EE 469 Wireless Data Networks

**Designation:** Elective

**Catalog Description:** Mobile agent’s platforms and systems, mobile agent-based service implementation, middleware and configuration, wireless local area networks, wireless protocols, network architecture supporting wireless applications, routing protocols in mobile are wireless networks, handoff in mobile and wireless networks

**Credits:** 3 credits

**Pre- and Co-requisites:**
EE 344 “Networking I” and EE 367 “Computer Data Structures and Algorithms” or consent

**Class/Lab Schedule:**
3 hours of lecture per week

**Topics Covered:**
- Mobile agent’s platforms and systems, mobile agent-based service implementation, middleware and configuration (6 hours)
- Wireless local area networks (6 hours)
- Wireless protocols, wireless application protocol (9 hours)
- Network architecture supporting wireless applications (6 hours)
- Routing protocols in mobile and wireless networks (9 hours)
- Handoff in mobile and wireless networks (6 hours)

**Textbook and Other Required Materials:**
William Stallings, ”Wireless Communications and Networks,” Prentice-Hall.

**Course Objectives and Relationship to Program Objectives:**
The students should understand wireless data networks, their protocols, and related technologies. They are trained to be able to design and evaluate wireless data networks and their protocols. Program objectives this course addresses are 1, 2, 3, 4, 5.

**Course Outcomes and Their Relationship to Program Outcomes**
- Design and evaluate an agent-based system, present the results [1 through 11]
- Design and evaluate a wireless local area network, present the results [1 through 11]
- Design and evaluate a wireless protocol, present the results [1 through 11]
- Design and evaluate an ad-hoc routing scheme, present the results [1 through 11]
- Design and evaluate a handoff scheme, present the results [1 through 11]

**Contribution of Course to Meeting the Professional Component**
Engineering topics: 100%

**Computer Usage:**
Students use available software tools, programming languages (C, C++, Java, as needed), and Internet to prepare their projects and present the results. All the assignments use computers (100%).
Design Credits and Features:
EE 469 has 1 design credit. About 50% of the projects propose and evaluate wireless data networks and their protocols.

Instructor(s):
G. Sasaki

Person(s) Preparing Syllabus and Date:
G. Sasaki, November 25, 2008