MATH 235   LINEAR ALGEBRA II   WINTER 2008
COURSE INFORMATION

Objectives:

This course completes the introduction to linear algebra. The course includes determinants, eigenvalues, eigenvectors, diagonalization and ends with the singular value decomposition of a matrix.

Intended Audience:

Math 235 is the second course in Linear Algebra and is a core course for the Honours Math program in the Faculty of Mathematics. Math 245 is an enriched version of this course.

Prerequisites:

Math 136/146 (Linear Algebra I) is a prerequisite and Math 138/148 (Calculus II) is strongly recommended. **Students who have a borderline pass in Math 136/146 will likely have difficulty with Math 235, and should seriously consider retaking Math 136/146 in order to strengthen their background.**

Textbook:

Linear Algebra and its Applications - 3rd ed., 2003 by David C. Lay.
Much of the course will follow the textbook; however, the emphasis may differ from that of the textbook. For example, the textbook works primarily over **R** but in class we will generally work over **C**. In addition, supplementary material not in the textbook will be covered. Thus, attending class is very important.

Course Web Page:

The (ANGEL) course web page can be found at: http://uwace.uwaterloo.ca/ (Some material can be found at Prof. Wolkowicz' course web page
http://orion.math.uwaterloo.ca/~hwolkowi/henry/teaching/w08/235.w08/index.shtml)

MATLAB:

The MATLAB software package will be used to supplement the course material. Although you will NOT be tested on MATLAB, there will be questions on assignments that will require the use of MATLAB. Nexus accounts have been set up for access to MATLAB. The Nexus Labs are located in rooms MC 3006, 3009 and have been reserved for Math 235 on Tuesdays from 6 - 9 pm. During these times a graduate teaching assistant will be available to answer any questions.

Outline of Topics:

Topic	Chapter	Approximate Time
Determinants	Chapter 3	5 hours
Eigenvalues and Eigenvectors	Chapter 5	9 hours
Orthogonality and Least Squares	Chapter 6	10 hours
Symmetric Matrices and Quadratic Forms	Chapter 7	10 hours

Marking Scheme:

The final grade will be calculated as follows:

Assignments	15%
Midterm Test	25% (scheduled for Tuesday Feb. 12, 2008, 4:30-6:30pm)
Final Exam	60% (common 2.5 hour exam scheduled during exam period)

Assignments:

You will be asked to hand in **8** assignments, the best **7** of which will be used in the calculation of the final grade. **Drop boxes** for Math 235 have been set up outside MC4066/4067. Assignments **must** be placed in the **appropriate** drop box corresponding to your instructor and **last name**. The deadline for handing these in will be **9:30 am** on Wednesdays. Assignment due dates are listed on a separate handout.

Calculators:

Only calculators approved by the Math Faculty will be permitted on the Midterm and Final exams.
The Math Faculty calculator policy is posted at: http://www.math.uwaterloo.ca/navigation/Current/calculatorpol

Instructors:

Instructor	Office	Phone
H. Wolkowicz	MC 6065	ext. 35589
A. Darvishvand	MC 4028	ext. 37563

Schedule of Classes:

Instructor	Section	Time	Location
H. Wolkowicz	001	9:30-10:20 MWF	MC 2017
A. Darvishvand	002	12:30-01:20 MWF	MC 2017

Tutorials:

Weekly tutorials have been scheduled for Mondays from 5:30 - 6:20 pm in RCH 101 beginning on Monday Jan. 14. The tutorials will focus on problem solving as well as the use of MATLAB.

Tutorial Centre:

Help from graduate teaching assistants is available in the Second Year Tutorial Centre (MC 4067). The hours of operation will be Monday and Tuesday afternoons (hours will be posted soon).