



Christu Jyothi Institute of Technology & Science
Colombonagar, Yeshwanthapur, Jangaon

Department of Electronics and Communication Engineering

Program Name:	B.Tech ECE	AY	2022-23
Course Name:	EMBEDDED SYSTEM DESIGN	Class/Sem	III/II
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LESSON PLAN

Lect No.	Topic	Teaching Aids	Reference
	UNIT - I		
1.	Introduction	TM1/TM2	T1/R1
2.	Definition of Embedded System	TM1/TM2	T1/R1
3.	Embedded Systems Vs General Computing Systems	TM1/TM2	T1/R1
4.	History of Embedded Systems	TM1/TM2	T1/R1
5.	Classification, Major Application Areas	TM1/TM2	T1/R1
6.	Purpose of Embedded Systems	TM1/TM2	T1/R1
7.	Characteristics and Quality Attributes of Embedded Systems.	TM1/TM2	T1/R1
8.	Revision	TM1/TM2	T1/R1
9.	Revision	TM1/TM2	T1/R1
10.	Revision	TM1/TM2	T1/R1
11.	Slip test	TM1/TM2	T1/R1

	UNIT - II		
12	Core of the Embedded System	TM1/TM2	T1/R1
13	General Purpose and Domain Specific Processors,	TM1/TM2	T1/R1
14	ASICs	TM1/TM2	T1/R1
15	PLDs	TM1/TM2	T1/R1
16	Commercial Off-The-Shelf Components (COTS)	TM1/TM2	T1/R1
17	Memory: ROM, RAM, Memory according to the type of Interface	TM1/TM2	T1/R1
18	Memory Shadowing	TM1/TM2	T1/R1
19	Memory selection for Embedded Systems	TM1/TM2	T1/R1
20	Sensors and Actuators	TM1/TM2	T1/R1
21	Communication Interface	TM1/TM2	T1/R1
22	Onboard and External Communication Interfaces	TM1/TM2	T1/R1
23	Revision	TM1/TM2	T1/R1
24	Revision	TM1/TM2	T1/R1
25	Slip test	TM1/TM2	T1/R1
	UNIT - III		
26	Reset Circuit	TM1/TM2	T1/R1
27	Brown-out Protection Circuit	TM1/TM2	T1/R1
28	Oscillator Unit	TM1/TM2	T1/R1
29	Real Time Clock	TM1/TM2	T1/R1
30	Watchdog Timer	TM1/TM2	T1/R1

31	Embedded Firmware Design Approaches and Development Languages.	TM1/TM2	T1/R1
32	Embedded Firmware Design Approaches and Development Languages.	TM1/TM2	T1/R1
33	Embedded Firmware Design Approaches and Development Languages.	TM1/TM2	T1/R1
34	Revision	TM1/TM2	T1/R1
35	Revision	TM1/TM2	T1/R1
36	Slip test	TM1/TM2	T1/R1
UNIT - IV			
37	RTOS Based Embedded System Design	TM1/TM2	T1/R1
38	Operating System Basics	TM1/TM2	T1/R1
39	Types of Operating Systems	TM1/TM2	T1/R1
40	Tasks	TM1/TM2	T1/R1
41	Process and Threads	TM1/TM2	T1/R1
42	Multiprocessing and Multitasking	TM1/TM2	T1/R1
43	Task Scheduling	TM1/TM2	T1/R1
44	Revision	TM1/TM2	T1/R1
45	Slip test	TM1/TM2	T1/R1
UNIT - V			
46	Shared Memory	TM1/TM2	T1/R1
47	Message Passing	TM1/TM2	T1/R1
48	Remote Procedure Call and Sockets	TM1/TM2	T1/R1
49	Task Communication/Synchronization Issues	TM1/TM2	T1/R1

50	Task Synchronization Techniques	TM1/TM2	T1/R1
51	Device Drivers	TM1/TM2	T1/R1
52	Methods to Choose an RTOS.	TM1/TM2	T1/R1
53	Revision	TM1/TM2	T1/R1
54	Revision	TM1/TM2	T1/R1
55	Slip test	TM1/TM2	T1/R1
		TM1/TM2	T1/R1

TM1:Chalkandtalk	TM2:PPT	TM3:Seminar	TM4:Webinar
TM5: LabDemos	TM6:AudioVisual Aids	TM7:GroupDiscussion	TM8:FieldVisits
TM9:3Dmodels	TM10:Puzzle	TM11:Quiz	TM12: IndustrialVisits
TM13:Case Study	TM14:FlashCards	TM15:Text BookAssignment	TM16:RolePlay
TM17:Surveys	TM18: Open Text BookTest	TM19: Cross WordPuzzles	TM20: Debates
TM21:Individual Projects			

TEXT BOOKS:

REFERENCE BOOKS: