

**Course:** STA437H1 F LEC5101

**Teacher:** Mehdi Molkaraie

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**Teaching Assistants:**

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**Schedule:**

Wednesdays from 18:00 to 21:00 at MC 102.

**Course Reference:**

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

**Evaluation for undergraduate students:**

Item	Credit	Description
Two Assignments	Each 10%	Will be posted on Quercus
Midterm Exam	30%	In person on October 23
Final Exam	50%	In person; Covers all the material

**Evaluation for graduate students:**

Item	Credit	Description
Two Assignments	Each 5%	Will be posted on Quercus
Midterm Exam	25%	In person on October 23
Final Exam	50%	In person; Covers all the material
One Research Project	15%	Will be posted on Quercus

Graduate students are required to do one research projects. The project will be posted on Quercus by Oct 23, submission deadline is 1 Dec.

- **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 exams, you can use/consult:**
  - A non-programmable calculator.
  - Two pages (letter-size and double-sided) of personal notes (typed or handwritten).

- **Assignment/Exam Schedule:**

- **Assignment 1:** Deadline: 16 Oct. Details will be posted on Quercus.
- **Assignment 2:** Deadline: 20 Nov. Details will be posted on Quercus.
- **Midterm Exam:** Wednesday, October 23, during class hours (in person).
- **Final Exam:** Will be scheduled by the Faculty (in person).

- **Office Hours:**

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

- **Policies:**

- **Absence declaration:** If you become ill and it affects your ability to do your academic work, consult me right away. Normally, I will ask you for documentation in support of your specific medical circumstances. This documentation can be an Absence Declaration (via ACORN) or the University's Verification of Student Illness or Injury (VOI) form. The VOI indicates the impact and severity of the illness, while protecting your privacy about the details of the nature of the illness. If you cannot submit a VOI due to limits on terms of use, you can submit a different form (like a letter from a doctor), as long as it is an original document, and it contains the same information as the VOI (including dates, academic impact, practitioner's signature, phone and registration number).
  - \* For more information on the VOI, please see <http://www.illnessverification.utoronto.ca>.
  - \* For information on Absence Declaration Tool for A&S students, please see <https://www.artsci.utoronto.ca/absence>.
  - \* If you get a concussion, break your hand, or suffer some other acute injury, you should register with Accessibility Services as soon as possible.
- **No late work:** Late work will not be accepted.
- **Missed tests:** If you miss the deadline to submit the assignments or miss the midterm exam, the weight will be shifted to the final assessment.
- **Regrading requests:** After releasing the 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,
- Random vectors,
- Sample geometry and random sampling,
- Multivariate normal distribution,
- Multiple regression analysis,
- Principle component analysis,

- Introduction to covariance selection models, 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>