

## FALL 2014 : ELEC 5100: WIRELESS COMMUNICATION SYSTEMS

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; 2:30 – 3:30 PM;  
e-mail for appointment at other times.

**Prerequisite:** ELEC 3400

**Textbook:** B.A. Black, P.S. DiPiazza, B. Ferguson, D.R. Voltmer & F.C. Berry, *Introduction to Wireless Systems*. Prentice Hall, 2008.

**Refs.:** V.K. Garg, *Wireless Communications and Networking*. Elsevier, 2007.

T.S. Rappaport, *Wireless Communications: Principles and Practice*, 2nd Ed.,  
Prentice Hall, 2002.

J.W. Mark and W. Zhuang, *Wireless Communications and Networking*.  
Prentice Hall, 2003.

### Grading Basis:

Homework :	20 %	
Test I :	25 %	( Oct. 2, 2014)
Test II :	25 %	( Nov. 20, 2014)
Final :	30 %	( Dec. 9, 2014, Tues., 8:00 AM)

**Attendance Policy:** *Class attendance and participation is required. Unexcused absences from more than 3 class sessions will receive an F in the course.* For an absence to be excused, the student must present an official excuse obtained from the Engineering Student Services Office no later than 1 week after the absence. For more information, see the Academic regulations in the Tiger Cub.

**Homework:** will be assigned periodically. Solutions to the homework problems will be discussed in class. **Late homework will not be accepted.** The lowest homework grade will be dropped from your average.

### TEXT COVERAGE

- Chapter 2 (The Radio Link)
- Chapter 3 (Channel Characteristics)
- Chapter 4 (Systems Engineering: Cellular Concept)
- Chapter 5 (Digital Signaling Principles)
- Chapter 6 (Multiple Access Methods)
- Chapter 8 (Standards)

**ELEC 5100. WIRELESS COMMUNICATION SYSTEMS (3).** Pr., ELEC 3400. Introduction to mobile cellular radio and wireless personal communications, cellular concept, mobile radio propagation, modulation techniques, multiple access techniques, wireless systems and standards.