

MAT240 - Algebra I[36L/24T]

Instructors

Instructor	Eckhard Meinrenken
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Office	MA 6112
Office Hours	Tuesday 1:30-2:30, or by appointment

Course Description

A theoretical approach to: vector spaces over arbitrary fields, including \mathbb{C} and \mathbb{Z}_p . Subspaces, bases and dimension. Linear transformations, matrices, change of basis, similarity, determinants. Polynomials over a field (including unique factorization, resultants). Eigenvalues, eigenvectors, characteristic polynomial, diagonalization. Minimal polynomial, Cayley-Hamilton theorem.

Textbook. Linear Algebra (4th edition); by Friedberg, Insel and Spence. Prentice Hall

Course Website. The website for the course is

<http://www.math.toronto.edu/mein/teaching/MAT240/MAT240.html>

Homework Assignments

There will be 9 homework assignments, which you must submit by the due date. We intend to use the *Crowdmark* system for the submission of homeworks (to be confirmed). These assignments will be given throughout the course which will cover the recent material discussed in lectures.

There will be some additional assignments that are not to be submitted. You are expected to work on these assignments as well. (They may be relevant for the term test or final exam.)

You are expected to work on the questions assigned, and if you cannot solve a problem, you should ask your TA and/or the instructor for help. Your homework mark will be determined by the taking the average of the best 8 assignments.

Term Tests

There will be 1 term test, taking place on Tuesday, October 18, 11:10-13:00 in EX 200.

You must bring your student card to the term test. No aids will be allowed.

Missing Term Work

If you cannot show up for a test because of illness or any other special reason, you **MUST** submit the official UofT medical certificate, which can be downloaded at

<http://www.illnessverification.utoronto.ca/>

There will be **NO** make-up tests. The marking scheme will be adjusted appropriately for students who have missed a test because of illness or any other (approved) legitimate reason.

Final Exam

The final exam will take place during the examination period, and will be 3h long. It will cover all the material presented in lectures and tutorials.

Aids permitted: None

Marking Scheme

Your final grade is determined in the following way:

Homework	(best 8 out of 9)	20 %
Term Test 1	10/18/2016	30 %
Final Exam	Date: TBA	50 %
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		100 %

Code of Behaviour / Plagiarism

Students should become familiar with and are expected to adhere to the Code of Behaviour on Academic Matters which can be found at:

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>