

COURSE INFORMATION SHEET
FALL 2006

1. **Course:** MATHEMATICS 221 – *Linear Algebra for Scientists and Engineers*
Lecture/Time/Session: L10 MWF 12:00
Instructor(s): W.K. Nicholson
Office/Phone/Email: MS 314 220-3954 wknichol@math.ucalgary.ca

2. **Prerequisites:** A grade of 70% or higher in Pure Mathematics 30 or equivalent.

NOTE: Credit for more than one of MATH 211 and MATH 221 will not be allowed.

NOTE: The Faculty of Science policy on pre- and co-requisite checking is outlined in the current University Calendar (see www.ucalgary.ca/pubs/calendar) *Faculty of Science, section 5C*. **It is the students' responsibility to ensure that they have the pre- and co-requisites for the course, and if they do not they will be withdrawn from the course without notice.**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. **Academic Accommodations:** It is the student's responsibility to request academic accommodations. A student with a documented disability who may require academic accommodation must register with the Disability Resource Centre to be eligible for formal academic accommodation. DRC registered students are required to discuss their needs with the instructor no later than fourteen (14) days after the start of this course.

5. **The University policy on grading and related matters** is described in the current University Calendar, *Academic Standings*. In determining the overall grade in the course, the following weights will be used:

Online Labs	[17]	20%
Mid-term Test	[2]	30%
Final Exam		50%

There will be a final examination scheduled by the Registrar's Office. A passing grade on the final examination is necessary to passing the course as a whole.

6. **Missed Components of Term Work.** The regulations of the Faculty of Science pertaining to this matter are outlined in the current University Calendar, *Faculty of Science, section 6A*. It is the student's responsibility to familiarize herself/himself with these regulations

7. **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 current University Calendar under the heading *Student Misconduct* and the information on integrity at. www.ucalgary.ca/honesty

8. **Dates and times of class exercises held outside of class hours (evening tests, Saturday laboratory examinations, weekend field trips, etc.):**
REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY

THERE WILL BE NO OUT OF CLASS ACTIVITY SCHEDULED FOR THIS COURSE.

9. **Text:** Linear Algebra with Application, 5th edition
Author: W. Keith Nicholson, McGraw-Hill Ryerson, 2006
10. In addition to the instruction provided by their lecturer and tutorial instructor, there is a continuous tutorial available where students may obtain individual help with questions about the course material and exercise problems. Faculty members and graduate students will be available in the continuous tutorial room to answer questions in a one-to-one fashion. The location and hours of operation of the continuous tutorial will be announced by the lecturer.
11. Calculators **ARE NOT** permitted at quizzes, mid-term test, or the final exam.
12. **SCUM**
 The Society for Calgary Undergraduate Mathematics is located in MS337A. They sell exam packages, run final reviews, and can often assist with problems. The office is open from 10am to 3pm Monday-Friday, and you are welcome to drop by. They look forward to meeting you!
13. **GRADING:** The final grade will be based on the following:
Online Labs (17): 20% Midterm Exam (2): 30% Final Exam: 50%
14. **ONLINE LABS:** These labs are from the *Lyryx Interactive Linear Algebra* website (<http://lila.lyryx.com>), and can be taken at any internet access. You must do a lab for each of the 18 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).
Deadlines: Labs on Sections 1.1-1.3, 2.1-2.5, 2.8 MUST be submitted before midnight, October 20, 2006
Labs on Sections 3.1-3.5 MUST be submitted before midnight, November 17, 2006
Labs on Sections 4.1-4.3 MUST be submitted before midnight, December 8, 2006
15. **MIDTERM:** **Friday, October 7 in the lecture period, 50 minutes, worth 15%**
Friday, November 18 in the lecture period, 50 minutes, worth 15%
16. **FINAL EXAMINATION:** **Scheduled by the Registrar, 3 hour test, worth 50%**
17. **IMPORTANT NOTE:** The midterm and final exams 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.
18. **LYRYX INTERACTIVE LINEAR ALGEBRA** (<http://lila.lyryx.com>): The website contains much more than the labs. It also includes narrated and animated tutorials, and explorations to enhance your understanding (and which can be used as computing tools). And it is available anywhere, anytime, through the internet.
19. **TUTORIALS:** We have booked the computer room **MS 515** as follows:
Tuesdays, 16:00 to 18:00 and Wednesdays, 13:00 to 15:00
 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.
20. **CONTINUOUS TUTORIAL:** Held in MS 569 as follows:
Mondays, Wednesdays, and Fridays 13:00 to 15:00,
Tuesdays and Thursdays 12:00 to 15:00
 There will be teaching assistants there to answer questions about the course.
21. **LECTURE SCHEDULE:** Here is an approximate outline of the contents of the course.

Week	Material	Comments
Sep 11-15	1.1, 1.2, 1.2	Lectures begin Monday September 11
Sept 18-22	1.3, 2.1, 2.2	
Sept 25-29	2.2, 2.3, 2.3	
Oct 2-6	2.4, 2.4, Midterm	Midterm 1: Friday October 6, in class
Oct 9-13	__, 2.5, 2.5	Thanksgiving: Monday October 9

Oct 16-20	2.5, 2.8, 3.1	
Oct 23-27	3.1, 3.2, 3.2	
Oct 30-Nov3	3.3, 3.3, 3.3	
Nov 6-10	3.4, A1, *Midterm	Midterm 2: Friday, November 10, in class
Nov 13-17	__, A1, A1	Reading Days: November 11-14
Nov 20-24	4.1, 4.1, 4.1	
Nov 27-Dec1	4.2, 4.2, 4.2	
Dec 4-8	4.3, 4.3, Review	Lectures end Friday December 8
Dec 11-20		Final Exams