

SPRING 2010 : ELEC 7970-003: WIRELESS COMMUNICATION THEORY
T Th 9:30–10:45 AM Broun 306

Instructor: Prof. J.K. Tugnait 313 Broun, 4-1846, tugnajk@eng.auburn.edu
Office Hours: MWF 10:30 – 11:50 AM; 2:00 – 3:00 PM;
e-mail for appointment at other times.

Prerequisite: ELEC 7410

Text: A. Goldsmith, *Wireless Communications*, Cambridge University Press, 2005.

Ref.: D. Tse and P. Viswanath, *Fundamentals of Wireless Communications*, Cambridge University Press, 2005.

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All posted notes are in “microsoft windows journal file” format.

Grading Basis:

Homework :	30 %	
Midterm :	30 %	(March 2, 2010 , Tuesday)
Final :	40 %	(May 10, 2010 , Monday, 8:00 AM)

TEXT COVERAGE (tentative)

- Chapters 2 & 3: Wireless channel models (2 weeks)
- Chapter 4: Capacity of wireless channels (1 week)
- Chapters 5 & 6: Digital modulation/demodulation techniques and performance analysis over wireless channels (2 weeks)
- Chapters 7 & 11: Equalization and diversity techniques. (2 weeks)
- Chapter 9: Adaptive modulation for fading channels. (1 week)
- Chapter 10: Multiple antennas and space-time communications.(1 week)
- Chapter 12: Multicarrier modulation and OFDM. (2 weeks)
- Chapter 13 & 14: Multiuser systems and multiple access techniques. (3 weeks)