SPRING 2018 : ELEC 7440: WIRELESS COMMUNICATION THEORY
T Th 9:30am – 10:45am  Broun 306

Instructor:  Prof. J.K. Tugnait  313 Broun,  4-1846,  tugnajk@eng.auburn.edu
Office Hours: MW 11:00 – 11:55 AM; 3:00 – 4:00 PM
e-mail for appointment at other times.

Prerequisite:  ELEC 3400 or ELEC 7410.


Reference :  D Tse and P. Viswanath, Fundamentals of Wireless Communications,,

Grading Basis:

Homework : 30%
Midterm : 30%  (March 8, 2018)
Final : 40%  (take-home: Out April 26, Due May 1)

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)

ELEC 7440. WIRELESS COMMUNICATION THEORY (3). LEC. 3. Pr., ELEC 3400 or ELEC 7410. The basic of design, analysis and performance limits of wireless communication systems.