Regression Analysis
(STAT 3503 A, Summer 2021)

Instructor: Dr. Gang Li

Office: HP 5218 E-Mail: gli@math.carleton.ca

Phone: 520-2600 ext 8999 https://brightspace.carleton.ca/

Class Schedule

Class Times:	Monday& Wednesday	18:05 - 19:25	Brightspace
Tutorial Times:	Monday	19:35 - 20:25 & 20:35 - 21:25	Brightspace
Office Hours:	Monday& Wednesday	18:05 - 19:25	Brightspace
	OR by appointment		

Marking Scheme

Assignment	5	20% total
In Class Test	4	40% total
Final Exam		40%

Textbook

Applied Linear Statistical models , (5th Ed., McGraw Hill 2005) by *Kutner, Nachtsheim, Neter, and Li.*

Prerequisite

i).   STAT 2509 or STAT 2607, or ECON 2200, or ECON 2202, or equivalent; and

ii).   MATH 1102 or MATH 1107 or MATH 1109 or equivalent; or permission of the School.

Course Policies

- **Class:**   The first class(May 10, 2021) and the last class (August 16, 2021) will be synchronous classes, all other classes will be asynchronous classes, lecture videos will be posted before the scheduled class time.

- There will be **5 assignments** each worth 4% of your total grade.

  - ✓ Assignments are due on the assigned Sunday at 11:59 pm. No late assignments will be accepted. No E-mail submission is accepted.

  - ✓ You need to submit a single pdf file to Brightspace. Detailed instruction will be given in the assignment.

  - ✓ In case some students have diffidently to submit their assignment electronically, you may try these two apps: CamScanner and TapScanner. These apps can help you scan your assignment with a smart phone.

- **Tutorial :** You are required to attend all tutorials.

  - ✓ In the tutorial, TA will explain the SAS questions in the assignments.

  - ✓ First day of tutorials is May 17, 2021.

- There will be **four 40-minutes, closed book, online tests** on ***Wednesday, June 9, July 7, July 21, August 4, 2021, 6:45pm to 7:25pm.***   .

  - ✓ The four tests worth 40% of your total grade.

  - ✓ ***No make up, early, or delayed tests***.

  - ✓ If you maintain at least 40% on every test, the lowest test will be dropped. The average of the best 3 tests will be used to determine the test component of your total mark 40%.

- **Checking the Test/Assignment Grades**:

  - ✓ It is your responsibility to make sure that your test/assignment marks recorded correctly by visiting Brightspace.

  - ✓ Deadline to make any corrections on your test/assignment marks is within one week when you receive them.

- **Final Exam** will be 3-hours, closed book exam based on whole term.

  - ✓ It is the responsibility of each student to be available at the time of the examination. In particular, no travel plans for the examination period in **_August, 2021_** should be made until the examination schedule is published.

- **Passing Conditions:** Students who fail to achieve a term mark of at least 50% OR fail to achieve a minimum mark of 50% on the final exam will automatically be assigned a grade of F in the course. Exceptions to this rule may be made at the discretion of the instructors.

- **Missing test/assignment:**

  - ✓ Students who must miss a test must inform me prior to the test and provide supporting documentation within one business day of the test date. If you provide adequate documentation (doctor's note, etc), then the weighting of that test will be placed on the final exam, otherwise a mark of 0 will be given for the test.

  - ✓ Students who must miss a assignment must inform me prior to the due date of the assignment and provide supporting documentation within one business day of the due date. If you provide adequate documentation (doctor's note, etc), then the weighting of that assignment will be placed on the next test, otherwise a mark of 0 will be given for the assignment.

  - ✓ The total weight of missing test/assignment transferred to final exam must be less than 20% of total mark.

- **Homework:** Selected exercises, mainly from the text, will be posted on Brightspace. These exercises are not to be handed in and will not be graded. However, to succeed in the course it is **ABSOLUTELY ESSENTIAL** that you do the exercises on a regular basis.

- **Calculators:** ONLY **non-programmable calculators** will be permitted for tests and the final exam. I reserve the right to confiscate any calculator during a test or final exam.

- **Course Information:** All course related materials (slides, assignments, solutions, grades, announcements) will be posted on Brightspace.

  - ✓ It is highly recommended that you print the slides and bring them in as we will be discussing all of the content presented in the slides.

  - ✓ It is your responsibility to keep up with information announced in class, on Brightspace, or sent to your Carleton e-mail account.

- **E-mail:** According to Carleton University policy under the Freedom of Information of Privacy Act (FIPPA),

  - ✓ Please use your Carleton account ONLY for all course related email,

  - ✓ Write your course code **STAT 3503 on the subject line**. Failing to start your heading with the course code might send your e-mail to the spam folder.

  - ✓ Be patient. Don't expect an immediate response. Please allow 24-48 hours for a reply.

- **Copyright:** All course related materials (including slides, assignments, solutions, and tests) are intended for personal use only and MAY NOT be reproduced or redistributed without prior written consent of the author(s).

Tentative Schedule and Syllabus

Week	Textbook Sections	Topics
Week 1	Sec 1.1-1.8	Simple Linear Regression .
Week 2	Sec 2.1-2.11	Inferences in Regression and Correlation Analysis.
Week 3	Sec 3.1-3.9	Diagnostics and Remedial Measures
Week 4	Sec 4.1-4.7, 5.1-5.13	Simultaneous Inferences and Matrix Approach to SLR.
Week 5	Sec 6.1-6.9, 7.1-7.3	Multiple Regression.
Week 6	Sec 7.4-7.6, Review	Multiple Regression.
Week 7	Sec 8.1-8.2	Regression Models for Quantitative and Qualitative Predictors.
Week 8	Sec 8.3-8.7	Regression Models for Quantitative and Qualitative Predictors.
Week 9	Sec 9.1-9.6, 10.1-10.5	Model Selection and Validation, Diagnostics.
Week 10	Sec 11.1-11.5, 12.1-12.5	Remedial Measure , Autocorrelation in Time Series Data.
Week 11	Sec 14.1-14.10	Logistic Regression, Poisson Regression and Generalized Linear Models.
Week 12	14.11-14.12 Review	Logistic Regression, Poisson Regression and Generalized Linear Models. & Review

- This schedule is subject to change depending on the progress of the course.

University Policies

- **Academic Integrity:** Students are required to be familiar with Section 10 of the Academic Regulations of Carleton University.

  - ✓ All tests, assignments, quizzes, and exams are to be done independently.

  - ✓ **Academic dishonesty in any form will not be tolerated.**.

  - ✓ Students who violate the standards of academic integrity during a test/examination will receive a grade of zero for that test/examination, and will be required to meet with the Associate Dean of Science for further disciplinary action.

- **Students with disabilities** requiring academic accommodations in this course must contact a coordinator at the Paul Menton Centre for Students with Disabilities to complete the necessary Letters of Accommodation. After registering with the PMC, make an appointment to meet and discuss your needs with me in order to make the necessary arrangements as early in the term as possible. Please note the deadline for

submitting completed forms to the Paul Mention Centre is ***July 30, 2021.*** For more details visit the PMC website.

- **Pregnancy obligation:** write to me 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 visit the Equity Services website.

- **Religious obligation:** write to me 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 visit the Equity Services website.

Important Dates

- **Tests:** ***Wednesday, June 9, July 7, July 21, August 4, 2021, 6:45pm to 7:25pm.***

- **Withdrawal:** The last day for academic withdrawal from the course is *August 16, 2021*.

- For more information, please visit Dates and Deadlines.

The End

Last modified: April 21, 2021, 17:02