



Faculty of Science  
DEPARTMENT OF MATHEMATICS AND STATISTICS  
Course Information Sheet

1. MATH 311 - - Spring 2005

<u>Lecture</u>	<u>Location</u>	<u>Instructor</u>
L47	Renyi Institute of Mathematics, Budapest, Hungary	K. Boroczky
T47	College International, Budapest, Hungary	M. Naszodi

2. **Prerequisites:** Mathematics 211 or 221  
**Co-requisites:** None

**Note:** The Faculty of Science policy on pre- and co-requisite checking is outlined in the 2004-2005 Calendar (see [www.ucalgary.ca/pubs/calendar](http://www.ucalgary.ca/pubs/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responsibility to ensure that they have the pre- and/or co-requisites for the course, and if they do not they will be withdrawn from the course without further notice.**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 in the 2004-2005 Calendar, Academic Standings. In determining the overall grade in the course, the following weights will be used:

Quizzes/Assignments	25%
Mid-term exam	25%
Final Exam	50%

5. **Missed Components of Term Work.** The regulations of the Faculty of Science pertaining to this matter are outlined in the 2004-2005 Calendar, Faculty of Science, section 6A. 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 2004-2005 University Calendar under the heading "Student Misconduct".
7. **There will be no out-of-class activities.**

## 8. Textbook

Elementary Linear Algebra, KW Nicholson (2<sup>nd</sup> Edition), MacGraw Hill

## 9. Academic Schedule

June 1	Wednesday	Lectures begin
<b>June 14</b>	<b>Tuesday</b>	<b>Mid-term Examination</b>
June 16	Thursday	Budapest Semesters Event
June 28	Tuesday	Last day of lectures. Last day to withdraw from Winter session courses.
<b>June 30</b>	<b>Thursday</b>	<b>Final Examination</b>

## 10. Course Content

Euclidean  $n$ -space, abstract vector spaces, subspaces, independence, basis and dimension, row and column space of a matrix, rank, application to systems of equations.

Eigenvalues, similarity, diagonalization, orthogonality, Gram-Schmidt process, principal axes theorem, applications to approximation.

Linear transformations, kernel and image, composition, matrix representation, change of basis, invariant subspaces, direct sums.

Inner products, length, angles, orthogonal sets, orthogonal diagonalization.