
University of Toronto
Department of Statistical Sciences
STA437/2005 Methods of Multivariate Data

Handout: Course Information

Fall 2022

Teacher: Mehdi Molkaraie

Email: mehdi.molkaraie@utoronto.ca

Teaching Assistants:

- Colin Decker, colin.decker@utoronto.ca
- Meihui Lin, meihui.lin@mail.utoronto.ca
- Miaoshiqi Liu, miaoshiqi.liu@mail.utoronto.ca

Schedule:

Wednesdays from 18:00 to 21:00 at MY150

Course Reference:

Richard Johnson and Dean Wichern, *Multivariate Statistical Analysis*, 6th Edition, Pearson, 2007.

Evaluation for undergraduate students:

Item	Credit	Description
Homework	No credit	Will be posted on Quercus
Online Quiz	20%	Quercus quizzes
Midterm	40%	In person
The Final Assessment	40%	In person; Covers all the material

Evaluation for graduate students:

Item	Credit	Description
Homework	No credit	Will be posted on Quercus
Online Quiz	10%	Quercus quizzes
Midterm	40%	In person
The Final Assessment	40%	In person; Covers all the material
One Research project	10%	Will be posted on Quercus on Oct 26th

Graduate students are required to do one research projects.

- **No collaboration with anyone else in (or outside) the course is permitted on the quizzes, the midterm exam, and the final assessment. During all the quizzes/exams, you can use/consult:**
 - A non-programmable calculator.
 - Two pages (letter-size and double sided) of personal notes.

- **Schedule:**

Online Quiz: Available from Wednesday October 17 – Sunday October 23.

Midterm: Wednesday, November 16, from 6:00pm – 9:00pm (in person).

The Final Exam: Will be scheduled by the Faculty (in person).

- **Office Hours:**

Weekly office hours will be held at Sidney Smith Building, floor G, SS623B. Details will be posted on Quercus during the second week of the lectures.

- **Policies:**

- **Missed tests:** 0% will be recorded for missed tests unless you request accommodation from your instructor as follows. You need to communicate your absence (and the reason for your absence) to your instructor via email in advance (i.e., before the tests) and declare your absence via ACORN absence declaration form. If missed for a legitimate reason, at most 1 test can be accommodated by shifting its weight to the final assessment. If more than one test is missed for legitimate reasons, however, an alternative assessment will be arranged at the instructors' discretion, which may have a different format.
- After releasing test grades, you will have one week to ask for regrading. Details will be announced on Quercus.

- **Prerequisite:**

STA302H1/STA352Y1/STAC67H3/STA302H5 (MAT224H1/MAT247H1 recommended)

- **Topics:**

- (Brief) Introduction to matrix algebra and random vectors,
- Sample geometry and random sampling,
- Multivariate normal distribution,
- Multiple regression analysis,
- Principle component analysis, and
- (if time permits) Factor analysis.

- **Notice:**

Course videos and materials belong to the instructor, the University, and/or other source depending on the situation, and are protected by copyright. In this course, you are permitted to download session videos and materials for your own academic use, but you should not copy, share, or use them for any other purpose without the explicit permission of the instructor.

- **Students with Disabilities or Accommodation Requirements:**

Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) at the beginning of the academic year by visiting <http://www.studentlife.utoronto.ca/as/new-registration>. Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will assess

your situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your needs or condition with any instructor, and your instructors will not reveal that you are registered with AS.

- **Academic Integrity:**

All students, faculty and staff are expected to follow the University's guidelines and policies on academic integrity. For students, this means following the standards of academic honesty when writing assignments, collaborating with fellow students, and writing tests and exams. Ensure that the work you submit for grading represents your own honest efforts. Plagiarism—representing someone else's work as your own or submitting work that you have previously submitted for marks in another class or program—is a serious offence that can result in sanctions. Speak to me or your TA for advice on anything that you find unclear. To learn more about how to cite and use source material appropriately and for other writing support, see the U of T writing support website at <http://www.writing.utoronto.ca>. Consult the Code of Behaviour on Academic Matters for a complete outline of the University's policy and expectations. For more information, please see <https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity> and <http://academicintegrity.utoronto.ca>