



MANIPAL UNIVERSITY JAIPUR

School of Electrical, Electronics & Communication Engineering (SEEC)

Department of Electronics & Communication Engineering
Course Hand-out

Wireless Communication | EC22 01I | 4 Credits | 4 0 0 4

Session: 2014 | Faculty: Dr. Tarun Kumar Dubey Class: II semester M.Tech.

A. Course Outcomes: At the end of the course, students will be able to

[225 I.1] Foster ability to understand various generations of mobile communication and utilize the concept of wireless communication for future wireless technologies and network.

[225 I.2] Demonstrate knowledge about GSM mobile communication standard, comparing 3G mobile standards with other standards

[225 I.3] Interpret the concept of IS-95 CDMA mobile communication standard, with existing and future GSM techniques.

[225 I.4] Develop the concept of multicarrier communication systems for analysis with Wireless LANs and enhancing the employability skills.

Syllabus: This course is offered by Dept. of Electronics and Communication Engineering as a program elective course (PE-I) to provide basic knowledge of mobile communication systems to the second year students of M.Tech. The growth of mobile telephony, broadband and wireless internet has revolutionized the world and created a huge number of career opportunities in the field of Electronics and Communication engineering. This course provides the basic overview of cellular systems (indoor and outdoor), fading models (large scale and small scale) and their impact on the bandwidth of the channel, physical and stochastic modelling of wireless channels, shape factors, various diversity and equalization techniques, probability models for coded and un-coded channels. The course is ideal for the students to gain basics knowledge of mobile cellular telecommunications that will help them to understand well the modern communication techniques.

1. T. S. Rappaport, *Wireless Communications Principles and Practice*, Pearson Education, Asia.
2. K. Feher, *Wireless Digital Communications, Modulation and Spread Spectrum Applications*, Eastern Economy Edition.
3. J. H. Schiller *Mobile Communication*

