TCN-6270 Mobile and Wireless Networks

Catalog Description
Techniques in the design and operation of wireless networks; LANs, MANs, and WANs; analytical models; application of traffic and mobility models; mobility control, and wireless ATM. (3 credits)

Prerequisites
TCN-5030 or equivalent

Type
Elective for MSTN, MSCS, MSIT, and Ph.D. students.

Course Objectives
This course provides students with fundamental knowledge and key techniques in the design and operation of mobile and wireless networks. Focusing on the upper layers for various wireless networks, this course covers analytical models, routing algorithms, scheduling algorithms and MAC protocols, congestion control algorithms, cross-layer design, QoS provisioning as well as selected topics in cutting-edge wireless networking research.

Topics
Transmission fundamentals
Communication networks
Satellite communications
Cellular networks
Mobile IP and WAP
WLANs
Introduction to PHY
Cross-layer design
Introduction to optimization and its application in communication networks
Selected topics in wireless networking research

Textbook
William Stallings, *Wireless Communication and Networks, 2nd Edition*, (Prentice Hall 2005).

Last Update
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