

Name of the Faculty : SH.ATUL KUMAR
 Discipline : Electronics and Communication Engg.
 Semester : VIth
 Subject : WIRELESS AND MOBILE COMMUNICATION
 Lesson Plan Duration : March-June 2023
 Work Load (Lecture/ Practical) per week (in hours): 03 HOURS (Lecture)

Week	Theory		Practical
	Lecture Day	Topic (including assignment/ test)	Topic
1 st	1	Basics of wireless communication, Advantages of wireless communication	Study the features of cellular mobile
	2	Electromagnetic waves, Frequency spectrum used, Cellular Network Systems.	
	3	Propagation considerations such as Range, Atmospheric Effect, Geographic Effect, Fading, Doppler Effect, Multipath Effect	
2 nd	4	Revision of unit 1	Study the specification of cellular mobile
	5	Cellular Concept: Introduction to 1G 2G 3G 4G	
	6	Cell area, Cell Site Structure	
3 rd	7	Capacity of cell	Study the working of cellular mobile
	8	Frequency Reuse (Concept), Interference (Co-channel, Adjacent channel)	
	9	Power Control for reducing Interference	
4 th	10	Fundamentals of cellular network planning a) Coverage planning b) Capacity planning c) Cell splitting and sectoring	Viva of Performed Practicals
	11	Revision of Unit 2	
	12	Multiple Access Techniques for Wireless Communication: Introduction to Multiple Access	
5 th	13	Frequency Division Multiple Access (FDMA)	To study the cell processing using CDMA trainer kit
	14	Time Division Multiple Access (TDMA)	
	15	1 st Sessional Test	
6 th	16	Distinction between TDMA FDD and TDMA TDD	Observing call processing of GSM trainer kit.
	17	Code Division Multiple Access (CDMA)	
	18	WCDMA	
7 th	19	Revision of Unit 3	Demonstration of Base Trans Receiver(BTS) with nearby cellular tower.
	20	Mobile Communication Systems: Introduction of Global Systems for Mobile Communication (GSM) and its architecture	
	21	Introduction of CDMA System	
8 th	22	Introduction of GPRS	Viva of Performed

	23	Introduction to EDGE	Practicals
	24	Introduction to Bluetooth	
9th	25	Introduction to Wi-fi	Demonstration of data transfer using Bluetooth.
	26	Revision of unit 4	
	27	2nd Sessional Test	
10th	28	Introduction to 3G & 4G:	To set up a Wi-fi network
	29	Introduction to Architecture and Features of UMTS	
	30	HSPA (High Speed Packet Access)	
11th	31	Architecture of LTE (Long Term Evolution) * Assignment Topic	Viva of Performed Practicals
	32	Features of LTE (Long Term Evolution)	
	33	Revision of unit 5	
12th	34	Troubleshooting GSM Mobile Phone	To study faults on a GSM mobile trainer
	35	Assembling of GSM phone	
	36	Disassembling of GSM phone	
13th	37	Study parts of mobile phone	Visit to Mobile Switching Centre
	38	Testing of various parts of mobile phone	
	39	Study features of cellular mobile	
14th	40	Study specifications of cellular mobile	Viva of Performed Practicals
	41	Study the working of cellular mobile	
	42	Cold testing method of fault finding of cellular mobile	
15th	43	Hot testing method of fault finding of cellular mobile	Final Internal Viva of all Practical
	44	Revision of unit 6	
	45	3rd Sessional Test	