LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (Autonomous)
L.B.REDDY NAGAR, MYLAVARAM-521 230.A.P. INDIA
Affiliated to JNTUK, Kakinada & Approved by AICTE, New Delhi
NAAC Accredited with "A" grade, Accredited by NBA
New Delhi & Certified by ISO 9001:2008
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
http://www.lbrce.ac.in, ecedept4@gmail.com Phone: 08659-222933, Fax: 08659-222931

LESSON PLAN

ACADEMIC YEAR : 2015-16
COURSE : B.Tech., (VIII-Sem.,)- Section A
BRANCH : Electronics and Communication Engineering
SUBJECT : Wireless Sensor Networks (Code: T 342)
FACULTY : Mr.L.SRINIVASA REDDY

S.No.	Tentative Date	Topics to be covered	No. of Classes	Actual Date	Content Delivery Method
UNIT-I : OVERVIEW OF WIRELESS SENSOR NETWORKS					
1.	07/12/15	Introduction of WSN and Syllabus discussion	1		
2.	07/12/15	Unit-1 Introduction	1		
3.	08/12/15	Challenges of WSNs	1		
4.	08/12/15	Characteristic requirements	1		
5.	09/12/15	Required mechanisms	1		
6.	09/12/15	Classification of WSN	1		
7.	10/12/15	Advantages of WSN	1		
8.	10/12/15	Tutorial-1	1		
9.	11/12/15	Pros and Cons of WSN	1		
10.	11/12/15	Differences between mobile and Ad-Hoc networks	1		
11.	14/12/15	Application examples of WSNs	1		
12.	14/12/15	Tutorial-2	1		
13.	15/12/15	Application types of WSN	1		
14.	15/12/15	Enabling technologies of WSN	1		
		Total classes(UNIT-1)	14		
UNIT-II : ARCHITECTURES					
15.	16/12/15	Introduction	1		
16.	16/12/15	Sensor node architecture	1		
17.	17/12/15	Processor, memory, sensor & actuator	1		
18.	17/12/15	Transceiver tasks and characteristics	1		
19.	18/12/15	Energy consumption of sensor node- processor	1		
20.	21/12/15	Energy consumption of transceiver	1		
21.	21/12/15	Energy consumption of memory, sensor & actuator	1		
22.	22/12/15	Operating system & execution environment	1		
23.	22/12/15	Sequential, process based, event based	1		
24.	23/12/15	Tutorial-3	1		
25.	23/12/15	Structure of OS & Dynamic energy and power management	1		
26.	28/12/15	Network architecture	1		
27.	28/12/15	Sensor network scenarios	1		
28.	29/12/15	Optimization goals and figure of merit	1		
29.	29/12/15	Optimization goals and figure of merit	1		
30.	30/12/15	Tutorial-4	1		
31.	30/12/15	Gateway concepts	1		
32.	31/12/15	WSN to Internet, Internet to WSN	1		
		Total Classes(UNIT-II)	18	--	--
UNIT-III : NETWORKING SENSORS					
33.	31/12/15	Physical layer	1		
34.	04/01/16	Transceiver design considerations	1		
35.	04/01/16	MAC protocols for wireless sensor networks	1		
36.	05/01/16	Low duty cycle protocols	1		
37.	05/01/16	**Tutorial-5**	1		

38.	06/01/16	Protocols-Wakeup concepts	1		
39.	06/01/16	S-MAC	1		
40.	07/01/16	The mediation Device protocol	1		
41.	07/01/16	Wakeup Radio concepts	1		
42.	08/01/16	**Tutorial-6**	1		
43.	08/01/16	Address and name management	1		
44.	18/01/16	Assignment of MAC address	1		
45.	18/01/16	Routing protocols	1		
46.	19/01/16	Energy efficient routing	1		
47.	19/01/16	Geographic routing	1		
48.	20/01/16	**Tutorial-7**	1		
		Total Classes(UNIT-III)	16	--	--
UNIT-IV : INFRASTRUCTURE ESTABLISHMENT					
49.	20/01/16	Infrastructure and topology of WSNs	1		
50.	21/01/16	Topology control	1		
51.	21/01/16	Clustering	1		
52.	22/01/16	**Tutorial-8**	1		
53.	22/01/16	Time synchronization	1		
54.	04/02/16	Time synchronization	1		
55.	04/02/16	Localization and positioning	1		
56.	05/02/16	Different aspects of localization	1		
57.	05/02/16	Protocols based on synchronization	1		
58.	08/02/16-09/02/16	Sensor tasking and control	3		
59.	09/02/16	**Tutorial-9**	1		
		Total Classes(UNIT-IV)	14	--	--
UNIT-V : SENSOR NETWORK PLATFORMS AND TOOLS					
60.	10/02/16	Operating systems for wireless sensor networks	1		
61.	10/02/16	Different types operating systems used for WSNs	1		
62.	11/02/16	Sensor node hardware	1		
63.	11/02/16	**Tutorial-10**	1		
64.	12/02/16	Barkeley Motes	1		
65.	12/02/16	Programming challenges	1		
66.	15/02/16	Node level software platforms	1		
67.	15/02/16	**Tutorial-11**	1		
68.	16/02/16	Node level Simulators	1		
69.	16/02/16	Different types of simulators used	1		
70.	17/02/16	Static-centric programming	1		
71.	17/02/16	**Tutorial-12**	1		
		Total Classes(UNIT-V)	12	--	--
TOPICS BEYOND THE SYLLABUS					
72.	18/02/16	Practical deployment of WSNs	1		
73.	18/02/16	Software Concepts-Tiny OS	1		
74.	19/02/16	NS2 installation	2		
		Total Classes(TOPICS BEYOND THE SYLLABUS)	4	--	--
		Total Number of Classes Required to complete the Syllabus	78	--	--
		Total Number of Classes Taken		--	--

DELIVERY METHODS			
DM1	Lecture interspersed with discussions /BB	**DM4**	Assignment/Test
DM2	Tutorial	**DM5**	Demonstration (laboratory, field visit)
DM3	Lecture with a quiz	**DM6**	Presentations/PPT

Signature			
Name			
	Subject Teacher	**Course Coordinator**	**HOD-ECE**

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LESSON PLAN

ACADEMIC YEAR : 2015-16
COURSE : B.Tech., (VIII-Sem.,)- Section B
BRANCH : Electronics and Communication Engineering
SUBJECT : Wireless Sensor Networks (Code: T 342)
FACULTY : Dr. G Srinivasa Rao

S.No.	Tentative Date	Topics to be covered	No. of Classes	Actual Date	Content Delivery Method
UNIT-I : OVERVIEW OF WIRELESS SENSOR NETWORKS					
1.	07/12/15	Introduction of WSN and Syllabus discussion	1		
2.	07/12/15	Unit-1 Introduction	1		
3.	08/12/15	Challenges of WSNs	1		
4.	08/12/15	Characteristic requirements	1		
5.	09/12/15	Required mechanisms	1		
6.	09/12/15	Classification of WSN	1		
7.	10/12/15	Advantages of WSN	1		
8.	10/12/15	Tutorial-1	1		
9.	11/12/15	Pros and Cons of WSN	1		
10.	11/12/15	Differences between mobile and Ad-Hoc networks	1		
11.	14/12/15	Application examples of WSNs	1		
12.	14/12/15	Tutorial-2	1		
13.	15/12/15	Application types of WSN	1		
14.	15/12/15	Enabling technologies of WSN	1		
		Total classes(UNIT-1)	14		
UNIT-II : ARCHITECTURES					
15.	16/12/15	Introduction	1		
16.	16/12/15	Sensor node architecture	1		
17.	17/12/15	Processor, memory, sensor & actuator	1		
18.	17/12/15	Transceiver tasks and characteristics	1		
19.	18/12/15	Energy consumption of sensor node- processor	1		
20.	21/12/15	Energy consumption of transceiver	1		
21.	21/12/15	Energy consumption of memory, sensor & actuator	1		
22.	22/12/15	Operating system & execution environment	1		
23.	22/12/15	Sequential, process based, event based	1		
24.	23/12/15	Tutorial-3	1		
25.	23/12/15	Structure of OS & Dynamic energy and power management	1		
26.	28/12/15	Network architecture	1		
27.	28/12/15	Sensor network scenarios	1		
28.	29/12/15	Optimization goals and figure of merit	1		
29.	29/12/15	Optimization goals and figure of merit	1		
30.	30/12/15	Tutorial-4	1		
31.	30/12/15	Gateway concepts	1		
32.	31/12/15	WSN to Internet, Internet to WSN	1		
		Total Classes(UNIT-II)	18	--	--
UNIT-III : NETWORKING SENSORS					
33.	31/12/15	Physical layer	1		
34.	04/01/16	Transceiver design considerations	1		
35.	04/01/16	MAC protocols for wireless sensor networks	1		
36.	05/01/16	Low duty cycle protocols	1		
37.	05/01/16	**Tutorial-5**	1		

38.	06/01/16	Protocols-Wakeup concepts	1		
39.	06/01/16	S-MAC	1		
40.	07/01/16	The mediation Device protocol	1		
41.	07/01/16	Wakeup Radio concepts	1		
42.	08/01/16	**Tutorial-6**	1		
43.	08/01/16	Address and name management	1		
44.	18/01/16	Assignment of MAC address	1		
45.	18/01/16	Routing protocols	1		
46.	19/01/16	Energy efficient routing	1		
47.	19/01/16	Geographic routing	1		
48.	20/01/16	**Tutorial-7**	1		
		Total Classes(UNIT-III)	16	--	--
UNIT-IV : INFRASTRUCTURE ESTABLISHMENT					
49.	20/01/16	Infrastructure and topology of WSNs	1		
50.	21/01/16	Topology control	1		
51.	21/01/16	Clustering	1		
52.	22/01/16	**Tutorial-8**	1		
53.	22/01/16	Time synchronization	1		
54.	04/02/16	Time synchronization	1		
55.	04/02/16	Localization and positioning	1		
56.	05/02/16	Different aspects of localization	1		
57.	05/02/16	Protocols based on synchronization	1		
58.	08/02/16-09/02/16	Sensor tasking and control	3		
59.	09/02/16	**Tutorial-9**	1		
		Total Classes(UNIT-IV)	14	--	--
UNIT-V : SENSOR NETWORK PLATFORMS AND TOOLS					
60.	10/02/16	Operating systems for wireless sensor networks	1		
61.	10/02/16	Different types operating systems used for WSNs	1		
62.	11/02/16	Sensor node hardware	1		
63.	11/02/16	**Tutorial-10**	1		
64.	12/02/16	Barkeley Motes	1		
65.	12/02/16	Programming challenges	1		
66.	15/02/16	Node level software platforms	1		
67.	15/02/16	**Tutorial-11**	1		
68.	16/02/16	Node level Simulators	1		
69.	16/02/16	Different types of simulators used	1		
70.	17/02/16	Static-centric programming	1		
71.	17/02/16	**Tutorial-12**	1		
		Total Classes(UNIT-V)	12	--	--
TOPICS BEYOND THE SYLLABUS					
72.	18/02/16	Practical deployment of WSNs	1		
73.	18/02/16	Software Concepts-Tiny OS	1		
74.	19/02/16	NS2 installation	2		
		Total Classes(TOPICS BEYOND THE SYLLABUS)	4	--	--
		Total Number of Classes Required to complete the Syllabus	78	--	--
		Total Number of Classes Taken		--	--

DELIVERY METHODS			
DM1	Lecture interspersed with discussions /BB	**DM4**	Assignment/Test
DM2	Tutorial	**DM5**	Demonstration (laboratory, field visit)
DM3	Lecture with a quiz	**DM6**	Presentations/PPT

Signature			
Name			
	Subject Teacher	**Course Coordinator**	**HOD-ECE**

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LESSON PLAN

ACADEMIC YEAR : 2015-16
COURSE : B.Tech., (VIII-Sem.,)- Section C
BRANCH : Electronics and Communication Engineering
SUBJECT : Wireless Sensor Networks (Code: T 342)
FACULTY : Mr.P.Venkat Rao

S.No.	Tentative Date	Topics to be covered	No. of Classes	Actual Date	Content Delivery Method
UNIT-I : OVERVIEW OF WIRELESS SENSOR NETWORKS					
1.	07/12/15	Introduction of WSN and Syllabus discussion	1		
2.	07/12/15	Unit-1 Introduction	1		
3.	08/12/15	Challenges of WSNs	1		
4.	08/12/15	Characteristic requirements	1		
5.	09/12/15	Required mechanisms	1		
6.	09/12/15	Classification of WSN	1		
7.	10/12/15	Advantages of WSN	1		
8.	10/12/15	Tutorial-1	1		
9.	11/12/15	Pros and Cons of WSN	1		
10.	11/12/15	Differences between mobile and Ad-Hoc networks	1		
11.	14/12/15	Application examples of WSNs	1		
12.	14/12/15	Tutorial-2	1		
13.	15/12/15	Application types of WSN	1		
14.	15/12/15	Enabling technologies of WSN	1		
		Total classes(UNIT-1)	14		
UNIT-II : ARCHITECTURES					
15.	16/12/15	Introduction	1		
16.	16/12/15	Sensor node architecture	1		
17.	17/12/15	Processor, memory, sensor & actuator	1		
18.	17/12/15	Transceiver tasks and characteristics	1		
19.	18/12/15	Energy consumption of sensor node- processor	1		
20.	21/12/15	Energy consumption of transceiver	1		
21.	21/12/15	Energy consumption of memory, sensor & actuator	1		
22.	22/12/15	Operating system & execution environment	1		
23.	22/12/15	Sequential, process based, event based	1		
24.	23/12/15	Tutorial-3	1		
25.	23/12/15	Structure of OS & Dynamic energy and power management	1		
26.	28/12/15	Network architecture	1		
27.	28/12/15	Sensor network scenarios	1		
28.	29/12/15	Optimization goals and figure of merit	1		
29.	29/12/15	Optimization goals and figure of merit	1		
30.	30/12/15	Tutorial-4	1		
31.	30/12/15	Gateway concepts	1		
32.	31/12/15	WSN to Internet, Internet to WSN	1		
		Total Classes(UNIT-II)	18	--	--
UNIT-III : NETWORKING SENSORS					
33.	31/12/15	Physical layer	1		
34.	04/01/16	Transceiver design considerations	1		
35.	04/01/16	MAC protocols for wireless sensor networks	1		
36.	05/01/16	Low duty cycle protocols	1		
37.	05/01/16	**Tutorial-5**	1		

38.	06/01/16	Protocols-Wakeup concepts	1		
39.	06/01/16	S-MAC	1		
40.	07/01/16	The mediation Device protocol	1		
41.	07/01/16	Wakeup Radio concepts	1		
42.	08/01/16	**Tutorial-6**	1		
43.	08/01/16	Address and name management	1		
44.	18/01/16	Assignment of MAC address	1		
45.	18/01/16	Routing protocols	1		
46.	19/01/16	Energy efficient routing	1		
47.	19/01/16	Geographic routing	1		
48.	20/01/16	**Tutorial-7**	1		
		Total Classes(UNIT-III)	16	--	--
UNIT-IV : INFRASTRUCTURE ESTABLISHMENT					
49.	20/01/16	Infrastructure and topology of WSNs	1		
50.	21/01/16	Topology control	1		
51.	21/01/16	Clustering	1		
52.	22/01/16	**Tutorial-8**	1		
53.	22/01/16	Time synchronization	1		
54.	04/02/16	Time synchronization	1		
55.	04/02/16	Localization and positioning	1		
56.	05/02/16	Different aspects of localization	1		
57.	05/02/16	Protocols based on synchronization	1		
58.	08/02/16-09/02/16	Sensor tasking and control	3		
59.	09/02/16	**Tutorial-9**	1		
		Total Classes(UNIT-IV)	14	--	--
UNIT-V : SENSOR NETWORK PLATFORMS AND TOOLS					
60.	10/02/16	Operating systems for wireless sensor networks	1		
61.	10/02/16	Different types operating systems used for WSNs	1		
62.	11/02/16	Sensor node hardware	1		
63.	11/02/16	**Tutorial-10**	1		
64.	12/02/16	Barkeley Motes	1		
65.	12/02/16	Programming challenges	1		
66.	15/02/16	Node level software platforms	1		
67.	15/02/16	**Tutorial-11**	1		
68.	16/02/16	Node level Simulators	1		
69.	16/02/16	Different types of simulators used	1		
70.	17/02/16	Static-centric programming	1		
71.	17/02/16	**Tutorial-12**	1		
		Total Classes(UNIT-V)	12	--	--
TOPICS BEYOND THE SYLLABUS					
72.	18/02/16	Practical deployment of WSNs	1		
73.	18/02/16	Software Concepts-Tiny OS	1		
74.	19/02/16	NS2 installation	2		
		Total Classes(TOPICS BEYOND THE SYLLABUS)	4	--	--
		Total Number of Classes Required to complete the Syllabus	78	--	--
		Total Number of Classes Taken		--	--

DELIVERY METHODS			
DM1	Lecture interspersed with discussions /BB	**DM4**	Assignment/Test
DM2	Tutorial	**DM5**	Demonstration (laboratory, field visit)
DM3	Lecture with a quiz	**DM6**	Presentations/PPT

Signature			
Name			
	Subject Teacher	**Course Coordinator**	**HOD-ECE**

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LESSON PLAN

ACADEMIC YEAR : 2015-16
COURSE : B.Tech, (VIII-Sem.,)-Section A
BRANCH : Electronics and Communication Engineering
SUBJECT : **Cellular and Mobile Communications (Code: T 134)**
FACULTY : **CH. V Naga Bhaskar**

S.No.	Tentative Date	Topics to be covered	No. of Classes	Actual Date	Content Delivery Method
UNIT-I : INTRODUCTION TO CELLULAR SYSTEMS					
1.	07-12-15	Introduction	1		
2.	07-12-15	Continuation to introduction	1		
3.	08-12-15	Basic Cellular system	1		
4.	08-12-15	Concept of Analog and Digital Cellular systems	1		
5.	09-12-15	Performance criteria.	1		
6.	09-12-15	uniqueness of mobile radio environment	1		
7.	10-12-15	operation of cellular systems	1		
8.	10-12-15	Hexagonal shaped cells	1		
9.	11-12-15	Concept of frequency Reuse channels	1		
10.	11-12-15	Co-channel Interference Reduction Factor	1		
11.	14-12-15	**Tutorial-1**	1		
12.	14-12-15	desired C/I from a normal case in an Omni directional Antenna system	1		
13.	15-12-15	Consideration of the Components of a Cellular system	1		
14.	15-12-15	Cell splitting.	1		
15.	16-12-15	**Tutorial-2**	1		
		Total Classes(UNIT-I)	15	--	--
UNIT-II : MOBILE RADIO PROPAGATION					
16.	17-12-15	Introduction, Basics of Mobile Radio Propagation	1		
17.	17-12-15	Free space propagation	1		
18.	18-12-15	Link budget design	1		
19.	18-12-15	Propagation models	1		
20.	21-12-15	**Tutorial-3**	1		
21.	22-12-15	Small scale multipath propagation,	1		
22.	22-12-15	Types of small-scale fading	1		
23.	23-12-15	Statistical models for multipath propagation	1		
24.	23-12-15	CELL SITE ANTENNAS AND MOBILE ANTENNAS: Cell site Antenna height	1		
25.	28-12-15	Omni directional antennas	1		
26.	28-12-15	directional antennas for interference reduction	1		
27.	29-12-15	space diversity antennas	1		

