure
	2 nd	Electronic Mail Message Structure
	3 rd	Content Transfer
15 th	1 st	Basic Concept Of Internet Telephony
	2 nd	World Wide Web
	3 rd	Class Test

Lesson Plan

Discipline : Electronics & Communication Engineering

Semester : 8th

Subject : Microwave Practical

Week	Practical	
	Practical Day	Topic
1 st	1 st	To study Microwave Components
2 nd	2 nd	To study the characteristics of the Reflex Klystron Tube
3 rd	3 rd	To study Magic Tee
4 th	4 th	To study the isolator
5 th	5 th	To study Attenuator
6 th	6 th	To measure the coupling coefficient and directivity of a Directional Coupler
7 th	7 th	To study Insertion Loss
8 th	8 th	Internal Practical Viva-1
9 th	9 th	To study Attenuation
10 th	10 th	To study Circulator
11 th	11 th	To determine the frequency and wavelength of a Microwave
12 th	12 th	To study I-V characteristics of Gunn Diode
13 th	13 th	To measure gain of a waveguide horn antenna
14 th	14 th	To determine reflection coefficient and VSWR
15 th	15 th	Internal Practical Viva-2

Lesson Plan

Discipline : ECE
Semester : 8th
Subject : WMC

Week	Theory	
	Lecture Day	Topic (including assignment / test)
1 st	1 st	Introduction of wireless communication
	2 nd	Unit:3 The Cellular concept
	3 rd	Frequency Reuse, Basic theory of hexagonal cell layout
2 nd	1 st	Numericals
	2 nd	Channel allocation schemes
	3 rd	Handover Analysis
3 rd	1 st	Spectrum efficiency
	2 nd	TEST
	3 rd	Erlang capacity comparison
4 th	1 st	Cellular CDMA
	2 nd	Soft capacity
	3 rd	FDM/TDM
5 th	1 st	Unit: 2 Multiple Access Techniques used in Mobile Wireless Communications : FDMA
	2 nd	Multiple Access Techniques used in Mobile Wireless Communications : TDMA
	3 rd	Multiple Access Techniques used in Mobile Wireless Communications : CDMA
6 th	1 st	Introduction to Spread Spectrum Communication
	2 nd	Digital Modulation for Mobile radio
	3 rd	Digital Modulation for Mobile radio
7 th	1 st	Analysis under fading channel
	2 nd	TEST
	3 rd	Diversity techniques
8 th	1 st	Diversity techniques
	2 nd	Rake demodulator
	3 rd	Revision
9 th	1 st	Unit: 4 Wireless standards-GSM
	2 nd	Wireless standards-GSM

	3 rd	IS-95
10 th	1 st	IS-95
	2 nd	UMTS-IMT-2000
	3 rd	Signaling
11 th	1 st	Call Control, Mobility Management
	2 nd	Location Tracing
	3 rd	TEST
12 th	1 st	Unit:1 Radio Propagation Characteristics
	2 nd	Radio Propagation Characteristics
	3 rd	Models for Path loss
13 th	1 st	Models for Path loss
	2 nd	Numericals on Path Loss
	3 rd	Shadowing & Multipath fading-delay spread
14 th	1 st	Revision of models
	2 nd	Coherence bandwidth, Coherence Time
	3 rd	Doppler Spread
15 th	1 st	Jake's Channel model
	2 nd	TEST

3rd Revision