

Mathematics 1071: Vectors and Matrices

Fall 2017

Instructor: Rachael Sundell

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Lectures: Monday, Wednesday, Friday, 12:30pm-1:30pm, UC2011

Lab: Friday, 2:30pm - 4:30pm, BB1021

Office Hour: Wednesdays at 1:30pm-2:30pm or by appointment

Textbook: *Elementary Linear Algebra*, 2nd Canadian Edition, by Stewart Venit, Wayne Bishop, and Jason Brown

Course Content: This course will cover the following material: Cartesian coordinates; vectors in two and three dimensions; the dot product and components of vectors; the cross product; equations of lines and planes; vector spaces; linear independence, bases and spanning sets; subspaces; matrices; addition and scalar multiplication of matrices; matrix multiplication; the transpose of a matrix; invertible matrices; systems of linear equations and row reduction; and determinants, including Cramer's rule.

Lab: The lab will reinforce concepts through examples, as well as provide students with the opportunity to ask questions about the content given in class or assignment problems. Though the lab is not mandatory, it is beneficial to attend. Assignments will also be handed back during the lab.

Course Webpage: The course webpage can be found through mycourselink on myinfo. Here you will be able to find assignments and their solutions as well as lecture notes and reviews for exams. Any changes to the course will be updated on the course webpage and students are encouraged to check the page regularly.

Grading Scheme:

Assignments	15%
Midterm 1	20%
Midterm 2	20%
Final Examination	45%

NOTE: If one of the midterm marks is lower than the final examination, the weight of that midterm will be moved to the final examination, giving the following grading scheme:

Assignments	15%
Midterm	20%
Final Examination	65%

Assignments: There will be a total of 6 assignments given approximately every two weeks. The lowest assignment grade will be dropped.

- All assignments should include a cover page with the following information: course number, assignment number, student name and ID.
- Assignments should be dropped off in the assignment boxes on the second floor of the Ryan building before midnight of the due date. Solutions will be available on the course webpage the day after the assignment is due.

Please note that **late assignments will not be accepted**. Students are encouraged to work together to understand the concepts in each assignment, but individual assignments must be submitted and copying is not allowed.

Midterm and Final Exam: There will be two midterm examinations: Monday, October 9th and Monday, November 6th. The date of the final examination will be provided when it is scheduled.

- Midterms and the final examination will be closed book with the exception of a one-sided sheet of 8.5" x 11" paper of personal study notes.
- Calculators are not allowed in midterm and final examinations.
- If a midterm is missed, there will be no makeup test. If a valid excuse is given (e.g., doctors note), then the weight of the midterm will be moved to the final examination.

Important Dates: Please note the following important dates:

September 5th : First day of class
 September 18th : Final date to register
 October 9th : First Midterm
 October 13th : Thanksgiving - University Closed
 November 3rd : Final date for withdrawal
 November 6th : Second Midterm
 December 4th : Final day of class
 December 7th : First day of exams
 December 18th : Final day of exams

Tutoring: At the Student Success Centre (SC 0008) every student has 5 free hours of tutoring every academic year. The Lakehead University Mathematics Assistance Centre (LUMAC) provides free tutoring in LI 2004 throughout the academic year (for hours visit <https://www.lakeheadu.ca/academics/departments/math/lumac>).