

## EE 4365 Introduction to Wireless Communications Systems Summer 2004

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**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](mailto:torlak@utdallas.edu) (first 6 weeks)

ECSN 4.920, [saquib@utdallas.edu](mailto:saquib@utdallas.edu) (last 6 weeks)

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**Prerequisite:** EE3350 or equivalent

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### Grading:

Midterm I	Midterm II	Final	HW, Comp. Simulations., and Participation
20 %	20 %	40 %	20 %

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**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

**Textbook:** Introduction to Wireless Systems, P. Mohana Shankar, John Wiley & Sons

### 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

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### 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