Course Name: Wireless Networks

Objectives:

Course Outlines: This course covers fundamental techniques in design and operation of first, second, and third generation wireless networks: cellular systems, medium access techniques, radio propagation models, error control techniques, handoff, power control, common air protocols (AMPS, IS-95, IS-136, GSM, GPRS, EDGE, WCDMA, cdma2000, etc), radio resource and network management. As an example for the third generation air interfaces, WCDMA is discussed in detail since it is expected to have a large impact on future wireless networks. This course is intended for graduate students who have some background on computer networks.

Text Books/Reference Books:

1. Theodore S Rappaport, Wireless Communications.
2. David Tse, Fundamentals of Wireless Communications.
3. W. Stallings, "Wireless Communications and Networks", Prentice Hall, 2002.
4. T.S. Rappaport, "Wireless Communications: Principles & Practice", Second Edition, Prentice Hall, 2002.
5. J. Schiller, "Mobile Communications", Addison Wesley, 2000.
6. V.K. Garg, "IS-95 CDMA and cdma 2000", Prentice Hall PTR, 2000.
7. J.P. Castro, "The UMTS Network and Radio Access Technology - Air Interface Techniques for Future Mobile Systems", Wiley, 2001.
8. H. Holma and A. Toskala, "WCDMA for UMTS Radio Access for Third Generation Mobile Communications", John Wiley & Sons, 2001.

Lectures delivered in previous Month:_____ This Month:_____ Total Lectures:_____ Signature of Instructor:_____