13-EC525 **WIRELESS COMMUNICATION SIGNAL PROCESSING**

SYLLABUS

Linear Diversity Techniques for Fading Channels System and Fading Channels Models: Transmission with out Diversity, Spectral Diversity, Temporal Diversity, spatial Diversity, Diversity methods for multiuser system
Adaptive Interference Suppression: Multiple Access Signal Model, Elements of multiuser detection, Linear interference suppression, Application to DS-CDMA, Adaptive algorithms **Equalization of Multiuser Channels:** Characterization of wireless channels, equalization of known multipath fading, Blind equalization in multipath slowly time varying channel **Blind Space Time Signal Processing** : The wireless propagation environment, signal model and structure, channel identification & equalization, Blind techniques **Network Capacity, Power control & effective Bandwidth**: Basic spread spectrum model & the MMSE Receiver, performance under random spreading sequences, Capacity and performance under power control, Multiple classes, maximum power constraints, effective Bandwidth
TEXT BOOK
1. H V Poor & G W Wornell, ”Wireless Communication Signal Processing Perspectives”, PHI