28.	29-12-15	**Tutorial-4**	1		
29.	30-12-15	umbrella pattern antennas	1		
30.	30-12-15	Minimum separation of cell site receiving antennas,	1		
31.	31-12-15	Mobile high gain antennas.	1		
32.	31-12-15	Sum and difference patterns	1		
33.	04-01-15	**Tutorial-5**	1		
		Total Classes(UNIT-II)	18	--	--
UNIT-III : INTERFERENCE					
34.	05-01-16	Introduction to Co-Channel Interference	1		
35.	05-01-16	real time Co-Channel interference	1		
36.	06-01-16	Co-Channel interference measurement	1		
37.	06-01-16	Design of Omni directional Antenna system	1		
38.	07-01-16	**Tutorial-6**	1		
39.	08-01-16	Design of directional Antenna system	1		
40.	08-01-16	Antenna parameters and their effects,	1		
41.	18-01-16	diversity receiver,	1		
42.	18-01-16	non-co-channel interference-different types	1		
43.	19-01-16	**Tutorial-7**	1		
		Total Classes(UNIT-III)	10	--	--
UNIT-IV : HANDOFFS AND DROPPED CALLS:					
44.	20-01-16	Types of handoff, handoff invitation	1		
45.	20-01-16	delaying handoff, forced handoff	1		
46.	21-01-16	mobile assigned handoff, Intersystem handoff	1		
47.	21-01-16	dropped call rates and their evaluation	1		
48.	22-01-16	**Tutorial-8**	1		
49.	04-02-16	**FREQUENCY MANAGEMENT AND CHANNEL ASSIGNMENT :** Numbering and grouping	1		
50.	04-02-16	setup access and paging channels	1		
51.	05-02-16	channel assignments to cell sites and mobile units	1		
52.	05-02-16	channel sharing and borrowing	1		
53.	08-02-16	**Tutorial-9**	1		
54.	09-02-16	sectorization, overlaid cells	1		
55.	09-02-16	non fixed channel assignment	1		
56.	10-02-16	cell splitting	1		
57.	10-02-16	**Tutorial-10**	1		
		Total Classes(UNIT-IV)	14	--	--
UNIT-V : DIGITAL CELLULAR SYSTEMS AND MULTIPLE ACCESS TECHNIQUES					
58.	11-02-16	Introduction	1		
59.	11-02-16	Global System for Mobile	1		

60.	12-02-16	Global System for Mobile	1		
61.	12-02-16	Time Division Multiple Access	1		
62.	15-02-16	Time Division Multiple Access	1		
63.	15-02-16	Time Division Multiple Access	1		
64.	16-02-16	**Tutorial-11**	1		
65.	17-02-16	Frequency Division Multiple Access	1		
66.	17-02-16	Frequency Division Multiple Access	1		
67.	18-02-16	Code Division Multiple Access	1		
68.	18-02-16	Code Division Multiple Access	1		
69.	19-02-16	**Tutorial-12**	1		
		Total Classes(UNIT-V)	12	--	--
TOPICS BEYOND THE SYLLABUS					
70.	22-02-16	**3G Systems-**Universal Mobile Telecommunications System;	1		
71.	22-02-16	Wideband CDMA; CDMA 2000.	1		
		Total Classes(TOPICS BEYOND THE SYLLABUS)	2	--	--
		Total Number of Classes Required to complete the Syllabus	71	--	--
		Total Number of Classes Taken		--	--

DELIVERY METHODS			
DM1	Lecture interspersed with discussions /BB	**DM4**	Assignment/Test
DM2	Tutorial	**DM5**	Demonstration (laboratory, field visit)
DM3	Lecture with a quiz	**DM6**	Presentations/PPT

Signature			
Name			
	Subject Teacher	**Course Coordinator**	**HOD**

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (Autonomous)
L.B.REDDY NAGAR, MYLAVARAM-521 230.A.P. INDIA
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
http://www.lbrce.ac.in, ecedept4@gmail.com Phone: 08659-222933, Fax: 08659-222931

LESSON PLAN

ACADEMIC YEAR : 2015-16
COURSE : B.Tech, (VIII-Sem.,)-Section B
BRANCH : Electronics and Communication Engineering
SUBJECT : **Cellular and Mobile Communications (Code: T 134)**
FACULTY : **K.LAKSHMI**

S.No.	Tentative Date	Topics to be covered	No. of Classes	Actual Date	Content Delivery Method
UNIT-I : INTRODUCTION TO CELLULAR SYSTEMS					
1.	07-12-15	Introduction	1		
2.	07-12-15	Continuation to introduction	1		
3.	08-12-15	Basic Cellular system	1		
4.	08-12-15	Concept of Analog and Digital Cellular systems	1		
5.	09-12-15	Performance criteria.	1		
6.	09-12-15	uniqueness of mobile radio environment	1		
7.	10-12-15	operation of cellular systems	1		
8.	10-12-15	Hexagonal shaped cells	1		
9.	11-12-15	Concept of frequency Reuse channels	1		
10.	11-12-15	Co-channel Interference Reduction Factor	1		
11.	14-12-15	**Tutorial-1**	1		
12.	14-12-15	desired C/I from a normal case in an Omni directional Antenna system	1		
13.	15-12-15	Consideration of the Components of a Cellular system	1		
14.	15-12-15	Cell splitting.	1		
15.	16-12-15	**Tutorial-2**	1		
		Total Classes(UNIT-I)	15	--	--
UNIT-II : MOBILE RADIO PROPAGATION					
16.	17-12-15	Introduction, Basics of Mobile Radio Propagation	1		
17.	17-12-15	Free space propagation	1		
18.	18-12-15	Link budget design	1		
19.	18-12-15	Propagation models	1		
20.	21-12-15	**Tutorial-3**	1		
21.	22-12-15	Small scale multipath propagation,	1		
22.	22-12-15	Types of small-scale fading	1		
23.	23-12-15	Statistical models for multipath propagation	1		
24.	23-12-15	CELL SITE ANTENNAS AND MOBILE ANTENNAS: Cell site Antenna height	1		
25.	28-12-15	Omni directional antennas	1		
26.	28-12-15	directional antennas for interference reduction	1		
27.	29-12-15	space diversity antennas	1		
28.	29-12-15	**Tutorial-4**	1		
29.	30-12-15	umbrella pattern antennas	1		
30.	30-12-15	Minimum separation of cell site receiving antennas,	1		

31.	31-12-15	Mobile high gain antennas.	1		
32.	31-12-15	Sum and difference patterns	1		
33.	04-01-15	**Tutorial-5**	1		
		Total Classes(UNIT-II)	18	--	--
UNIT-III : INTERFERENCE					
34.	05-01-16	Introduction to Co-Channel Interference	1		
35.	05-01-16	real time Co-Channel interference	1		
36.	06-01-16	Co-Channel interference measurement	1		
37.	06-01-16	Design of Omni directional Antenna system	1		
38.	07-01-16	**Tutorial-6**	1		
39.	08-01-16	Design of directional Antenna system	1		
40.	08-01-16	Antenna parameters and their effects,	1		
41.	18-01-16	diversity receiver,	1		
42.	18-01-16	non-co-channel interference-different types	1		
43.	19-01-16	**Tutorial-7**	1		
		Total Classes(UNIT-III)	10	--	--
UNIT-IV : HANDOFFS AND DROPPED CALLS:					
44.	20-01-16	Types of handoff, handoff invitation	1		
45.	20-01-16	delaying handoff, forced handoff	1		
46.	21-01-16	mobile assigned handoff, Intersystem handoff	1		
47.	21-01-16	dropped call rates and their evaluation	1		
48.	22-01-16	**Tutorial-8**	1		
49.	04-02-16	**FREQUENCY MANAGEMENT AND CHANNEL ASSIGNMENT :** Numbering and grouping	1		
50.	04-02-16	setup access and paging channels	1		
51.	05-02-16	channel assignments to cell sites and mobile units	1		
52.	05-02-16	channel sharing and borrowing	1		
53.	08-02-16	**Tutorial-9**	1		
54.	09-02-16	sectorization, overlaid cells	1		
55.	09-02-16	non fixed channel assignment	1		
56.	10-02-16	cell splitting	1		
57.	10-02-16	**Tutorial-10**	1		
		Total Classes(UNIT-IV)	14	--	--
UNIT-V : DIGITAL CELLULAR SYSTEMS AND MULTIPLE ACCESS TECHNIQUES					
58.	11-02-16	Introduction	1		
59.	11-02-16	Global System for Mobile	1		
60.	12-02-16	Global System for Mobile	1		
61.	12-02-16	Time Division Multiple Access	1		

