DALHOUSIE UNIVERSITY

ECON 2260 / MATH 2060 / STAT 2060
Introduction to Probability and Statistics I
Winter 2019

Instructor: Dr. Lerna Pehlivan
Office: Chase Building 312
Email: lr608779@dal.ca
Classes: M/W/F: 10:35-11:25
Class Location: Studley SIR JAMES DUNN 117
Prerequisites: MATH 1000.03
Office hours: M: 11:30-12:30
W: 9-10 & 12:30-13:30

Required Textbook:

- Jay L. Devore, **Probability and Statistics for Engineering and the Sciences**, 9th edition, 2016

Course Websites:

- **Brightspace:** Communicating course related information, except the homework.
- **CAPA:** For the homework.

  How to Login to LON-CAPA:

  - In your web browser, go to capa.mathstat.dal.ca.
  - You will be prompted to enter a username and password. By default, your username is your Dalhousie NetID and your password is your banner number (your Dalhousie student number that starts with B00). Your full banner number must be entered, i.e., the upper-case letter B, followed by two zeros, then followed by six digits.
  - You then have to select a role for the course you wish to enter. Most likely, you will have only one choice: a student user role for the course titled "Stat 2060". Click on the 'Select' button next to that choice.
  - You will be directed to the home page of the course. Navigation is easiest by using the tabs in the top blue bar. The 'Contents' tab is where the assignments will be posted.
  - For increased security and convenience, you should change the default password to the one you use for all other Dalhousie-related activities. Click on the 'Main Menu tab' in the top blue bar, then click on 'Set my user preferences' and then click on 'Password'. Enter the current (default) password and enter (twice) your new password.

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1 Course Description

This course is a rigorous introduction to probability and statistical theory. Topics covered include elementary probability, random variables, distributions, estimation and hypothesis testing. Estimation and testing are introduced using maximum likelihood and the generalized likelihood ratio.

2 Course Evaluation

2.1 Grading Scheme

The course grade will be based on a mid-term exam (30%), a final exam (45%), assignments (15%) and quizzes (10%). To pass the course, you must get at least 50% of the mid-term and final exams combined.

Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale.

$A+(90-100)$	$B+(77-79)$	$C+(65-69)$	$D(50-54)$
$A \quad (85-89)$	$B \quad (73-76)$	$C \quad (60-64)$	$F(<50)$
$A-(80-84)$	$B-(70-72)$	$C-(55-59)$	

2.2 Assignments

There will be a total of 9 online assignments. The assignment grade will be calculated by dropping the lowest assignment score. However, non-submitted assignments can not be dropped. Assignments will be posted one week before the due date. Late assignments can not be accepted.

2.3 Quizzes

There will be 10 weekly tutorials starting from week 3. There will be a 10-15 minutes quiz at the end of every tutorial.

2.4 Examinations

There will be a mid-term and a final exam. The exams will be closed-book with one page (double sided) of notes allowed. The schedules for the exams are:

- **Mid-term:** Tuesday, February 26 (7:00-8:30pm) Location: TBA
- **Final exam:** TBA (set by the registrar)

To be eligible to write the exams you will be required to present a valid student ID card. No cellphones or other communication devices will be allowed in the exam room. In case you miss the mid-term exam for **legitimate** reasons, such as serious illness, it is important that you inform me or the department secretary (494-6909), as soon as possible, but latest 24 hours after the exam. You will provide me with a doctor's note. Failure to do so will result in a grade of zero. The final exam will be cumulative. There will be **no make-up final exam**.

3 Dalhousie University Academic Policies

3.1 Accommodation Policy for Students

Students may request accommodation as a result of barriers related to disability, religious obligation, or any characteristic protected under Canadian Human Rights legislation. The full text of Dalhousie's Student Accommodation Policy can be accessed here. Students who require accommodation for classroom participation or the writing of tests and exams should make their request to the Advising and Access Services Centre (AASC) prior to or at the outset of the regular academic year. More information and the Request for Accommodation form are available at dal.ca/access.

3.2 Academic Integrity

Academic integrity, with its embodied values, is seen as a foundation of Dalhousie University. It is the responsibility of all students to be familiar with behaviours and practices associated with academic integrity. Instructors are required to forward any suspected cases of plagiarism or other forms of academic cheating to the Academic Integrity Officer for their Faculty. The Academic Integrity website (academicintegrity.dal.ca/Policies) provides students and faculty with information on plagiarism and other forms of academic dishonesty, and has resources to help students succeed honestly. The full text of Dalhousie's Policy on Intellectual Honesty and Faculty Discipline Procedures is available here.

3.3 Student Code of Conduct

Dalhousie University has a student code of conduct, and it is expected that students will adhere to the code during their participation in lectures and other activities associated with this course. In general: "The University treats students as adults free to organize their own personal lives, behaviour and associations subject only to the law, and to University regulations that are necessary to protect

- the integrity and proper functioning of the academic and non-academic programs and activities of the University or its faculties, schools or departments;
- the peaceful and safe enjoyment of University facilities by other members of the University and the public;
- the freedom of members of the University to participate reasonably in the programs of the University and in activities on the University's premises;
- the property of the University or its members."

The full text of the code can be found here.

4 Tentative Course Outline

I reserve the right to adjust the order and content of the course materials at my discretion when it fits the goals of the course. Outline of Topics to be covered (all from Devore).

Chapter	**Topic**
1	Descriptive statistics (Self-study)
2	Probability
3	Discrete random variables and distributions
4	Continuous random variables and distributions
5	Joint probability distributions
6	Point estimation
7	Confidence intervals based on a single sample
8	Hypothesis tests based on a single sample
9	Inference based on two samples