

Carleton University – School of Mathematics and Statistics
STAT 2607 A and B – *Business Statistics II* – WINTER 2020

Instructors: Dr. Wayne Horn, wayne.horn@carleton.ca, 4352 Herzberg Laboratories
Dr. Patrick Farrell, patrick.farrell@carleton.ca, 5412 Herzberg Laboratories

Lectures: The lecture videos for each week of the course are posted on cuLearn.

Office Hours: Office hours will be posted on cuLearn.

Textbook: There are no required textbooks. For most students, the lecture slides and practice material we provide on cuLearn are usually sufficient. However, if you would like to order a reference book, you can purchase any edition of either (1) *Business Statistics in Practice*, Canadian Edition, Bowerman et al, or (2) *Business Statistics for Contemporary Decision Making*, Canadian Edition, Black et al.

Prerequisite: STAT 2606

Grading Scheme: Lab Assignments **20%**, Midterm Exam **40%**, Final Exam **40%**

Lab Assignments: There will be 10 weekly lab assignments starting the week of **January 20**. Each assignment is worth 2% of your final grade.

Midterm Exam: The midterm exam will be held on **Saturday, March 7** from **12pm – 3pm**. The midterm exam tests the material from Weeks 1 – 6 of the lecture schedule.

Final Exam: There will be a **3-hour** final exam scheduled by the university. The final exam period runs from **April 13 – 25**. The final exam tests the material from Weeks 7 – 12 of the lecture schedule.

Academic Integrity: Students are required to be familiar with the Academic Integrity Policy at Carleton University. The complete policy is available at: <http://carleton.ca/senate/wp-content/uploads/Academic-Integrity-Policy1.pdf>. Students who violate the standards of academic integrity relating to any coursework will be required to meet with the Associate Dean of Science.

Copyrighted Material: All course materials are protected by copyright and remain the intellectual property of the instructors. Students registered in the course may only use course materials for their own educational use. Students are not permitted to reproduce or distribute lecture notes or other course material publicly for commercial or non-commercial purposes without express written consent from the instructors.

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy or Religious Obligation: Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, refer to the [Student Guide to Academic Accommodation](#).

Academic Accommodations for Students with Disabilities: If you have a documented disability requiring academic accommodations in this course, please contact the [Paul Menton Centre for Students with Disabilities](#) (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made.

Survivors of Sexual Violence: As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and is survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit [Sexual Assault Support Services](#).

Accommodation for Student Activities: Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any [requests for academic accommodation](#) during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

ADDITIONAL COURSE POLICIES

- 1.** You must use your Carleton email account for all email communications. We are not able to respond to non-Carleton emails due to FIPPA (Freedom of Information and Protection of Privacy Act).
- 2.** Each lab section will work on a slightly different problem than all other lab sections, so you must attend the lab for which you are enrolled. Failure to do so will result in a grade of 0% for that lab assignment.
- 3.** If you complete and pass at least seven (7) lab assignments, and any lab assignment grade is lower than the grade on the corresponding exam, then we will replace the lab assignment grade with the exam grade.
- 4.** Students who do not attend the midterm exam due to unforeseen circumstances may apply to write a deferred examination. Exam deferral requests must be made in writing to the instructor(s) no later than three working days after the original exam and include appropriate supporting documentation. Electronic documentation will not be accepted. In the case of illness, a hard copy of [Carleton's medical certificate](#) must be completed and dated no later than one day after the exam. Students who fail to follow these instructions will receive a grade of 0% on the midterm exam.
- 5.** Concerns about the grading of the midterm exam or a lab assignment must be brought to the instructor's attention within one business day of these items being available for review.
- 6.** Students who fail to obtain a minimum score of 50% on both the midterm and final exams will be assigned a grade of **F** in the course. Exceptions to this rule may be made at the discretion of the instructor.
- 7.** Lab assignments and midterm exams must be collected prior to the end of this semester. Items not collected by this time will be destroyed.
- 8.** Any student wishing to review their final exam must make an appointment to do so within the first two weeks of the Summer semester.
- 9.** Students are expected to check cuLearn and their email daily for course announcements.
- 10.** Only non-programmable calculators will be permitted during exams. The instructor reserves the right to disallow any calculator.
- 11.** In assigning course letter grades, final numerical grades are viewed as continuous and grades are not automatically rounded up. A student must earn at least the lower numerical limit of a letter grade category to receive that letter grade.

TENTATIVE LECTURE SCHEDULE

WEEK	DATES	TOPICS
1	Jan. 6 – 10	A Hypothesis Test for Comparing Two Population Variances, Experimental Design, One-Way ANOVA
2	Jan. 13 – 17	Kruskal-Wallis Test, Randomized Block Design, Friedman Test
3	Jan. 20 – 24	Goodness-of-Fit Test, Test for Independence
4	Jan. 27 – 31	Correlation, Simple Linear Regression, Least Squares Estimation, Least Square Regression Line, Correlation versus Causation, Extrapolation
5	Feb. 3 – 7	SLR Model Assumptions, Estimating Error Variance, Testing the Significance of the Independent Variable, Confidence Interval for the Mean Response, Prediction Interval for an Individual Response, The F Test for the Model, Coefficient of Determination
6	Feb. 10 – 14	Residual Analysis, Transformations
N/A	Feb. 17 – 21	WINTER BREAK WEEK
7	Feb. 24 – 28	Multiple Regression, Interpretation of Regression Coefficients, R^2 and Adjusted R^2 , The Overall F Test, Testing the Significance of an Independent Variable
8	Mar. 2 – 6	Confidence and Prediction Intervals, The Quadratic Regression Model, Interaction, Dummy Variables, The Partial F Test
9	Mar. 9 – 13	Model Building, Multicollinearity, Residual Analysis, Outliers and Influential Observations
10	Mar. 16 – 20	Time Series Components, Basic Models
11	Mar. 23 – 27	Multiplicative Decomposition, Simple Exponential Smoothing
12	Mar. 30 – Apr. 3	Forecast Error Comparisons