62.	15-02-16	Time Division Multiple Access	1		
63.	15-02-16	Time Division Multiple Access	1		
64.	16-02-16	**Tutorial-11**	1		
65.	17-02-16	Frequency Division Multiple Access	1		
66.	17-02-16	Frequency Division Multiple Access	1		
67.	18-02-16	Code Division Multiple Access	1		
68.	18-02-16	Code Division Multiple Access	1		
69.	19-02-16	**Tutorial-12**	1		
		Total Classes(UNIT-V)	12	--	--
TOPICS BEYOND THE SYLLABUS					
70.	22-02-16	**3G Systems-**Universal Mobile Telecommunications System;	1		
71.	22-02-16	Wideband CDMA; CDMA 2000.	1		
		Total Classes(TOPICS BEYOND THE SYLLABUS)	2	--	--
		Total Number of Classes Required to complete the Syllabus	71	--	--
		Total Number of Classes Taken		--	--

DELIVERY METHODS			
DM1	Lecture interspersed with discussions /BB	**DM4**	Assignment/Test
DM2	Tutorial	**DM5**	Demonstration (laboratory, field visit)
DM3	Lecture with a quiz	**DM6**	Presentations/PPT

Signature			
Name			
	Subject Teacher	**Course Coordinator**	**HOD**

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LESSON PLAN

ACADEMIC YEAR : 2015-16
COURSE : B.Tech, (VIII-Sem.,)-Section C
BRANCH : Electronics and Communication Engineering
SUBJECT : **Cellular and Mobile Communications (Code: T 134)**
FACULTY : **Dr. A Narendra Babu**

S.No.	Tentative Date	Topics to be covered	No. of Classes	Actual Date	Content Delivery Method
UNIT-I : INTRODUCTION TO CELLULAR SYSTEMS					
1.	07-12-15	Introduction	1		
2.	07-12-15	Continuation to introduction	1		
3.	08-12-15	Basic Cellular system	1		
4.	08-12-15	Concept of Analog and Digital Cellular systems	1		
5.	09-12-15	Performance criteria.	1		
6.	09-12-15	uniqueness of mobile radio environment	1		
7.	10-12-15	operation of cellular systems	1		
8.	10-12-15	Hexagonal shaped cells	1		
9.	11-12-15	Concept of frequency Reuse channels	1		
10.	11-12-15	Co-channel Interference Reduction Factor	1		
11.	14-12-15	**Tutorial-1**	1		
12.	14-12-15	desired C/I from a normal case in an Omni directional Antenna system	1		
13.	15-12-15	Consideration of the Components of a Cellular system	1		
14.	15-12-15	Cell splitting.	1		
15.	16-12-15	**Tutorial-2**	1		
		Total Classes(UNIT-I)	15	--	--
UNIT-II : MOBILE RADIO PROPAGATION					
16.	17-12-15	Introduction, Basics of Mobile Radio Propagation	1		
17.	17-12-15	Free space propagation	1		
18.	18-12-15	Link budget design	1		
19.	18-12-15	Propagation models	1		
20.	21-12-15	**Tutorial-3**	1		
21.	22-12-15	Small scale multipath propagation,	1		
22.	22-12-15	Types of small-scale fading	1		
23.	23-12-15	Statistical models for multipath propagation	1		
24.	23-12-15	CELL SITE ANTENNAS AND MOBILE ANTENNAS: Cell site Antenna height	1		
25.	28-12-15	Omni directional antennas	1		
26.	28-12-15	directional antennas for interference reduction	1		
27.	29-12-15	space diversity antennas	1		
28.	29-12-15	**Tutorial-4**	1		
29.	30-12-15	umbrella pattern antennas	1		
30.	30-12-15	Minimum separation of cell site receiving antennas,	1		

31.	31-12-15	Mobile high gain antennas.	1		
32.	31-12-15	Sum and difference patterns	1		
33.	04-01-15	**Tutorial-5**	1		
		Total Classes(UNIT-II)	18	--	--
UNIT-III : INTERFERENCE					
34.	05-01-16	Introduction to Co-Channel Interference	1		
35.	05-01-16	real time Co-Channel interference	1		
36.	06-01-16	Co-Channel interference measurement	1		
37.	06-01-16	Design of Omni directional Antenna system	1		
38.	07-01-16	**Tutorial-6**	1		
39.	08-01-16	Design of directional Antenna system	1		
40.	08-01-16	Antenna parameters and their effects,	1		
41.	18-01-16	diversity receiver,	1		
42.	18-01-16	non-co-channel interference-different types	1		
43.	19-01-16	**Tutorial-7**	1		
		Total Classes(UNIT-III)	10	--	--
UNIT-IV : HANDOFFS AND DROPPED CALLS:					
44.	20-01-16	Types of handoff, handoff invitation	1		
45.	20-01-16	delaying handoff, forced handoff	1		
46.	21-01-16	mobile assigned handoff, Intersystem handoff	1		
47.	21-01-16	dropped call rates and their evaluation	1		
48.	22-01-16	**Tutorial-8**	1		
49.	04-02-16	**FREQUENCY MANAGEMENT AND CHANNEL ASSIGNMENT :** Numbering and grouping	1		
50.	04-02-16	setup access and paging channels	1		
51.	05-02-16	channel assignments to cell sites and mobile units	1		
52.	05-02-16	channel sharing and borrowing	1		
53.	08-02-16	**Tutorial-9**	1		
54.	09-02-16	sectorization, overlaid cells	1		
55.	09-02-16	non fixed channel assignment	1		
56.	10-02-16	cell splitting	1		
57.	10-02-16	**Tutorial-10**	1		
		Total Classes(UNIT-IV)	14	--	--
UNIT-V : DIGITAL CELLULAR SYSTEMS AND MULTIPLE ACCESS TECHNIQUES					
58.	11-02-16	Introduction	1		
59.	11-02-16	Global System for Mobile	1		
60.	12-02-16	Global System for Mobile	1		
61.	12-02-16	Time Division Multiple Access	1		

