

University of Massachusetts Lowell

Electrical and Computer Engineering

**16.618 Performance of Wireless Networks Fall 2005**

Instructor: Prof. K. Chandra  
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References: Digital Communications, J.G. Proakis, McGraw-Hill  
G.L. Stuber, Principles of Mobile Communications, Kluwer Publ.  
Selected publications and Class Notes

Course Web Site: <http://morse.uml.edu/Activities.d/wireless/wireless618.html>

9/5/05	Course Overview; Review of Probability and Random Processes ( <i>HW I</i> )
9/12/05	Overview of wireless system technologies Introduction to radio wave propagation fundamentals
9/19/05	Propagation models: Fading characterization ( <i>HW II</i> )
9/26/05	Simulation of Fading Channels ( <i>Take Home EXAM I</i> )
10/03/05	Modulation Schemes and Bit Error Rate Calculations ( <i>Home Work III</i> )
10/10/05	Modulation Contd. : Power Considerations
10/17/05	Transmission on Flat Fading Channels
10/24/05	Transmission on Frequency Selective Channels ( <i>Home Work IV</i> )
10/31/05	Error Control: Equalizers ( <i>Take Home EXAM II</i> )
11/07/05	Equalizer Performance Contd.
11/14/05	Simulation of end-to-end wireless transmission with fading and ISI ( <i>HW V</i> )
11/21/05	Handout Papers for Review, Analysis and Final Projects
11/28/05 : 12/12/05	Spread Spectrum Fundamentals , Multicarrier Modulation, OFDM Concepts
12/19/05	Final Project Presentation

**Final Exam:**

This includes a written report and class presentation on selected paper/project.

**Grading Policy**

5 Home Works: 45%      Two Exam Average: 30%      Final: 25%