

# EEL 6593 Mobile Communication

**Credits:** 3 credits

**Textbook, Title, Author, and Year:** Modern Wireless Communications, by Haykin & Moher, Prentice Hall, 2005

**Reference Materials:** Wireless Communications, by Goldsmith, Cambridge University press, 2005

## **Specific Course Information**

**Catalog Description:** Introduction to modern wireless communications: basic components, radio propagation and noise, modulation and frequency-division multiple access, coding and time-division multiple access, spread spectrum and code-division multiple access, diversity, capacity and space-division multiple access, wireless architectures.

**Prerequisites:** 1. EEL 4512 Communication Systems, 2. EEL 4541 Stochastic Process and Random Signals

**Specific Goals for the Course:** The goal of this course is to introduce the student to the fundamentals of radio propagation, wireless communications and communication-theoretic aspects of multiple-access techniques.

## **Brief List of Topics to be covered:**

1. Physical Properties of Wireless Channels
2. Modulation and Frequency-Division Multiple Access
3. Coding and Time-Division Multiple Access
4. Spread Spectrum and Code-Division Multiple Access
5. Diversity, Capacity, and Space-Division Multiple Access