62.	15-02-16	Time Division Multiple Access	1		
63.	15-02-16	Time Division Multiple Access	1		
64.	16-02-16	**Tutorial-11**	1		
65.	17-02-16	Frequency Division Multiple Access	1		
66.	17-02-16	Frequency Division Multiple Access	1		
67.	18-02-16	Code Division Multiple Access	1		
68.	18-02-16	Code Division Multiple Access	1		
69.	19-02-16	**Tutorial-12**	1		
		Total Classes(UNIT-V)	12	--	--
TOPICS BEYOND THE SYLLABUS					
70.	22-02-16	**3G Systems-**Universal Mobile Telecommunications System;	1		
71.	22-02-16	Wideband CDMA; CDMA 2000.	1		
		Total Classes(TOPICS BEYOND THE SYLLABUS)	2	--	--
		Total Number of Classes Required to complete the Syllabus	71	--	--
		Total Number of Classes Taken		--	--

DELIVERY METHODS			
DM1	Lecture interspersed with discussions /BB	**DM4**	Assignment/Test
DM2	Tutorial	**DM5**	Demonstration (laboratory, field visit)
DM3	Lecture with a quiz	**DM6**	Presentations/PPT

Signature			
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	Subject Teacher	**Course Coordinator**	**HOD**

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LESSON PLAN

ACADEMIC YEAR : 2015-16
COURSE : B.Tech., (VIII-Sem.,)- Section A
BRANCH : Electronics and Communication Engineering
SUBJECT : Digital Design Through Verilog (Code: T 160)
FACULTY : Y. AMAR BABU

S.No.	Tentative Date	Topics to be covered	No. of Classes	Actual Date	Content Delivery Method
UNIT-I : INTRODUCTION TO VERILOG					
75.	07-12-15	Verilog as HDL, Levels of Design Description	1		
76.	07-12-15	Concurrency, Simulation and Synthesis, Functional Verification	1		
77.	08-12-15	System Tasks, Programming Language Interface (PLI), Module	1		
78.	08-12-15	Simulation and Synthesis Tools	1		
79.	09-12-15	Test Benches	1		
80.	09-12-15	**Tutorial-1**	1		
81.	10-12-15	LANGUAGE CONSTRUCTS AND CONVENTIONS	1		
82.	10-12-15	Introduction, Keywords, Identifiers, Strings	1		
83.	11-12-15	White Space Characters, Comments, Numbers	1		
84.	11-12-15	Scalars and Vectors, Logic Values, Strengths	1		
85.	14-12-15	Data Types	1		
86.	14-12-15	Parameters, Memory	1		
87.	15-12-15	Operators, System Tasks	1		
88.	15-12-15	**Tutorial-2**	1		
		Total Classes(UNIT-I)	14	--	--
UNIT-II : GATE LEVEL AND BEHAVIORAL MODELING					
89.	16-12-15	Introduction, AND Gate Primitive, Module Structure	1		
90.	16-12-15	Other Gate Primitives, Illustrative Examples, Tri-State Gates, Array of Instances of Primitives	1		
91.	17-12-15	Design of Flip flops with Gate Primitives	1		
92.	17-12-15	Delays, Strengths and Contention Resolution	1		
93.	18-12-15	Net Types, Design of Basic Circuits	1		
94.	18-12-15	**Tutorial-3**	1		

95.	21-12-15	Introduction, Operations and Assignments, Functional Bifurcation , *Initial* Construct, *Always* Construct	1		
96.	21-12-15	Multiple Always ,Examples Assignments with Delays, *Wait* construct	1		
97.	22-12-15	Blocks, Designs at Behavioral Level	1		
98.	22-12-15	Blocking and Non-blocking Assignments	1		
99.	23-12-15	**Tutorial-4**			
100.	23-12-15	The *case* statement, Simulation Flow *if* and *if-else* constructs	1		
101.	28-12-15	*assign-deassign* construct, *repeat* construct	1		
102.	28-12-15	*for* loop, the *disable* construct, *While* loop,	1		
103.	29-12-15	*forever* loop, parallel blocks,			
104.	29-12-15	*force- release* construct, Event			
105.	30-12-15	**Tutorial-5**	1		
		Total Classes(UNIT-II)	17		--
UNIT-III : DATA FLOW AND SWITCH LEVEL MODELING					
106.	30-12-15	Introduction, Continuous Assignment Structures, Delays and Continuous Assignments	1		
107.	31-12-15	Assignment to Vectors	1		
108.	31-12-15	Operators	1		
109.	01-01-16	**Tutorial-6**	1		
110.	01-01-16	Introduction, Basic Transistor Switches,	1		
111.	04-01-16	CMOS Switch, Bi-directional Gates	1		
112.	04-01-16	Time Delays with Switch Primitives	1		
113.	05-01-16	Instantiations with Strengths and Delays	1		
114.	05-01-16	Strength Contention with Trireg Nets, Exercises	1		
115.	06-01-16	**Tutorial-7**	1		
		Total Classes(UNIT-III)	10	--	--
UNIT-IV : SYSTEM TASK, FUNCTIONS, UDPS					
116.	06-01-16	Introduction, Parameters, Path Delays, Module Parameters	1		
117.	07-01-16	System Tasks and Functions	1		
118.	07-01-16	File-Based Tasks and Functions	1		
119.	08-01-16	Compiler Directives, Hierarchical Access, General Observations, Exercises	1		
120.	08-01-16	**Tutorial-8**	1		

121.	18-01-16	Introduction, Function	1		
122.	18-01-16	Tasks	1		
123.	19-01-16	User- Defined Primitives (UDP)	1		
124.	19-01-16	**Tutorial-9**	1		
125.	20-01-16	FSM Design (Moore and Mealy Machines)	1		
126.	20-01-16	FSM Design (Moore and Mealy Machines)	1		
127.	21-01-16	FSM Design (Moore and Mealy Machines)	1		
128.	21-02-16	**Tutorial-10**	1		
		Total Classes(UNIT-IV)	13	--	--
UNIT-V : DIGITAL DESIGN					
129.	22-01-16	State Machine Charts, Derivation of SM Charts	1		
130.	22-01-16	State Machine Charts	1		
131.	25-01-16	Realization of SM Charts	1		
132.	25-01-16	Realization of SM Charts	1		
133.	27-01-16	Implementation of the Dice Game	1		
134.	27-01-16	**Tutorial-11**	1		
135.	28-01-16	Alternative realizations for SM Charts using Microprogramming	1		
136.	28-01-16	Microprogramming	1		
137.	29-01-16	Linked State Machines	1		
138.	29-01-16	Xilinx 3000 Series FPGAs	1		
139.	04-02-16	Designing with FPGAs	1		
140.	04-02-16	Using a One-Hot State Assignment	1		
141.	05-02-16	Altera Complex Programmable Logic Devices (CPLDs)	1		
142.	05-02-16	Altera FLEX 10K Series CPLDs	1		
143.	08-02-16	**Tutorial-12**	1		
		Total Classes(UNIT-V)	15	--	--
TOPICS BEYOND THE SYLLABUS					
144.	08-02-16	Advanced FPGA Architectures	1		
145.	09-02-16	ASIC Design	1		
		Total Classes(TOPICS BEYOND THE SYLLABUS)	2	--	--
		Total Number of Classes Required to complete the Syllabus	71	--	--
		Total Number of Classes Taken		--	--

