**Wireless Networks**

ITS 437 A01, Spring ’08/’09, Call # 04170

**Class Meetings:** MTWTh 3:10-4pm, RTVC 027

**Final Exam Time:** Wednesday, June 10, at 12:20 p.m. (2 hours)

**Textbook:** Andy Dorman: The Essential Guide to Wireless Communications Applications (online)

**Class Web Site:** http://www.its.ohiou.edu/kruse/its437

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Phone: 593-4891, E-Mail: kruse@ohiou.edu  
Office Hours: see http://www.its.ohiou.edu/kruse

**Class Content**

We will cover the following materials (see the web site for more details):

- Basics of RF propagation, Link Budgets, Signal to Noise Ratio, Data Communications on noisy channels.
- International and US regulations regarding radio frequency assignments and operation.
- Cellular Voice and Data Communications, third generation wireless standards
- Wireless Local Area Networks
- Satellite communications basics; components, operations, and orbits.

**Exams**

A 1-hour exam will cover the lecture materials presented in weeks 1-4.  
A 2-hour comprehensive final exam will cover all material presented in class.

**Quizzes and Homework.**

Reading assignments from the book as well as other sources will be assigned every week.  
Homework assignments will be linked directly to readings. Approximately every other week, a short quiz will test basic understanding of the readings.

**What you will learn**

After completing this class, you should be able to define what makes wireless communications different from communications using guided media, summarize technical elements common to all forms of wireless communications, and identify the major classes of applications where wireless communications techniques are used. You should be able to explain how the use of radio spectrum is regulated and by what agencies; you should also be able to critique the various methods of spectrum regulation. You should be able to compare wireless applications and evaluate where wireless applications can be used to solve business problems (and which ones).
Term paper
By week 5 of the quarter, each student must select a topic for a research paper. An outline of the paper is due at the end of week 8; the term paper is due at the final class meeting.

Attendance Requirements
It is hoped that you will find the class meetings to be valuable in achieving the goals of this class; it is unlikely that you can get the full benefit from the class without attending. (Note that readings will come from diverse sources, and that class time will be used for exercises, demonstrations, and some hands-on experimentation). However, you ultimately decide if you are going to attend.

Please refer to your Student Handbook for a definition of excused absences and related information.

Grading Basis (Total available points: up to 305)

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<th>Midterm Exam</th>
<th>Final Exam</th>
<th>Homework and Quizzes</th>
<th>Term Paper</th>
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<td>75 points</td>
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Grade Determination

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Any score below 60% will result in a failing grade (F).

Academic Misconduct
The published policies of Ohio University prohibit any form of academic misconduct and dishonesty. These policies fully apply to this course, and it is assumed that every student is familiar with them. Cheating on examinations, submitting work of others as your own, or plagiarism in any form will result in penalties ranging from loss of credit for a project to expulsion from the University, depending on the severity of the offense.

Storage of Records and Materials
All materials turned in to me as part of the assignments in this course will be returned to you once they are graded. Any records (grades, attendance, etc.) and materials which have not been picked up will be discarded after one year.