STATISTICS 131A — Probability Theory

Textbook: Ross, S. (2010). A First Course in Probability, 8th Edn. Prentice Hall, Upper Saddle River, N.J.

Instructor: Prof. Peter Hall

Lecture times: 11.00 am Mondays, Wednesdays and Fridays, in Olson 223.

Instructor Office hours: 12.00–2.00 pm Friday

TA Office hours: 12–1 pm Tuesday, 1–2 pm Thursday, 1117 MSB

Timetable changes: The lectures scheduled for Monday 2nd April, Monday 30th April, Wednesday 2nd May and Friday 4th May will be given by the Teaching Assistant.

Grading policy: The seven hand-in homeworks each count for 4% of the final mark, except that only the highest six marks will be used (and therefore, homeworks will count for a total of $4 \times 6 = 24\%$ of the final mark); the two mid-term exams each count for 20% of the final mark; and the final exam counts for the remaining 36%. A missing exam will be scored as zero unless it has been approved in advance by the instructor, or there is a medical reason properly supported by a medical certificate. The weight of an approved missing mid-term exam can be shifted to the final exam, and a missing final exam must be made up in a supplementary exam, which may take the form of an oral exam.

Each exam (i.e. the two mid-terms, and the final exam) will be closed-book, but students will be permitted to bring to the exam room a single quarto sheet of paper, written on both sides.

Proposed Lecture and Homework Schedule (Spring Quarter, 2012): The schedule below, including the homework questions, may be revised, depending on progress through the course. You should check the website routinely for changes. Note that Monday 28th May is a holiday.

Due dates for hand-in homeworks are Mondays 16th April, 23th April, 7th May, 14th May, 21th May, Wednesday 30th May, and Monday 4th June. Only a small number of the questions set for each hand-in homework will be marked.

The first and second mid-term exams will be held on Friday 20th April and Friday 18th May, respectively.

The lecture and homework schedules below are tentative only, and may be revised one or more times during the quarter. Please check back for revisions!

In connection with the homeworks, abbreviations are as follows: "Chap. 1: P8c" denotes part c of question 8 from the list of Problems at the end of Chapter 1, and "Chap. 1: T8" denotes question 8 from the list of Theoretical Exercises at the end of Chapter 1. This notation avoids ambiguities in both editions of the textbook.

Lectures 1–3 (week starting 2nd April): Ross §§1.1–1.5, 2.1 and 2.2; Chap. 1: P8c, P10, P11, P12, P19, P21, T8, T9, T11.

Lectures 4–6 (week starting 9th April): Ross §§2.2–2.5, 3.1–3.3; homework for this period: Chap. 2: P1, P23, T1, T2, T3, T7, T11.

Lectures 7 and 8 (week starting 16th April): Ross §§3.3–3.5; homework for this period: Chap. 3: P1, P2, P6, P9, P12, P14, P16, P17, P22, P23, P24, P25.

First hand-in homework, to be submitted on Monday 16th April for grading: Chap. 1: P8c, P10, P11, P12, P19, P21, T8, T9, T11.

Lecture 9: FIRST MID-TERM EXAM (Friday 20th April)

Lectures 10-12 (week starting 23rd April): Ross §§4.1, 4.2 and 4.6; homework for this period: Chap. 4: P1, P2, P3, P5, P6, P7, P8, P11, P17.

Second hand-in homework, to be submitted on Monday 23rd April for grading: Chap. 2: P1, P23, P39, T1, T2, T3, T7, T11.

Lectures 13–15 (week starting 30th April): Ross §§4.4 and 4.5; homework for this period: Chap. 4: P38, T3 (T5 in 7th edition), T4 (T6 in 7th edition), T7 (T9 in 7th edition), T10, T11, T12, T14, T19.

Lectures 16–18 (week starting 7th May): Ross \S 5.1–5.3; homework for this period: Chap. 5: P1, P6, P7, P8, P11, T1, T2, T3, T5, T13 (T12 in 7th edition), T14 (T13 in 7th edition).

Third hand-in homework, to be submitted on Monday 7th May for grading: Chap. 3: P1, P9, P16, P22, P25; Chap. 4: P1, P3, P5, P6.

Lectures 19 and 20 (week starting 14th May): Ross §§4.3 and 4.6 (revisited), 4.7, 5.1–5.4; homework for this period: Chap. 4: P52, P57 P75, P79, T27, T29.

Fourth hand-in homework, to be submitted on Monday 14th May for grading: Chap. 4: P17, P38, P52, P57, P75, P79, T4 (T6 in 7th edition), T7 (T9 in 7th edition), T10, T19, T27, T29.

Lecture 21: SECOND MID-TERM EXAM (Friday 18th May)

Lectures 22–24 (week starting 21st May): Ross \S 5.4–5.6; homework for this period: Chap. 5: P15b, P19, P32, P33, P35, P36, P39, P40, T16 (T15 in 7th edition), T17 (T16 in 7th edition), T19 (T18 in 7th edition), T22 (T21 in 7th edition), T23 (T22 in 7th edition), T29 (T28 in 7th edition), T30 (T29 in 7th edition).

Fifth hand-in homework, to be submitted on Monday 21st May for grading: Chap. 5: P15b, P19, P32, P33, T15, T16.

Lectures 25–29 (weeks starting 28th May and 4th June; 28th May is Memorial Day): Ross Chapter 6; homework for this period: Chap. 6: P1, P7, P10, P13, P19, P20, P22, P23, P36, P38 (T39 in 7th edition), P40 (T41 in 7th edition), P41 (T42 in 7th edition), T20 (T18 in 7th edition), T24 (T22 in 7th edition).

Sixth hand-in homework, to be submitted on Wednesday 30th May for grading: Chap. 5: P35, P36, P39, P40, T19 (T18 in 7th edition), T22 (T21 in 7th edition), T23 (T22 in 7th edition), T29 (T28 in 7th edition), T30 (T29 in 7th edition).

Seventh hand-in homework, to be submitted on Monday 4th June for grading: Chap. 6: P1, P7, P10, P13, P19, P20, P22, P23, T20 (T18 in 7th edition).

FINAL EXAM DATE AND TIME: Tuesday 12th June, 10:30–12:30.