Department of Mathematics and Statistics
McGill University

MATH 133: Linear Algebra and Geometry

MATH 133: Linear Algebra and Geometry (3 credits; Prerequisite: a course in functions). Topics to be covered: Systems of linear equations, matrices, determinants, eigenvalues, eigenvectors, and diagonalization. Vector geometry, lines and planes, linear transformations. Subspaces of $\mathbb{R}^n$, linear independence, bases.

Textbook: Nicholson, W.K. (2004). *Elementary Linear Algebra, 2nd Ed.*, ISBN: 0-07-091142-8, McGraw-Hill (paperback). We will cover the following sections:

- Chapter 1: Sections 1.1 to 1.6 (but leave out subsections 1.4.4, 1.4.5, 1.4.6, and 1.6.3)

- Chapter 2: Sections 2.1, 2.2, 2.3 (2.3.4 is optional)

- Chapter 3: Sections 3.1 (except 3.1.7), 3.2, 3.3, 3.4 (except 3.4.6, 3.4.7), 3.5 (3.5.3 is optional)

- Chapter 4: Sections 4.1 to 4.4

		Formula I	Formula II
Marking Scheme:	Assignments (2):	10%	10%
	Webwork (8):	5%	5%
	Midterm (one hour):	15%	
	Final Exam (three hours):	70%	85%

Your final mark for the course will be the greater of the marks computed from these two formulas. Those students who do not write the midterm will be marked according to formula II. There is no option of a 100% final. No additional work will be given in order to upgrade a final mark. Students with final grade of D or F have the right to apply to take a supplemental exam.

Assignments: There will be two written assignments. Assignments are handed in, and will be returned, at your tutorial.

Webwork: There will be about eight WebWork assignments. WebWork is very sensitive to how you input your solutions, and can be quite frustrating, even thought your solution is correct. WebWork 0 shows you how to avoid making these kind of errors. So be sure to do Webwork 0 which is a practice Webwork and does not count toward your mark.

 Midterm: There will be a midterm examination. It will be multiple choice and computer marked. The details will be announced later and posted on "mycourses".

Assignment Plagiarism: Assignments must be done individually. You may not copy another person's work. Furthermore, you must not give a copy of your work to another student.

Calculators and Machine Scoring: No calculators will be allowed during the midterm or final examination. Note also that both exams may be part multiple choice and machine scored.

Important: In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.

Right to submit in English or French written work that is to be graded [approved by Senate on 21 January 2009]: In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Statement on Academic Integrity: McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/students /srr/honest/) for more information).

L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le site www.mcgill.ca/students/srr/honest/).

January, 2013.