Course Outline

Math 2255 Linear Algebra I

Instructor: Maria Grazia Viola
E-mail: mviola@lakeheadu.ca
Office Hours: Tuesday 1:15-2:30, Wednesday 11:00-1:00, or by appointment.

Lectures: Tuesday and Thursday 4:00-5:30.

Textbook: Linear algebra and its applications by D. Lay, sixth edition.

Course Outline:
Chapter 1: Linear systems, row reduction and echelon form, linear independence, linear transformations.
Chapter 2: Matrix operations, the inverse of a matrix, matrix factorization, subspaces, dimension and rank.
Chapter 3: Determinant, Cramer's rule.
Chapter 4: Vector spaces and subspaces, null spaces, bases, dimension of a vector space, change of basis.
Chapter 5 (if time allows it): Eigenvectors and eigenvalues, the characteristic polynomial, diagonalization, eigenvectors and linear transformations, complex eigenvalues.

Reading: You should read the material that will be covered in class before coming to class so that you know in advance which points are more obscure for you and you can ask questions in class.

Grading System: The final grade will be determined by a midterm, a _final exam and the homework. The weight of each component is as it follows:
Homework Grade 20%
Midterm 35%
Final 45%

Exam Schedule: The midterm will be October 27.

Homework: I will give a list of homework problems weekly to work as practice. The homework will be collected every Thursday. No late homework will be accepted. IF YOU WORK ALL THE ASSIGNED HOMEWORK PROBLEMS, YOU SHOULD DO WELL IN THE COURSE. Moreover, I will drop the lowest homework grade when determining your final homework grade.

Calculator: A basic calculator will be allowed in the exams.

Make-up policy: A make-up midterm will be given only with a valid university excuses (sickness, etc). A make-up midterm must be written within two weeks of the original date.

This is a general outline. Any communication or change regarding this outline, the time and location of exams as well as other matters concerning the course will be posted on D2L and announced in the lecture.