

# EEL 6597 Wireless Personal Communication Systems

**Credits:** 3 credits

**Textbook, Title, Author, and Year:** T. S. Rappaport, Wireless Communications: Principles and Practice, 2nd Edition, Prentice Hall, 2002

**Reference materials:** N/A

## Specific Course Information

**Catalog Description:** This course introduces seniors and graduate students in Electrical Engineering to the fundamentals of wireless personal communication services, systems and networks. It focuses on the principles, technologies, system architectures and standards for wireless access networks for telephony, data communications and portable computing.

**Prerequisites:** EEL 5500 – Digital Communications (or consent of instructor)

**Specific Goals for the Course:** This course introduces seniors and graduate students in Electrical Engineering to the fundamentals of wireless personal communication services, systems and networks. It focuses on the principles, technologies, system architectures and standards for wireless access networks for telephony, data communications and portable computing.

## Brief List of Topics to be covered:

1. Introduction and review of cellular concept
2. Multipath fading channel
3. Diversity reception, MIMO systems
4. Multiple access techniques
5. Bandwidth conservation methods
6. Wireless system and standards
7. Wireless networking
8. Third generation systems and standards
9. Evolution to fourth and fifth generation systems and standards