Introduction to Wireless Communications Systems
Summer 2004

Course Name and Instructors: EE 4365 and Profs. Torlak and Saquib
Office Hours: Wednesday 3:00-5:00PM
Instructors' Info: ECSN 4.908, torlak@utdallas.edu (first 6 weeks)
ECSN 4.920, saquib@utdallas.edu (last 6 weeks)
WWW: http://www.utdallas.edu/~torlak
Prerequisite: EE3350 or equivalent

Grading:

<table>
<thead>
<tr>
<th></th>
<th>Midterm I</th>
<th>Midterm II</th>
<th>Final</th>
<th>HW, Comp. Simulations., and Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20 %</td>
<td>20 %</td>
<td>40 %</td>
<td>20 %</td>
</tr>
</tbody>
</table>

Homework Policy: Collaboration on solving the homework problems is encouraged. Turning in identical homework solutions, however, will be considered cheating. Late homework will not be accepted. Lowest homework grade will be dropped.

Computer Simulations: Simple MATLAB simulations.

Required Software: MATLAB


Reference Books:

- Wireless Communications and Networking by Jon. W. Mark and Weihua Zhuang
- Wireless Communications: Principles & Practice 2/e, Theodore S. Rappaport
- Microwave Mobile Communications by W.C. Jakes
- Wireless Information Networks by K. Pahlavan, and A.H. Levesque
- Mobile Communications Engineering by William C.Y. Lee

Course Outline:

- History and Overview of Wireless Communications (Chapter 1)
- Review: Communications System Design and Probability (Appendix A.4)
- Propagation Characteristics of Wireless Channels (Chapter 2)

MIDTERM I

- Modems for Wireless Communications (Chapter 3)
- Cells and Cellular Traffic (Chapter 4)

MIDTERM II

- Fading Mitigation in Wireless Systems (Chapter 5)
- Multiple Access Techniques (FDMA, TDMA, CDMA) (Chapter 6)
- Wireless Standards and Mobility in Wireless Networks (Notes)

FINAL