Government Polytechnic Sundernagar					
Lesson Plan for the Session Jan,2025-June,2025					
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	**January**	**5**	28th, 29th, 30th	**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	**& Feberary**	**1**	4th, 5th, 6th,		
3		**2**	11th, 13th,		
4		**3**	18th, 19th, 20th,	**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.
5		**4**	25th, 27th		
6	**ch**	**1**	4th, 5th, 6th,		
7		**2**	11th, 12th, 13th,		Concept of bandwidth, analog and digital signals, data rate, signal strength, SNR, RSSI, electromagnetic wave propagation: ground waves

8	**Mar**	**3**	18th, 19th, 20th,	**Unit 3: Fundamentals of Wireless Communication**	electromagnetic 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.(1st Class Test)
9		**4**	25th ,26th, 27th		
10	**April**	**1**	1st, 2nd, 3rd,		
11		**2**	8th, 9th, 10th,	**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)
12		**3**	16th,17th		
13		**4**	22nd, 23rd , 24th		
14		**5**	30th		
15	**May**	**1**	1st ,6th , 7th, 8th		
16		**2**	13th, 14th, 15th	**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)
17		**3**	20th, 21st , 22nd		
18		**4**	27th, 28th		

Himani Vaidya
Subject Teacher