STATISTICS 2060A – Winter 2008

Lectures: TR   10:05–11:25 at SIR JAMES DUNN 135

Instructor: Prof. Hong Gu
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Text: Jay L. Devore – Probability and Statistics for Engineering and the Sciences, seventh (or sixth) Edition.

Marking Scheme: Assignments   20%
                  Midterm exam 30%
                  Final exam   50%

There will be no supplemental examination to this course.

   This is a calculus–based introduction to probability and statistics with Math 1000 as prerequisites.

Assignments

   There will normally be assignments every week during the term which must be handed in at class on the day they are due. Late assignments will not be accepted. Solutions will be available on my website http://www.mathstat.dal.ca/~hgu/teaching.html after the due date.

   Some assignments may require the use of the MINITAB statistical package. MINITAB release 15 is available on campus at computer labs in LSC 200, LSC 2084, LSC 2087, MMASS2018, MMASS 2019, MMASS 2020, killam B433, Killam B400, Killam Learning Commons and Chase 007.

   If you are unhappy about your assignment mark, use the following procedure: (1) Check the posted solutions. If still not convinced, (2) resubmit the assignment at the next round with a note to the marker explaining the nature of your complaint. Still unhappy? (3) See your instructor.

Extra help   Extra help is available at

a) The Math Learning Center (check http://www.mathstat.dal.ca/learning/learningcenter.html for location and times when statistics help is on duty)
b) From your instructor during office hours (Tues. Thur. 11:30am–12:30pm), or by appointment.

<u>Course Outline – Winter 2008</u>

Week of   Topic   Section in text

Jan. 7   Introduction
           Sample spaces and events   2.1
           Axioms & properties of probability   2.2

Jan. 14   Combinatorics and combinatorial probability   2.3
           Conditional probability, independence   2.4, 2.5

Jan. 21   Conditional probability, Bayes theorem   2.4, 2.5

Jan. 28   Random variables   3.1
           pdf and CDF for discrete random variables   3.2
           Expected values for discrete random variables 3.3

Feb.4   The Binomial distribution   3.4
           The Hypergeometric distribution   3.5
           The Poisson distribution   3.6

Feb. 11   Continuous random variables; the density function
           The CDF and expected values   4.2
           The Exponential distribution   part of 4.4

Feb. 18   The Normal distribution   4.3
           Descriptive statistics   1.2
           Measures of location and variability   1.3, 1.4

           MIDTERM EXAM   Mar. 4 (Tues.), 10:05–11:25am on class.

                        At SIR JAMES DUNN 135.

Mar. 6   Distributions of statistics   5.3

Mar. 10   Likelihood and point estimation   6.1, 6.2
           Confidence interval for the population mean   7.1

Mar. 17   Confidence interval for proportions   7.2
           Hypothesis testing   8.1

Mar. 24   Test for the population mean   8.2
           Test concerning proportions   8.3

Mar. 31   P-values   8.4,8.5

Apr. 7   Review