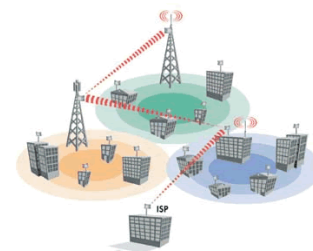




University of South Florida
College of Engineering
Department of Electrical Engineering



EEL 6597 Wireless Network Architectures and Protocols **(Wireless Networking)**

Spring semesters - 3 Credit Hours (also available online)

Instructor:

Richard D. Gitlin Sc.D.

State of Florida 21st Century World Class Scholar

Distinguished University Professor, Agere Systems Chair

The world is experiencing an explosion in the development and deployment of new wireless systems, including packet-based mobile telephony, the ubiquitous “WiFi” networks, the emerging 5G, IoT (Internet of Things), and wireless broadband access networks. The goal of this course is to provide an understanding of the unifying networking technologies that enable these emerging wireless systems, including *packet networking* (e.g. IP networking), smart antennas (MIMO), and advanced network architectures. With this goal in mind, this course emphasizes the foundation technologies needed to understand and design contemporary wireless networks.

THE TOPICS COVERED IN THIS COURSE INCLUDE:

Introduction to Wireless Networking, Wireless Communications.
 TDMA, CDMA, and OFDMA based networks.
 Wireless Application Models, Protocols, and Performance Issues.
 Network design, Traffic Engineering, Mobility Management.
 Packet Networking, Queuing Theory, QoS, IP Networking.
 Multiple Access Protocols and Media Service Models (Aloha, Ethernet).
 Wireless LANs (Wi-Fi)
 4G LTE
5G, IoT, Ad-Hoc, Mesh, Sensor, and Self-Organizing Networks

PREREQ: **EEL 6593 MOBILE AND PERSONAL COM. OR THE CONSENT OF INSTRUCTOR.**
NOTES: **THE COURSE CAN FORM A SEQUENCE WITH EEL 6534 DIGITAL COMMUNICATIONS.**