**MATH2930 S1**

Introductory Probability and Statistics

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Instructor: Xin Gao, Professor, Department of Math & Stats

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Time and place:

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| --- | --- | --- | --- |
| TR | 10:00 | 180 | CLH  J |

Office hours: by appointment

TextBook: Probability and Statistics for Engineering and the Sciences, 9th Edition, Jay L. Devore

Reference book: Probability and Statistics for Engineers and Scientists, 2008, Walpole.

Course Evaluations:

Final exam, 50% (Scheduled by Registrar office)

Midterm, 35%, (May 21, 80 minutes in class)

Three assignments with the total worth of 15% (May 9, May 16 and June 4).

A TA will be available during the tutorial time to answer your questions and provide help to problems in the class. During each tutorial, TA will give demonstrations on how to solve questions in the chapters covered in that week. There are two tutorial labs both on TR afternoons, one from 2-3 and the second from 3-4.

**Note**:

1. **No** late assignment will be accepted.
2. **No** makeup exam will be given. If a valid explanation is provided (such as a medical note), the final marks will be adjusted accordingly.
3. **Do not**write the test or exam, if you do not feel well. Once you wrote the test or exam, that is the score that you will receive.

**Assignments:**

1. Assignments have to be handed in during class time on the specified dates. Emailed assignments will not be graded.
2. Print the student name and student number and, in particular, underline the family name. The name should be identical to the one on the student card or York card.

Course Outline:

This is an applied probability and statistics course for engineering students. The aim is to provide an application oriented introduction to probability and statistics. The examples will be from a wide selection of engineering disciplines. The probability component is about 30% of the lectures. About 40% of the time, the lectures and tutorials focus on solving practical statistical problems that emerge from engineering problems. Prerequisites: SC/MATH 1014 3.00 or equivalent; SC/MATH 1025 3.00 or equivalent; LE/EECS 1011 3.00 or equivalent. Course credit exclusions: SC/MATH 1131 3.00; SC/MATH 2560 3.00; SC/MATH 2570 3.00; SC/MATH 2565 3.00.

Tentative topics:

Chapter 1: Overview and Descriptive Statistics  Week 1
Chapter 2: Probability  Lecture  Week 1
Chapter 3: Discrete Random Variables and Probability Distributions Week 2
Chapter 4: Continuous Random Variables and Probability Distributions  Week 2
Chapter 5: Joint Probability Distributions and Random Samples Week 3
Chapter 7: Statistical Intervals Based on a Simple Sample  Week 3
Chapter 8: Tests of Hypotheses Based on a Single Sample  Week 4
Chapter 9: Tests of Hypotheses Based on Two Samples Week 5

Chapter 10: Analysis of Variance (Time permitting) Week 6

Chapter 12: Simple Linear Regression (Time Permitting) Week 6