

Government Polytechnic Sundernagar

Lesson Plan for the Session Jan,2024-June,2024

Subject Name : Programme Elective – II (Wireless Communication)				Semester: 4th Computer	Subject Teacher: Himani Vaidya
Sr no	Month	Week	Date	Name of Chapter	Contents to be taught
1	Feberary	3	12th ,13th, 14th	Unit 1: Introduction to Wireless Communication	Wireless communication and its applications, advantages and disadvantages of wireless communication, Types of Services: broadcast, paging, cellular telephony, trunking radio, cordless telephony, WLAN, PAN, adhoc & sensor networks, fixed wireless access; challenges in wireless communication.
2		4	19th, 20th, 21st		
3		3	26th, 27th, 28th		
5	March	1	4th, 5th, 6th,	Unit 2: Electromagnetic Spectrum	Electromagnetic spectrum, licensed/unlicensed spectrum bands, ISM band, terrestrial and satellite microwave communication, broadcast radio, infrared and light wave communication, wireless transmission impairments – attenuation, distortion, noise, interference, path loss, shadowing and fading. (1st Class Test)
6		2	11th, 12th, 13th,		
7		3	18th, 19th, 20th,		
8		4	26th, 27th		Concept of bandwidth, analog and digital signals, data rate, signal strength, SNR, RSSI, electromagnetic wave propagation: ground waves, sky waves and line-

10	April	1	1st, 2nd, 3rd,	Unit 3: Fundamentals of Wireless Communication	wave propagation: ground waves, sky waves and line-of-sight propagation; radio waves, microwaves, infrared; Overview of Propagation Mechanisms: reflection, diffraction and scattering; outdoor and indoor propagation.
11		2	8th, 9th, 10th,		
12		3	16th		
13		4	22nd, 23rd , 24th	Unit 4: Cellular Architecture	Cellular Communication: cellular concept, cellular system architecture, cells, clusters, frequency reuse, cell splitting, handoff, Digital Cellular System: TDMA, ETDM, PCS, CDMA, Global System for Mobile Communication (GSM), GSM network: switching system, BSS, operation and support system, Generations of cellular networks and their features (1G – 5G). (2nd Class Test)
14		5	29th, 30th		
15	May	1	6th , 7th, 8th	Unit 5: Wireless LAN Technology and Bluetooth	Wireless LAN (WLAN), IEEE-802.11, WLAN applications, WLAN types, WLAN problems – hidden station and exposed station problems; Bluetooth technology, Direct Sequence Spectrum Scheme, Frequency Hopping Spread Spectrum, Personal Area Networks. (House Test)
16		2	13th, 14th, 15th		
17		3	20th, 21st , 22nd	Unit 5: Wireless LAN Technology and Bluetooth	Wireless LAN (WLAN), IEEE-802.11, WLAN applications, WLAN types, WLAN problems – hidden station and exposed station problems; Bluetooth technology, Direct Sequence Spectrum Scheme, Frequency Hopping Spread Spectrum, Personal Area Networks. (House Test)
18		4	27th, 28th, 29th,		

Subject Teacher