



Faculty of Science
DEPARTMENT OF MATHEMATICS and STATISTICS
Course Information Sheet

1. Course: MATH 221 – Linear Algebra for Scientists & Engineers FALL 2003
Lecture/Time/Session: L17 MWF 12:00 (Duration: 50 minutes) Room: ST 141
Instructor(s): K.W. Nicholson
Office: MS 314 Phone: 220-3954

2. Prerequisite(s): A grade of 70% or higher in Mathematics 30 or Pure Mathematics 30.
Co-requisite(s): None

Note: The Faculty of Science policy on pre- or co-requisite checking is outlined on page 198, of the 2003-2004 Calendar. It is a student's responsibility to ensure that they have the pre- and/or co-requisites for the course, and if they do not they will be withdrawn from the course without further notice.

3. **Fee Policy:** After the last day to drop/add courses, there will be no refund of tuition fees if a student withdraws from a course, courses or the session.

4. **The University policy on grading and related matters** is described on pages 41-42 of the 2003-2004 Calendar. In determining the overall grade in the course, the following weights will be used:

Mid-term Test(s)	[2]	30%
Quizzes	[18]	20%
Final Exam		50%

There will be a final examination scheduled by the Registrar's Office. The use of aids such as open book, etc. is not permitted.

5. **Missed Components of Term Work.** The regulations of the Faculty of Science pertaining to this matter are outlined on page 199, of the 2003-2004 Calendar. It is the student's responsibility to familiarize herself/himself with these regulations.

6. **Academic misconduct** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the 2003-2004 University Calendar under the heading "Student Misconduct", pages 53-56.

7. **Dates and times of class exercises held outside of class hours** (evening test, Saturday laboratory examinations, week end field trips, etc.): None

TEXT: *Elementary Linear Algebra*, 2nd Edition by W. Keith Nicholson, McGraw-Hill Ryerson, 2001; "bundled" version.

The new "bundled" version of the textbook contains a special pincode giving you direct access to the website (see below). If you do not purchase a textbook, then the cost for the website (which contains an electronic version of the textbook) is \$39.95 plus GST.

GRADING: The final grade will be based on the following tests:

Online Labs (18): 20%

Midterm Exams (2): 30%

Final Exam (1): 50%

ONLINE LABS: These labs are from the *Lyryx Interactive Linear Algebra* website, and can be taken anywhere you have access to the internet. You must do a lab for each of the sections in the course (see the schedule below). You can try these labs as many times as you wish (only a better grade is recorded), and must be completed prior to the following deadlines:

Labs on Sections 1.1--1.6, must be submitted **before midnight on October 3**

Labs on Sections 1.8, 2.1--2.6, must be submitted **before midnight on November 7**

Labs on Sections 3.1--3.5, must be submitted **before midnight on December 8**

MIDTERMS: Two 50 minute midterm exams will be held in the lecture period on the following dates:

Midterm 1: Friday, October 3

Midterm 2: Friday, November 7

FINAL EXAMINATION: This will be a 3-hour test worth 50% of the final grade, scheduled by the Registrar.

Lyryx Interactive Linear Algebra: The website contains much more than the labs. It also includes narrated and animated tutorials, explorations to enhance your understanding (and which can be used as computing tools), a message board to post questions, and the entire textbook! And it is available anywhere, anytime, through the internet.

TUTORIALS: Instead of the tutorials posted on your schedule from the Registrar, we have booked the computer room **MS 515** at times on Mondays, Tuesdays, Wednesdays and Thursdays, **to be announced** in class. These are not mandatory and are more like a drop-in centre. There will be teaching assistants in the room during these hours to answer any questions you may have about exercises, theory in the course, and the software.

IMPORTANT NOTE: The midterm and final examinations will **not** be held in the computer room. They are traditional exams, written on good old paper. So you must also learn to do many of the exercises yourself, without relying on the computer.

LECTURE SCHEDULE: Here is an approximate outline of the contents of the course.

WEEK	MATERIAL	COMMENTS
Sep 8-12	1.1, 1.2, 1.2	Lectures begin Monday September 8
Sep 15-19	1.3, 1.4, 1.4	
Sep 22-26	1.4, 1.5, 1.5	
Sep 29-Oct 3	1.5, 1.6, Mid 1	Midterm 1: Friday, October 3 in class
Oct 6-10	--, 1.8, 2.1	Thanksgiving: Monday, October 13
Oct 13-17	2.2, 2.2, 2.3	
Oct 20-24	2.3, 2.3, 2.4	
Oct 27-31	2.5, 2.5, 2.6	
Nov 3-7	3.1, 3.1, Mid 2	Midterm 2: Friday, November 7, in class
Nov 10-14	--, 3.2, 3.2	Reading Days: November 8-11
Nov 17-21	3.3, 3.3, 3.4	
Nov 24-28	3.4, 3.5, 3.5	
Dec 1-5	3.5, 3.5	
Dec 8-12	Review	Lectures end Monday, December 8
Dec 12-22		Final Examinations