

Math 2R03 Linear Algebra II Information Sheet
Term 1 Autumn 2007–2008

Instructor:

Dr. D. Haskell, HH 316 ext 27244, haskell@math.mcmaster.ca
office hours: Wednesday, Friday, 10:30-12:00

Website: http://www.math.mcmaster.ca/~haskell/math2r_07-08/webpage2r-07.html

Text: 1) *Linear Algebra with Applications, 5th edition* by Keith Nicholson, McGraw-Hill, Ryerson. Students may use the fourth edition, but this will not be supported by the instructor. That is, students are responsible for comparing the editions, and being aware of discrepancies. All references to the text, including recommended problems, will be to the fifth edition.

2) *Lyryx Interactive Linear Algebra*, <http://lila.lyryx.com> Students must establish a LILA account to complete the assigned homework problems. Any student who had an account within the past 12 months can renew that account for a reduced fee.

Course objective: Develop properties of abstract vector spaces, building on the intuition that came from the study of real euclidean space in Linear Algebra I. Includes the study of inner product spaces, orthogonality, and linear transformations. Applications to other parts of mathematics.

Weekly schedule: See the website for a more detailed outline of the course material.

Lectures and Tutorials: There will be three lectures and one tutorial per week. The lectures will be used to present new material. The tutorial is an opportunity for students to solidify their grasp of concepts, as well as working through examples, clarifying LILA assignments and reviewing for midterms.

Assessment: Your grade will be based on LILA assignments, two projects, two in-class midterms and the final exam. The distribution is as follows, although the instructor reserves the right to change the weight of any portion of this marking scheme.

LILA assignments — 10%

Projects — 10%

Midterm I — 20%

Midterm II — 20%

Final — 40%

The tentative dates for tests and exams are:

Midterm I: Wednesday, 3 October, 19:00–20:30

Midterm II: Wednesday, 7 November, 19:00–20:30

LILA assignments: Each section of the textbook covered will have an associated LILA lab to be completed. The due dates can be seen on the course website, and are chosen to be the Thursday following the day when the material is completed in lectures. The LILA assignments are intended to keep you working consistently on the course material, and to

act to let you know if you are understanding the material. They can be repeated as often as you like.

Recommended problems: are an essential part of the course. Working through these problems will help you understand the material of the course. I cannot stress too much that to understand mathematics you must DO it.

Projects: Each project will be a more in-depth exploration of an application of linear algebra. You may work in groups of up to four people, but each person named on the submission must be a contributing member of the group.

Exams: The exams will involve both theory and examples. You will be required to state definitions, and do problems that involve both proofs and calculations. At least one problem on each exam will be chosen from the list of recommended problems on the course website.

All work submitted must be YOUR OWN. At the same time, you are encouraged to discuss problems and general ideas with each other. Mathematics need not be an isolating activity. What you may not do is to copy someone else's work.

To be explicit: You MAY print out a LILA assignment and ask your instructor, TA, or another student for help on how to do the problems. You MAY NOT have another student work the problem for you, and then input the solution.

You MAY discuss the solution to a project with other students. You MAY NOT copy another student's solution, or put your name on another student's submission without contributing to the solution.

Important reminders:

Late assignments will not be marked.

Only excuses validated by the Dean's office will be accepted for missing any examinations. You must bring your student ID to the midterms and the final exam.

Only the McMaster standard calculator Casio fx-991 will be allowed in the midterms and final exam.

Final Policy Notes:

(i) It seems unfortunate but necessary to reproduce the words of the dean on cheating: *Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.*

It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy located at

<http://www.mcmaster.ca/univsec/policy/AcademicIntegrity.pdf>

The following illustrates only three forms of academic dishonesty:

Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.

Improper collaboration in group work.

Copying or using unauthorized aids tests and examinations.

(ii) The instructor reserves the right to change or revise information contained in this course outline.