DELIVERY METHODS			
DM1	Lecture interspersed with discussions /BB	**DM4**	Assignment/Test

DM2	Tutorial	**DM5**	Demonstration (laboratory, field visit)
DM3	Lecture with a quiz	**DM6**	Presentations/PPT

Signature			
Name			
	Subject Teacher	**Course Coordinator**	**HOD**

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LESSON PLAN

ACADEMIC YEAR : 2015-16
COURSE : B.Tech., (VIII-Sem.,)- Section C
BRANCH : Electronics and Communication Engineering
SUBJECT : Digital Design Through Verilog (Code: T 160)
FACULTY : R. HARI KISHAN

S.No.	Tentative Date	Topics to be covered	No. of Classes	Actual Date	Content Delivery Method
UNIT-I : INTRODUCTION TO VERILOG					
146.	07-12-15	Verilog as HDL, Levels of Design Description	1		
147.	07-12-15	Concurrency, Simulation and Synthesis, Functional Verification	1		
148.	08-12-15	System Tasks, Programming Language Interface (PLI), Module	1		
149.	08-12-15	Simulation and Synthesis Tools	1		
150.	09-12-15	Test Benches	1		
151.	09-12-15	**Tutorial-1**	1		
152.	10-12-15	LANGUAGE CONSTRUCTS AND CONVENTIONS	1		
153.	10-12-15	Introduction, Keywords, Identifiers, Strings	1		
154.	11-12-15	White Space Characters, Comments, Numbers	1		
155.	11-12-15	Scalars and Vectors, Logic Values, Strengths	1		
156.	14-12-15	Data Types	1		
157.	14-12-15	Parameters, Memory	1		
158.	15-12-15	Operators, System Tasks	1		
159.	15-12-15	**Tutorial-2**	1		
		Total Classes(UNIT-I)	14	--	--
UNIT-II : GATE LEVEL AND BEHAVIORAL MODELING					
160.	16-12-15	Introduction, AND Gate Primitive, Module Structure	1		
161.	16-12-15	Other Gate Primitives, Illustrative Examples, Tri-State Gates, Array of Instances of Primitives	1		
162.	17-12-15	Design of Flip flops with Gate Primitives	1		
163.	17-12-15	Delays, Strengths and Contention Resolution	1		
164.	18-12-15	Net Types, Design of Basic Circuits	1		

165.	18-12-15	**Tutorial-3**	1		
166.	21-12-15	Introduction, Operations and Assignments, Functional Bifurcation , *Initial* Construct, *Always* Construct	1		
167.	21-12-15	Multiple Always ,Examples Assignments with Delays, *Wait* construct	1		
168.	22-12-15	Blocks, Designs at Behavioral Level	1		
169.	22-12-15	Blocking and Non-blocking Assignments	1		
170.	23-12-15	**Tutorial-4**			
171.	23-12-15	The *case* statement, Simulation Flow *if* and *if-else* constructs	1		
172.	28-12-15	*assign-deassign* construct, *repeat* construct	1		
173.	28-12-15	*for* loop, the *disable* construct, *While* loop,	1		
174.	29-12-15	*forever* loop, parallel blocks,			
175.	29-12-15	*force- release* construct, Event			
176.	30-12-15	**Tutorial-5**	1		
		Total Classes(UNIT-II)	17		--
UNIT-III : DATA FLOW AND SWITCH LEVEL MODELING					
177.	30-12-15	Introduction, Continuous Assignment Structures, Delays and Continuous Assignments	1		
178.	31-12-15	Assignment to Vectors	1		
179.	31-12-15	Operators	1		
180.	01-01-16	**Tutorial-6**	1		
181.	01-01-16	Introduction, Basic Transistor Switches,	1		
182.	04-01-16	CMOS Switch, Bi-directional Gates	1		
183.	04-01-16	Time Delays with Switch Primitives	1		
184.	05-01-16	Instantiations with Strengths and Delays	1		
185.	05-01-16	Strength Contention with Trireg Nets, Exercises	1		
186.	06-01-16	**Tutorial-7**	1		
		Total Classes(UNIT-III)	10	--	--
UNIT-IV : SYSTEM TASK, FUNCTIONS, UDPS					
187.	06-01-16	Introduction, Parameters, Path Delays, Module Parameters	1		
188.	07-01-16	System Tasks and Functions	1		
189.	07-01-16	File-Based Tasks and Functions	1		
190.	08-01-16	Compiler Directives, Hierarchical Access, General Observations, Exercises	1		

191.	08-01-16	**Tutorial-8**	1		
192.	18-01-16	Introduction, Function	1		
193.	18-01-16	Tasks	1		
194.	19-01-16	User- Defined Primitives (UDP)	1		
195.	19-01-16	**Tutorial-9**	1		
196.	20-01-16	FSM Design (Moore and Mealy Machines)	1		
197.	20-01-16	FSM Design (Moore and Mealy Machines)	1		
198.	21-01-16	FSM Design (Moore and Mealy Machines)	1		
199.	21-02-16	**Tutorial-10**	1		
		Total Classes(UNIT-IV)	13	--	--
UNIT-V : DIGITAL DESIGN					
200.	22-01-16	State Machine Charts, Derivation of SM Charts	1		
201.	22-01-16	State Machine Charts	1		
202.	25-01-16	Realization of SM Charts	1		
203.	25-01-16	Realization of SM Charts	1		
204.	27-01-16	Implementation of the Dice Game	1		
205.	27-01-16	**Tutorial-11**	1		
206.	28-01-16	Alternative realizations for SM Charts using Microprogramming	1		
207.	28-01-16	Microprogramming	1		
208.	29-01-16	Linked State Machines	1		
209.	29-01-16	Xilinx 3000 Series FPGAs	1		
210.	04-02-16	Designing with FPGAs	1		
211.	04-02-16	Using a One-Hot State Assignment	1		
212.	05-02-16	Altera Complex Programmable Logic Devices (CPLDs)	1		
213.	05-02-16	Altera FLEX 10K Series CPLDs	1		
214.	08-02-16	**Tutorial-12**	1		
		Total Classes(UNIT-V)	15	--	--
TOPICS BEYOND THE SYLLABUS					
215.	08-02-16	Advanced FPGA Architectures	1		
216.	09-02-16	ASIC Design	1		
		Total Classes(TOPICS BEYOND THE SYLLABUS)	2	--	--
		Total Number of Classes Required to complete the Syllabus	71	--	--
		Total Number of Classes Taken		--	--

