MOBILE COMMUNICATION

Paper Code	**CEN-704**
Course Credits	**4**
Lectures / week	**3**
Tutorial / week	**1**
Course Description	**UNIT – I** Introduction to Mobile and cellular Communication systems, Frequencies for radio communication, Basic cellular system, Transmission problems and its solution in cellular system, cellular geometry, components of a cellular Mobile network, cellular communication from 1G to 3G. **UNIT- II** Cellular Geometry, Concept of Frequency re-use channels, Cell splitting, Sectoring and Clustering of a cell, Co-channel interferences and system capacity, Trunking and Grade of services, Microcell zone concept. **UNIT- III** GSM Architecture, Channels used in GSM, Location tracking and call setup, Mobility management, Frame structure for GSM, Handover, Security in GSM, GSM call recording functions, Subscriber and service data Management, GSM network identities, Traffic cases in GSM. **UNIT- IV** CDMA Architecture, Chipset sequence in CDMA, Channels used in CDMA, CDMA system design, capacity of a CDMA system, Next generation cellular technology 4G, 4G Softwares, Advantages of 4G Network technology over 3G, Applications of 4G. **UNIT – V** GPRS Architecture, Benefits of GPRS, GPRS attach and detach procedure, GPRS Traffic cases, Introduction to Wireless Application Protocol WAP, WAP Architecture, Applications of WAP,

Introduction to Mobile IP.

References / Text Books:	• Theodore S. Rappaport, Wireless communications Principles and Practice, Pearson Education. • William C.Y. Lee, Wireless and cellular communications, McGraw Hill publication. • Jochen Schiller, Mobile Communications, Pearson Education 2012. • Vijay K. Garg, Wireless communication and Networking, Elsevier Morgan Kaufmann Publishers. • Mobile Communication Hand Book", 2nd Edition, IEEE Press. 2002
Computer Usage / Software Requires:	XML/ JAVA/ .NET