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

Handout: Course Information Winter 2021

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Delivery:

We will use a mixture of synchronous and asynchronous learning. The slides of the lectures and prerecorded videos will be uploaded on Quercus.

Course Reference:

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

Evaluation for undergraduate students:

Item	Credit	Description
Tests/Quizzes	$4 \times 20\%$	On Quercus Assignments
Homeworks	No credit	Will be posted on Quercus
The Final Assessment	20%	Covers all of the material

Evaluation for graduate students:

Item	Credit	Description
Tests/Quizzes	$4 \times 18\%$	On Quercus Assignments
Homeworks	No credit	Will be posted on Quercus
Research project	8%	One project: total credit 8%
The Final Assessment	20%	Covers all of the material

Graduate students are required to do one research projects.

- **The tests and the final assessment are open-book but must be completed on your own, independently. No collaboration with anyone else in (or outside) the course is permitted on the tests and the final assessment. During the exams, you can use/consult:**
  - A non-programmable calculator
  - The course reference
  - The slides of the lectures
  - Your personal notes

- **Schedule:**

  Test/Quiz 1: Tuesday, January 26, 15:45 – 17:00

  Test/Quiz 2: Tuesday, February 9, 15:45 – 17:00

  Test/Quiz 3: Tuesday, March 2, 15:45 – 17:00

  Test/Quiz 4: Tuesday, March 23, 15:45 – 17:00

  The Final Assessment: Tuesday, April 6, 15:00 – 17:00

- **Online class meetings:**

  Online class meetings on BB colab are scheduled on **Tuesdays** from **16:00–17:00**.

  Additional online meetings (e.g., before each test) will be announced on Quercus.

- **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 on ACORN. 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. Note that this alternative assessment may have a different format (e.g., oral assessment) and will be scheduled in April after classes end.
  - **Submissions:** Solutions have to be submitted directly on "Quercus Assignment' or "Quizzes". Accepted formats are PDF, JPG, JPEG, and DOC – preferably not DOCX.
  - You can also submit your solutions via email before the deadline, **but not later**.
  - Details regarding students interested in regrading 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,
  - 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