DELIVERY METHODS

DM1	Lecture interspersed with discussions /BB	**DM4**	Assignment/Test
DM2	Tutorial	**DM5**	Demonstration (laboratory, field visit)
DM3	Lecture with a quiz	**DM6**	Presentations/PPT

Signature			
Name			
	Subject Teacher	**Course Coordinator**	**HOD**

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (Autonomous)
L.B.REDDY NAGAR, MYLAVARAM-521 230.A.P. INDIA
Affiliated to JNTUK, Kakinada & Approved by AICTE, New Delhi
NAAC Accredited with "A" grade, Accredited by NBA
New Delhi & Certified by ISO 9001:2008
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
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LESSON PLAN

ACADEMIC YEAR : 2015-16
COURSE : B.Tech., (VIII-Sem.,)- Section B
BRANCH : Electronics and Communication Engineering
SUBJECT : Digital Design Through Verilog (Code: T 160)
FACULTY : G.Venkatarao

S.No.	Tentative Date	Topics to be covered	No. of Classes	Actual Date	Content Delivery Method
UNIT-I : INTRODUCTION TO VERILOG					
1.	07-12-15	Verilog as HDL, Levels of Design Description	1		
2.	07-12-15	Concurrency, Simulation and Synthesis, Functional Verification	1		
3.	08-12-15	System Tasks, Programming Language Interface (PLI), Module	1		
4.	08-12-15	Simulation and Synthesis Tools	1		
5.	09-12-15	Test Benches	1		
6.	09-12-15	**Tutorial-1**	1		
7.	10-12-15	LANGUAGE CONSTRUCTS AND CONVENTIONS	1		
8.	10-12-15	Introduction, Keywords, Identifiers, Strings	1		
9.	11-12-15	White Space Characters, Comments, Numbers	1		
10.	11-12-15	Scalars and Vectors, Logic Values, Strengths	1		
11.	14-12-15	Data Types	1		
12.	14-12-15	Parameters, Memory	1		
13.	15-12-15	Operators, System Tasks	1		
14.	15-12-15	**Tutorial-2**	1		
		Total Classes(UNIT-I)	14	--	--
UNIT-II : GATE LEVEL AND BEHAVIORAL MODELING					
15.	16-12-15	Introduction, AND Gate Primitive, Module Structure	1		
16.	16-12-15	Other Gate Primitives, Illustrative Examples, Tri-State Gates, Array of Instances of Primitives	1		
17.	17-12-15	Design of Flip flops with Gate Primitives	1		
18.	17-12-15	Delays, Strengths and Contention Resolution	1		
19.	18-12-15	Net Types, Design of Basic Circuits	1		
20.	18-12-15	**Tutorial-3**	1		

21.	21-12-15	Introduction, Operations and Assignments, Functional Bifurcation , *Initial* Construct, *Always* Construct	1		
22.	21-12-15	Multiple Always ,Examples Assignments with Delays, *Wait* construct	1		
23.	22-12-15	Blocks, Designs at Behavioral Level	1		
24.	22-12-15	Blocking and Non-blocking Assignments	1		
25.	23-12-15	**Tutorial-4**			
26.	23-12-15	The *case* statement, Simulation Flow *if* and *if-else* constructs	1		
27.	28-12-15	*assign-deassign* construct, *repeat* construct	1		
28.	28-12-15	*for* loop, the *disable* construct, *While* loop,	1		
29.	29-12-15	*forever* loop, parallel blocks,			
30.	29-12-15	*force- release* construct, Event			
31.	30-12-15	**Tutorial-5**	1		
		Total Classes(UNIT-II)	17		--
UNIT-III : DATA FLOW AND SWITCH LEVEL MODELING					
32.	30-12-15	Introduction, Continuous Assignment Structures, Delays and Continuous Assignments	1		
33.	31-12-15	Assignment to Vectors	1		
34.	31-12-15	Operators	1		
35.	01-01-16	**Tutorial-6**	1		
36.	01-01-16	Introduction, Basic Transistor Switches,	1		
37.	04-01-16	CMOS Switch, Bi-directional Gates	1		
38.	04-01-16	Time Delays with Switch Primitives	1		
39.	05-01-16	Instantiations with Strengths and Delays	1		
40.	05-01-16	Strength Contention with Trireg Nets, Exercises	1		
41.	06-01-16	**Tutorial-7**	1		
		Total Classes(UNIT-III)	10	--	--
UNIT-IV : SYSTEM TASK, FUNCTIONS, UDPS					
42.	06-01-16	Introduction, Parameters, Path Delays, Module Parameters	1		
43.	07-01-16	System Tasks and Functions	1		
44.	07-01-16	File-Based Tasks and Functions	1		
45.	08-01-16	Compiler Directives, Hierarchical Access, General Observations, Exercises	1		
46.	08-01-16	**Tutorial-8**	1		

47.	18-01-16	Introduction, Function	1		
48.	18-01-16	Tasks	1		
49.	19-01-16	User- Defined Primitives (UDP)	1		
50.	19-01-16	**Tutorial-9**	1		
51.	20-01-16	FSM Design (Moore and Mealy Machines)	1		
52.	20-01-16	FSM Design (Moore and Mealy Machines)	1		
53.	21-01-16	FSM Design (Moore and Mealy Machines)	1		
54.	21-02-16	**Tutorial-10**	1		
		Total Classes(UNIT-IV)	13	--	--
UNIT-V : DIGITAL DESIGN					
55.	22-01-16	State Machine Charts, Derivation of SM Charts	1		
56.	22-01-16	State Machine Charts	1		
57.	25-01-16	Realization of SM Charts	1		
58.	25-01-16	Realization of SM Charts	1		
59.	27-01-16	Implementation of the Dice Game	1		
60.	27-01-16	**Tutorial-11**	1		
61.	28-01-16	Alternative realizations for SM Charts using Microprogramming	1		
62.	28-01-16	Microprogramming	1		
63.	29-01-16	Linked State Machines	1		
64.	29-01-16	Xilinx 3000 Series FPGAs	1		
65.	04-02-16	Designing with FPGAs	1		
66.	04-02-16	Using a One-Hot State Assignment	1		
67.	05-02-16	Altera Complex Programmable Logic Devices (CPLDs)	1		
68.	05-02-16	Altera FLEX 10K Series CPLDs	1		
69.	08-02-16	**Tutorial-12**	1		
		Total Classes(UNIT-V)	15	--	--
TOPICS BEYOND THE SYLLABUS					
70.	08-02-16	Advanced FPGA Architectures	1		
71.	09-02-16	ASIC Design	1		
		Total Classes(TOPICS BEYOND THE SYLLABUS)	2	--	--
		Total Number of Classes Required to complete the Syllabus	71	--	--
		Total Number of Classes Taken		--	--

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DM1	Lecture interspersed with discussions /BB	**DM4**	Assignment/Test

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