COURSE DETAIL

DESIGN OF WIRELESS COMMUNICATION NETWORKS
Country Taiwan
Host Institution National Taiwan University
Program(s) National Taiwan University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Computer Science
UCEAP Course Number 100
UCEAP Course Suffix
UCEAP Official Title DESIGN OF WIRELESS COMMUNICATION NETWORKS
UCEAP Transcript Title WIRELESS NETWORKS
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description

This course examines in-depth wireless communication systems and their protocols. It focuses on the design rationales of communication protocols, the overall network architectures and performance evaluation of complicated wireless systems so that students are capable of designing next-generation communications systems through rigorous simulation and mathematical analysis. In addition, the course introduces the IEEE 802.15.4 experiment test bed for hands-on experiments. Students learn from hands-on experimentation the design of wireless protocols and thus how to develop new applications in wireless networking. Course topics include: modular communication systems and protocol design; experiment and algorithm development in IEEE 802.15.4 platform; network and MAC protocol designs for personal and local area networks; mathematical modeling for communication systems and protocols; physical and MAC protocol designs for mobile and wide area networks; cross layer design and optimization for emerging wireless communication systems.

Language(s) of Instruction
English

Host Institution Course Number
CommE5039

Host Institution Course Title
DESIGN OF WIRELESS COMMUNICATION NETWORKS

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Communication Engineering

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