**Department of Computer and Information Sciences**

**TOWSON UNIVERSITY**

# COSC 732 Wireless Networks and Mobile Communications Fall 2017

**Instructor:** Dr. Alexander L. Wijesinha

**Office:** YR 428

**Office Hours:** M, Th 6-6:50 pm; Tu 2-3 pm

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**Course Description:** The principles and practice of wireless networks and mobile communications. Topics include 802.11 wireless LANs, mobile IP, Bluetooth, cellular networks, LTE and LTE-Advanced, and the basics of: signal encoding, OFDM/OFDMA, SC-FDMA, MIMO, spread spectrum, and error codes.

**Course Objectives:** To introduce the concepts underlying wireless technologies and networking; to provide an understanding of the relevant architectures and protocols; and to provide experience with capturing and analyzing wireless packets, and writing an application for a mobile device.

**Prerequisite:** COSC 650

**Textbook:** C. Beard and W. Stallings**,** Wireless Communication Networks and Systems, Pearson, 2016

**Course Requirements:**

Paper: Students will form groups consisting of 4-5 students. Each group will study an assigned topic in wireless networks or mobile communications, write a short (conference style) paper, and make a short presentation to show their understanding of the topic. Details will be provided later.

Project: Each group of students (same groups as for the paper) will work on the project. A part of the project will involve programming. Details will be provided later.

Exams: Two exams will be given during the semester. The date for Exam 1 will be announced later. Exam 2 will be at the time for the final exam stated in the Towson University Exam Schedule i.e. Monday Dec 18, 7:30 pm.

**Grade:** Exams: 25% each, Project: 25%, Paper/presentation: 25%

Course grades will be assigned as follows (with A- and B+ modifications as usual):

A=90-100%, B=80-89%, C=70-79%, F=0-69%.

**Cheating and Plagiarism:** Please refer to the policy on academic integrity stated in the Towson University Graduate Catalog.