

## Linear Algebra for Engineering or Science Math1104F, Winter 2013

**Instructor:** Dr. Steven Wang, 4368HP  
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**Lectures:** Monday, Wednesday 11:35am - 12:55pm, Azrieli Theatre 102

**Tutorials:** Monday, TBA

<i>Sections</i>	<i>Room</i>	<i>TA's name</i>	<i>TA's email</i>
<i>F1</i>	<i>SA317</i>	<i>TBA</i>	<i>TBA</i>
<i>F2</i>	<i>PA201</i>	<i>TBA</i>	<i>TBA</i>
<i>F3</i>	<i>SA318</i>	<i>TBA</i>	<i>TBA</i>
<i>F4</i>	<i>SA501</i>	<i>TBA</i>	<i>TBA</i>

**Office hours:** Monday, Wednesday 1:30pm-2:30pm.

**Textbook:** “*Elementary Linear Algebra*”, Custom Edition , Nelson Publishing, available at the Haven Books.

**Prerequisites:** Ontario Grade 12 Mathematics: Advanced Functions, or MATH 0005, or equivalent, or permission of the School.

**Course Objective:** The purpose of this course is to introduce students system of linear equations, matrix algebra and vector spaces, determinants, complex numbers, Eigenvalues, orthogonalization and applications.

**Evaluation:** Tests (40%), Tutorials (10%), and Final Examination (50 %). Students who don't have a 30% of the term marks (15 out of 50) and are absent on the final exam will be assigned the grade of FND.

**Tutorials:** Tutorials begin on January 14, 2013. In each tutorial you will be given some questions to work on. You are grouped in a team of four or five students. You may have discussions with the TA and/or your study partners about the tutorial questions. At the end, each team submits one

set of answer to the TA. Each member will have the same mark (0, or 2.5, or 5). TA's names and office hours will be announced later.

**Tests:** There will be three 50 minutes tests held during tutorial time. Each test contributes the same marks. You are expected to take all the tests. No make up, early or delayed tests will be given. Medical excuses, other than hospitalization, will not be considered. Best 2 tests out of 3 will be counted as 40%. TESTS dates: **Jan. 28, Feb. 25 and Mar. 18.**

**Final Examination:** This is a three hour closed-book exam scheduled by the University and will take place sometime during the examination period (April 13-27, 2013). Students wishing to see their examination papers must make an appointment within three weeks of the examination. This privilege is for you to learn where you went wrong and is not an opportunity to argue about the marking!

**Calculators:** You may use only simple non-programmable, non-graphing calculators for the tests and the final examination in this course. I reserve the right to disallow any calculators.

**Tutorial Centre:** HP1160, will be opening on Monday Jan. 21, 2013. Hours for the centre: Monday to Thursday 10 am to 4 pm.

### **Academic Accommodation**

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: [http://carleton.ca/equity/accommodation/student\\_guide.htm](http://carleton.ca/equity/accommodation/student_guide.htm)

Religious obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: [http://carleton.ca/equity/accommodation/student\\_guide.htm](http://carleton.ca/equity/accommodation/student_guide.htm)

Students with disabilities requiring academic accommodations: in this course

must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities could include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC, 613-520-6608, every term to ensure that I receive your Letter of Accommodation, no later than two weeks before the first assignment is due or the first in-class test/midterm requiring accommodations. If you only require accommodations for your formally scheduled exam(s) in this course, please submit your request for accommodations to PMC by the last official day to withdraw from classes in each term. For more details visit the PMC website: [http://www.carleton.ca/pmc/students/acad\\_accom.html](http://www.carleton.ca/pmc/students/acad_accom.html)

## Math1104F Tentative lecture schedule—subject to change

Week	Dates	Sections	Notes
1	Jan. 7-11	1.1-1.2, 2.1	
2	Jan. 14-18	2.3-2.4	
3	Jan. 21-25	2.4-2.5	
4	Jan. 28 - Feb. 1	3.1-3.3	<b>Test #1 (Jan. 28),</b>
5	Feb. 4-8	3.4, 4.1	
6	Feb. 11-15	4.2-4.3	
7	Feb. 18-22		Winter break
8	Feb. 25-Mar. 1	4.4-4.5,	<b>Test #2 (Feb. 25),</b>
9	Mar. 4 -8	4.6-4.7	
10	Mar. 11-15	7.1-7.3.	
11	Mar. 18-22	8.1-8.3	<b>Test # 3 (Mar. 18)</b>
12	Mar. 25-29	5.1-5.2	
13	Apr. 1 -5	notes; 6.1-6.2	complex numbers, complex eigenvalues
14	Apr. 8-10	6.3	