## **ECE 3610**

## **Engineering Probability and Statistics**

## Spring Semester 2004

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Office Hrs: Mon./Wed. 1:00-1:30 pm and 3:00-4:00 pm, others by appointment. Note:

These hours may be adjusted if needed.

Required D.C. Montgomery and G.C. Runger, Applied Statistics and Probability for

Engineers, 3d Ed., Wiley 2003. ISBN 0-471-20454-4. Texts:

Study Schaum's Outline: Hwei Hsu, Probability, Random Variables, and Random Guides

Processes, ISBN: 0-07-030644-3 or M. Spiegel, et. al., Probability and Statis-

tics, ISBN 0-07-1350047.

**Optional** MATLAB Student Version 6.x with Simulink 5.x and Symbolic Math Toolbox Software:

(no matrix size limits). An interactive numerical analysis, data analysis, and graphics package for Windows/Linux/Mac OSX \$99.95. The Signal Processing toolbox may be useful at \$29.95. Order from www.mathworks.com/ student. Note: The ECE PC Lab has the full version of MATLAB and Sim-

ulink for windows (ver. 6.x) with many toolboxes.

**Optional** TI-89 calculator with *TI Connect* (free) and *TI Connectivity Kit* (USB cable).

Hardware: Download TI Statistics with List Editor for TI-89 (free) software.

**Grading:** 1.) Graded homework assignments/quizzes worth 20%.

2.) Graded computer projects worth 20%

3.) Two "Hour" exams at 15% each, 30% total.

4.) Final exam worth 30%.

Topics	Text Sections	Est. Weeks
1. Introduction and Course Overview	1.1–1.4	1.0
2. Probability	2.1–2.8	2.0
3. Discrete Random Variables and Probability Distributions	3.1–3.9	1.5 Exam I)
4. Continuous Random Variables and Probability Distributions	4.1–4.12	1.5
5. Joint Probability Distributions	5.1–5.10	4.5 (Exam II)
6. Statistics (various topics)	6.1–12.6	4.0