Course Syllabus

CSCE 5520/4520 - Wireless Networks and Protocols  
(Spring 2022)  
Monday 5:30 PM - 8:20 PM  
NTDP K110  
Dr. Qing Yang (qing.yang@unt.edu)  
F253, Discovery Park, University of North Texas  
Office Hours: Mon 2:30 PM - 3:30 PM

Course Information

In this class, students are expected to understand the fundamentals of wireless networks and protocols. To achieve these goals, we will address topics including but not limited to, radio propagation, multiple radio access, cellular networks, mobile communication system, ad hoc networks, vehicular networks, sensor networks, and wireless local area networks.

Prerequisites

CSCE 3600

Course Objectives

Students who have completed this course should be capable of doing the following:

- Understand the basic operation of a cellular network
- Understand the basic operation of different network elements of cellular network
- Understand the soft and hard handoff
• Understand the basic issues related to supporting QoS in voice and data services in cellular networks
• Understand the basic operation of cellular networks and interworking of wireless and wireline networks
• Understand the fundamentals of different wireless networks and protocols

Textbook


Topics

• Introduction to wireless networks
• Radio propagation
• Cellular concept
• Multiple radio access
• Mobile communication system
• Ad hoc network
• Vehicular network
• Sensor network
• Wireless LAN

Assessment

Exams
There will be THREE exams in this class. Exams will be closed book, closed notes. Questions will be derived from lectures, assignments, and the materials discussed in classes.

Homework
There will be THREE homework assignments and these activities will be take-home in nature and designed to reinforce concepts taught in class. Solutions to homework assignments must be submitted on Canvas by 11:55 PM on the due dates.

Attendance

Class attendance is mandatory. This is a graduate class, so students need to actively participate in class. It is believed that if you miss many classes (more than 3), there is a strong likelihood that you will
not pass the class. Please notify me in advance if you are attending conferences, research meetings, or something alike.

Grading

- Exams (70%)
  + Exam1
  + Exam2
  + Exam3
- Homework (30%)
  + Home1
  + Home2
  + Home3

Due Dates

The due dates of homework assignments can be found on Canvas. The deadlines for all assignments are always 11:55 PM on the due dates. Late assignments will receive a grade of zero (0). Deadlines will be made as generous as possible to a priori take into account illness, other courses, and nearly all conceivable excuses. If you have a documented illness preventing you from completing your assignments, you may submit all of your partial work and request an extension by sending an email to Dr. Qing Yang. An extension is not automatic.

Special Accommodations

A student in need of special accommodations must bring that need to my attention within the first two weeks of class. The need must be properly documented.

Course Summary:
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<tr>
<th>Date</th>
<th>Details</th>
<th>Due</th>
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<tr>
<td>Mon Feb 14, 2022</td>
<td>Homework1</td>
<td>due by 11:55pm</td>
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