

LESSON PLAN

Wireless cellular 4G LTE Broadband 17EC81 - A2B

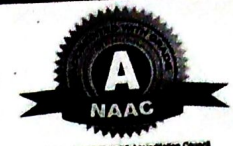
Period	Planned Date	Topic Planned	Actual Date	Topic covered	Remarks
1	19.04.21	Key Enablers for LTE features	19-4-21	Key enable for LTE	
2	20.04.21	OFDM, Single carrier FDMA	20-4-21	OFDM, SC FDMA	
3	20.04.21	Single carrier FDE, Channel Dependent Multiuser Resource Scheduling	20-4-21	SCFDE	
4	21.04.21	Multi antenna Techniques, IP based Flat network	21-04-21	Multi antenna technique	
5	26.04.21	LTE Network Architecture	26-04-21	LTE NA	
6	26.04.21	Wireless Fundamentals: Cellular concept	27-04-21	Wireless Fundamentals	
7	27-04-21	Broadband wireless channel (BWC)	27-04-21	BWC	
8	27-04-21	Fading in BWC	27-04-21	Fading	
9	28-04-21	Modelling BWC – Empirical and Statistical models	28-04-21	Modelling BWC	
10	03-05-21	Mitigation of Narrow band and Broadband Fading	03-5-21	Mitigation of narrow band & Broad band	
At the end of this topic students able to basics of LTE standardization					
11	04-05-21	Multicarrier Modulation: OFDM basics, OFDM in LTE	04-05-21	Multi carrier modulation OFDM in LTE	
12	04-05-21	Timing and Frequency Synchronization	04-05-21	Timing & frequency synchronization	
13	05-05-21	PAR and analysis, SC-FDE	05-05-21	PAR & analysis	
14	10-05-21	OFDMA and SC-FDMA: OFDM with FDMA, TDMA, CDMA	10-05-21	OFDMA & SCFDMA	
15	11-05-21	OFDMA, SC-FDMA	11-05-21	OFDMA, SC-FDMA	
16	11-05-21	OFDMA and SC-FDMA in LTE	11-05-21	SCFDMA LTE	
17	12-05-21	Multiple Antenna Transmission and Reception: Spatial Diversity overview, Receive Diversity, Transmit Diversity	12-05-21	Spatial diversity Transmit diversity	
18	17-05-21	Interference cancellation and signal enhancement	17-05-21	Interference cancellation	

19	18-05-21	Spatial Multiplexing, Choice between Diversity	18-05-21	Spatial Multiplexing	
20	18-05-21	Interference suppression and Spatial Multiplexing	18-05-21	Interference Suppression	
At the end of this topic students able to LTE modulation techniques and multiplexing					
21	19-05-21	Overview and Channel Structure of LTE: Introduction to LTE	19-05-21	Overview & channel structure of LTE	
22	24-05-21	Channel Structure of LTE	24-05-21	channel structure of LTE	
23	24-05-21	Downlink OFDMA Radio Resource	24-05-21	Downlink OFDMA Radio resources	
24	25-05-21	Uplink SC-FDMA Radio Resource	25-05-21	uplink SC-FDMA	
25	25-05-21	Downlink Transport Channel Processing: Overview	25-05-21	Downlink Transport channel Processing	
26	26-05-21	Downlink shared channels	26-05-21	Downlink shared channel	
27	31-05-21	Downlink Control Channels, Broadcast channels,	31-05-21	Downlink control channel	
28	01-06-21	Multicast channels	01-06-21	multicast channels	
29	01-06-21	Downlink physical channels	01-06-21	Downlink physical channel	
30	02-06-21	H-ARQ on Downlink	02-06-21	H-ARQ on downlink	
At the end of this topic students able to understand the LTE channel and processing					
31	07-06-21	Uplink Channel Transport Processing: Overview	07-06-21	uplink channel Transport Processing	
32	08-06-21	Uplink shared channels, Uplink Control Information	08-06-21	uplink shared channel	
33	08-06-21	Uplink Reference signals, Random Access Channels	08-06-21	uplink Reference signal	
34	09-06-21	H-ARQ on uplink Physical Layer Procedures	09-06-21	H-ARQ on uplink	
35	14-06-21	Hybrid - ARQ procedures, Channel Quality Indicator CQI	14-06-21	Hybrid-ARQ procedure	
36	15-06-21	feedback, Precoder for closed loop MIMO Operations	15-06-21	Feedback precoder	
37	15-06-21	Uplink channel sounding	15-06-21	uplink channel sounding	
38	16-06-21	Buffer status Reporting in uplink	16-06-21	Buffer status reporting	
39	21-06-21	Scheduling and Resource Allocation, Cell Search	21-06-21	Scheduling & Resource	
40	22-06-21	Random Access Procedures, Power Control in uplink	22-06-21	Random Access Procedures	
At the end of this topic students able to understand the uplink channel processing and physical layer					



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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR: 2020-21 EVEN Semester

procedures					
41	22-06-21	Radio Resource Management and Mobility Management:	22-06-21	Radio Resource management	
42	23-06-21	PDCP overview	23-06-21	PDCP overview	
43	28-06-21	MAC/RLC overview	28-06-21	MAC/RLC overview	
44	29-06-21	RRC overview	29-06-21	RRC overview	
45	29-06-21	Mobility Management	29-06-21	Mobility management	
46	30-06-21	Inter-cell Interference Coordination	30-06-21	Mobility management	
47	05-07-21	Revision of previous question paper	5-7-21		
49	06-07-21	Revision of previous question paper			
50	06-07-21	Revision of previous question paper			
51	07-07-21	Revision of previous question paper			
At the end of this topic students able to manage the resources and then be prepared to face the forthcoming challenges					