

# MA2071 Syllabus

**Instructor:** William J. Martin  
**Office:** SH 302A  
**Phone:** 831-6764  
**e-mail:** [martin@wpi.edu](mailto:martin@wpi.edu)  
**Office hours:** 2:00-2:50 Thurs/Fri  
or by appointment  
... or, just drop in

MA 2071 – C01-C04, C Term 2003  
Matrices & Linear Algebra I  
**Text:** “Introductory Linear Algebra”  
by Kolman and Hill (7th ed.)  
**Meetings:** 12:00–12:50 MTWRF  
**TA:** Xiao Zhong, SH204  
**e-mail:** [xiaozh@wpi.edu](mailto:xiaozh@wpi.edu)

The goal of this course is to develop the basic language and techniques of matrix algebra and to introduce vector spaces and eigenvalues. Linear algebra is an essential part of mathematics and an indispensable tool in many areas of science and engineering. We will illustrate this fact by touching on some of the many applications of linear algebra throughout the course.

## TERM SCHEDULE

Here is a rough outline of what we will cover in the 28 lecture periods:

Jan. 9 to Jan. 10	<i>Matrix Arithmetic</i>	Secs. 1.1–1.4
Jan. 13 to Jan. 17	<i>Linear Systems, Determinants</i>	Secs. 1.5, 1.6, 3.1, 3.2
Jan. 20 to Jan. 24	<i>Geometry, Transformations</i>	Secs. 4.1–4.3
Jan. 27 to Jan. 31	<i>Vector Spaces</i>	Secs. 5.3–6.2
Feb. 3 to Feb. 7	<i>Subspaces, Dependence, Bases</i>	Secs. 6.3–6.6
Feb. 10 to Feb. 14	<i>Change of Basis, Orthogonality</i>	Secs. 6.6–6.8
Feb. 17 to Feb. 21	<i>Eigenvalues</i>	Secs. 8.1–8.3
Feb. 24 to Feb. 27	<i>Applications</i>	Secs. from Chaps. 2 and 9 (as time permits)

The following sections may be covered on the given dates if time permits: Sec. 5.1 (1/24), Sec. 6.9 (2/14).

## GRADES

**A:** 100 % – 88 %;      **B:** 87.99 % – 74 %;      **C:** 73.99 % – 60 %

## GRADING SCHEME

Homework (best 5 assignments): 25 %  
Tests (Jan. 27, Feb. 10, Feb. 24): 75 %

There will be three tests. These will be given on the following dates:

- **Test 1:** Monday, January 27, 2002 in class, noon, OH107
- **Test 2:** Monday, February 10, 2002 in class, noon, OH107
- **Test 3:** Monday, February 24, 2002 in class, noon, OH107

## HOMEWORK

In order to encourage students to keep up with the course and to prepare for the tests, a large number of problems from the text will be recommended. A small number of problems will be collected and graded for credit. These **six homework assignments** will be handed out in class and are due on Friday afternoons by 4:00 p.m. The best five of these will be used in the calculation of your grade.

## QUIZZES

Each Friday, a non-credit quiz will be distributed upon exit from the lecture. Solutions will be distributed in the following conference section. The questions on the quizzes should be viewed as sample test questions.

## CONFERENCE SECTIONS

Section	Meeting Time	Location	PLA
C01	Wed. 12:00 – 12:50	SH106	Jeffrey Simone
C02	Wed. 12:00 – 12:50	SH202	Iavor Trifonov
C03	Wed. 12:00 – 12:50	SH304	Joanna Begin
C04	Wed. 12:00 – 12:50	SH308	John Waymouth

These sessions provide one-on-one contact with experienced senior students. Students may work in groups, solve sample problems at the blackboard, or go over test solutions, among other activities. This is an important and integral part of the course. **All students are expected to attend** their respective conference sections.

## IMPORTANT NOTES:

- There will be no make-up tests.
- If a student happens to miss a test for valid reasons (e.g., as evidenced by a doctor's note specifically stating that the student was too ill to participate), then the weight of the remaining tests may be increased to compensate for the missing mark;
- No late assignments will be accepted for credit.