

COURSE INFORMATION SHEET
FALL 2009

- Course:** MATHEMATICS 211 -- Linear Methods I
Lecture/Time: L04 TR 08:00-09:15
Instructor: Dr. C. Cunningham
Office/Phone/Email: MS 528 403-220-6888 cunning@math.ucalgary.ca
- Prerequisites:** A grade of 70 per cent or higher in Pure Mathematics 30. (Alternatives are presented in the paragraph titled Mathematics Diagnostic Test in the Program section of this Calendar.)
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responsibility to ensure that they have the pre- and co-requisites for the course, and if they do not they will be withdrawn from the course without notice.**
- 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.
- 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.
- 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:

<i>Problem Sets (200 webwork questions)</i>	[10]	10 x 2.5% = 25%
<i>Mid-term Test (90 minutes)</i>	[1]	25%
<i>Final Exam (180 minutes)</i>		50 %

The final examination will be scheduled by the Registrar's Office. *** The use of aids such as open book, etc. **is not** permitted.
- 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.
- 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. See: <http://www.ucalgary.ca/honesty/>
- Dates and times of class exercises held outside of class hours (evening tests, Saturday laboratory examinations, weekend field trips, etc.):**

**** The MID-TERM TEST will be held on Tuesday, October 27th from 6pm to 7:30pm.****

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME ACTIVITY. If you have a conflict with this out of class time activity, please inform your instructor at least one week in advance of the activity so that other arrangements may be made for you.

Date	Lecture Topic	Textbook Section ¹	Homework (due the following Wednesday at 11pm)
2009/09/08 Tuesday	Solutions to Systems of Linear Equations,	1.1	
2009/09/10 Thursday	Elementary Operations, Gaussian Elimination	1.2	
2009/09/15 Tuesday	Rank, Homogeneous Equations	1.3	
2009/09/17 Thursday	Matrix Addition, Scalar Multiplication, Transposition	2.1	
2009/09/22 Tuesday	Equations, Matrices and Matrix Transformations	2.2	Gaussian_Elimination
2009/09/24 Thursday	Matrix Multiplication	2.3	
2009/09/29 Tuesday	Matrix Multiplication and Matrix Inversion	2.3, 2.4	Matrix_Multiplication
2009/10/01 Thursday	Matrix Inversion	2.4	
2009/10/06 Tuesday	Matrix Inversion and Elementary Matrices	2.4, 2.5	Matrix_Inversion
2009/10/08 Thursday	Matrix Inversion and Elementary Matrices	2.4, 2.5	
2009/10/13 Tuesday	Matrix Transformations	2.6	Elementary_Matrices
2009/10/15 Thursday	Matrix Transformations	2.6	
2009/10/20 Tuesday	Determinants and the Cofactor Expansion	3.1, 3.2	Transformations_2D
2009/10/22 Thursday	Determinants and Matrix Inverses	3.2	
2009/10/27 Tuesday	Review, Evening Mid-term Test, 90-minutes		Determinants
2009/10/29 Thursday	Eigenvalues and Eigenvectors	3.3	
2009/11/03 Tuesday	Diagonalization, Complex Numbers	3.3, App ^x A	Eigenvalues_1
2009/11/05 Thursday	Complex Eigenvalues	3.3, App ^x A	
2009/11/10 Tuesday	An Application to Linear Recurrence	3.4	Eigenvalues_2
2009/11/17 Tuesday	Vectors and Lines	4.1	
2009/11/19 Thursday	Projections and Planes	4.2	
2009/11/24 Tuesday	More on the Vector Product	4.3	Eigenvalues_3
2009/11/26 Thursday	Linear Operations in 3D	4.4	
2009/12/01 Tuesday	Projection Matrices, Reflection Matrices in 3D	4.4	Lines_and_Planes
2009/12/03 Thursday	Rotation Matrices in 3D	4.4	
2009/12/08 Tuesday	Review		Tranformations_3D
	Final Exam		

¹ The textbook for this lecture section is Linear Algebra with Applications, 6th Canadian Edition, by W. Keith Nicholson, McGraw-Hill Ryerson.