

Math 1104-G (Winter 2019)

Linear Algebra for Engineering or Science

Instructor: Nicolas Arancibia Robert
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Office Hours: Monday 1:00-2:30.

Lectures: Monday and Wednesday 10:05 am - 11:25 am in Minto Centre 2000.

Tutorials: Monday 11:35 am - 12:25 pm.

Prerequisites: Ontario Grade 12 Mathematics: Advanced Functions,
or MATH 0005, or equivalent, or permission of the School.

Textbook: *Linear Algebra and its Applications*, 5th ed.
by Lay, Lay, & McDonald.

Other reference: *A First Course in Linear Algebra* by Robert A. Beezer
Linear Algebra Done Wrong (latest edition) by Sergei Treil

Method of Evaluation:	Tests (best 2 out of 3)	45%
	Final Exam	50%
	Tutorial Work	5%

Topics Covered: Systems of linear equations. Matrix algebra. Determinants. Invertible matrix theorem. Cramers rule. Vector space \mathbb{R}^n ; subspaces, bases. Eigenvalues, diagonalization. Linear transformations, kernel, range. Complex numbers (including De Moivre's theorem). Inner product spaces and orthogonality. Applications.

Pregnancy or religious obligation: Write 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.

Students with disabilities requiring academic accommodations in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to

contact the PMC every term to have a Letter of Accommodation sent to the Instructor by their Coordinator. In addition, students are expected to confirm their need for accommodation with the Instructor no later than two weeks before the first assignment is due or the first in-class test/midterm. If you require accommodations only for formally scheduled exam(s) in this course, you must request accommodations by the official accommodation deadline published on the PMC website.

Comments:

- The tests will be held during the tutorial sessions on the following dates:
 - Test 1: Monday, January 27
 - Test 2: Monday, February 24
 - Test 3: Monday, March 23
- Tests must be written at the scheduled time; no provision is made for make-up tests. You must bring your student card to each test and exam and place it on your desk where it is visible.
- The final exam is a three hour closed book test to be scheduled by the University. The date, time, and location will be announced at some point during the term.
- A basic (non-scientific) calculator may be used on the tests and exam, but is not required.
- Plagiarism and cheating will not be tolerated and can lead to severe penalties – consult the undergraduate calendar.
- During the tutorial sessions, a TA will be present to work out selected problems, to answer questions, and to administer the tests.
- You are expected to attend all lectures. If you miss a lecture, it is your responsibility to understand all material from that lecture, and to get any information given. Please try to avoid missing class.
- Student or professor materials created for this course (including any posted notes, tutorials, tests, and solutions) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).