

STAT 5602W: Analysis of Categorical Data, Winter 2022

Instructor: Song Cai

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Hours, Locations and Webiste:

Lectures (online):

Time: Tue. and Thu. 13:05–14:25

Zoom link: <https://carleton-ca.zoom.us/j/97741593839>

Passcode: 323247

Office hours (online):

Time: Thu. 16:00–17:00

Zoom link: <https://carleton-ca.zoom.us/j/94845501341>

Course website:

<http://people.math.carleton.ca/~scai/teaching/stat5602-w22/>

Brightspace (for grades only): <https://brightspace.carleton.ca>

Important Dates:

First day of classes: Jan. 11, 2022

Last day of classes: Apr. 12, 2022

Feb. 22–25, 2022: Spring break; no classes

Important dates and deadlines, 2021–2022:

<https://calendar.carleton.ca/academicyear/>

Dates of Religious/Spiritual Observances:

<https://carleton.ca/equity/focus/discrimination-harassment/religious-spiritual-observances/>

Note: It is your responsibility to inform me which holy days apply to you and you have to do so within the first two weeks of the class. The due dates for assignments and exams will not be changed for holy days after this two-week period.

Textbook:

A. Agresti, *Categorical Data Analysis*, 3rd ed., Wiley, 2012

Reference book:

C. R. Bilder and T. M. Loughin, *Analysis of Categorical Data with R*, CRC Press, 2015

Prerequisites:

STAT 5600 and STAT 5501

Familiarity with R statistical software

Assessment Rules (**provisional**):

- Three or four assignments: 30%
Marking scheme: 15 (perfect), 13 (good), 10 (OK), 6 (much effort needed), 3 (nonsense), 0 or 1 (you have learned nothing); no other marks
- A in-class midterm exam: 35%
- A final exam: 35%

Topics (provisional):

1. Basics of categorical data analysis: distributions and inference
2. Analysis of contingency tables
3. Introduction to generalized linear models for categorical data
4. Statistical Models for binary data
5. Statistical Models for multinomial data
6. Loglinear models for contingency tables
7. Other topics (time permits): statistical models for matched pairs, introduction to analysis of ordered categorical data, etc.

Important Notes:

- Asking content-related questions by emails is not encouraged. You should always come to my office hour for such questions to avoid unnecessary confusions.
- When asking schedule-related or clarification questions by emails, you should expect a waiting time of 24 to 48 hours for me to process.
- If you want to make an appointment other than the regular office hours, you should expect a meeting at least one week after the date you make the appointment.
- Late submissions of assignments will not be accepted and a zero mark will be given in that case unless you can provide a documented reason (e.g., medical), in which case the weight of that assignment will be shifted to the other assignments.
- If you want to see your final exam paper, you have to make an appointment within two weeks of the final exam.
- Your grade will not be changed in any case according to your special needs (such as scholarship, etc).
- Students from the University of Ottawa should gain access to cuLearn at Carleton University. To do this, follow the instruction given at <https://carleton.ca/culearnsupport/instructors/u-of-o-students-accessing-culearn/>.

Academic Integrity Policy:

<http://carleton.ca/studentaffairs/academic-integrity/>

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 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 see the [Student Guide](#).

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 see the [Student Guide](#).

Academic Accommodations for Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and 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 me to ensure accommodation arrangements are made. Please consult the [PMC website](#) for the deadline to request accommodations for the formally-scheduled exam (if applicable).