COMP 5380, Personal Area Networks

Credit hours: 3 lecture
Contact hours: 3 lecture

Catalog Description: Fundamentals of very low power, short-range high-bandwidth personal network technologies such as Bluetooth and direct diffusion.

Prerequisites: COMP 4320 or ELEC 5220
Corequisites: None

Selected Elective Course (CSCI, SWEN, WIRS)

Instructor or Course Coordinator: Dr. Alvin Lim

Required Textbook

Reference Materials
Students will be assigned a number of classic and recent conference and journal papers that may change from semester to semester.

Course Outcomes
The student will be able to
• understand the concepts, architecture, design, and performance evaluation of personal area networks.
• implement network protocols and applications for personal pervasive systems.

Topics Covered
• Wireless Information devices and wearable computers (2 hours)
• PAN applications (2 hours)
• PAN issues and challenges (2 hours)
• Wireless PAN technology (3 hours)
• PAN models and architectures (3 hours)
• Wireless Technologies (3 hours)
• Wireless LANs (3 hours)
• IEEE 802.15, 805.11 standards (2 hours)
• Bluetooth technology (2 hours)
• Wireless access protocol - WAP (2 hours)
• HomeRF protocol (2 hours)
• Ad-hoc network protocols (5 hours)
• Mobile and wireless networking (4 hours)
• PAN middleware and agent architecture (4 hours)
• Personal information system (4 hours)
• Exams (2 hours)

**Course Requirements**
• Homework assignments (40%)
• Exams (60%)

Syllabus prepared: Spring 2016