

# **Syllabus: ECE 6331/5331 ADVANCED TELECOMMUNICATIONS**

**Fall, 2019**

*Zhu Han*

## **Instructor information**

- Office location: Engineering Building 2 W302
- Office hours: Mon. 1:00pm-5:00pm or by appointment
- Email: [zhan2@mail.uh.edu](mailto:zhan2@mail.uh.edu) [hanzhu22@gmail.com](mailto:hanzhu22@gmail.com)
- Phone: 713-743-4437 (o), 301-996-2011 (c)

## **Course description and objectives**

This course focuses on the analysis and design of communication systems, including both one-to-one communication and multiple-user networks. We will cover the topics including channel characteristics, information theory, wireless modulation and coding, and wireless networks. The objectives are to give the students overview of communication systems, instruct the basic techniques and illustrate the state-of-art.

## **Required textbook:**

Wireless Communications: Principles and Practice, 2<sup>nd</sup> Edition, Theodore S. Rappaport, Prentice Hall, 2001.

## **Required software: MATLAB**

## **Course content and calendar**

- Introduction and Cellular Concept
- Communication Channel
- Communication Theory
- Communication Techniques: modulation, equalization, channel coding, speech coding, multiple access
- Wireless networks and standard

## **Project and homework**

- Wireless Channel Simulations: MATLAB
- Wireless Resource Allocation: MATLAB
- Term Presentation
- Homework 3-4 per week

## **Policy on assignment due dates**

- Same day at class or same day in my mailbox
- 50% off with a plausible delay reason.
- 0% with more than 2 week delay

**Exam and grading policy**

- Two exams
- Final presentation and paper
- Participation: 5%
- Vote for the percentage of homework, project, and exam at the last exam

**Statement for academic dishonesty**

Any violation of academic integrity will receive academic and possibly disciplinary sanctions, including the possible awarding of an XF grade which is recorded on the transcript and states that failure of the course was due to an act of academic dishonesty. All acts of academic dishonesty are recorded so repeat offenders can be sanctioned accordingly.

- CHEATING
- COPYING ON A TEST
- PLAGIARISM
- ACTS OF AIDING OR ABETTING
- UNAUTHORIZED POSSESSION
- SUBMITTING PREVIOUS WORK
- TAMPERING WITH WORK
- GHOSTING or MISREPRESENTATION
- ALTERING EXAMS
- COMPUTER THEFT