

# MA2102 Linear Algebra 2006/07

**Convenor:** Prof. Dietrich Notbohm.

My office is **F33** in the building of the School of Computer Science and Mathematics . I am available for consultation either at the scheduled surgery hours (see below), during my **office hours** in my office (**Monday 11.30 to 12.30** and **Wednesday 11.30 to 12.30**) or by arrangement. You can also just knock at my office door and either I have time for you or we make an appointment.

Feedback is very much welcomed and encouraged during the module as well as at the end through the formal questionnaires.

**Prerequisites:** MA1152 *Introduction to Linear Algebra*

**Description:** The course continues the study of linear algebra, taking a more conceptual point of view than MA1152. There is a review of some of the basic notions of vector spaces, linear independence, spanning sets and bases. A detailed study of linear transformation, their matrices and some of their major properties then commences. A central theme is whether a vector space has a basis consisting of eigenvectors for a given linear transformation, or equivalently, whether it has a diagonal matrix with respect to a suitable basis.

## **Sample Reading List:**

R.B.J.T Allenby, *Linear Algebra*, Edward Arnold.

C.W. Curtis, *Linear Algebra, and Introduction Approach*, Springer.

J.B. Fraleigh and R.B. Beauregard, *Linear Algebra*, 3rd Ed., Addison Wesley.

S. Andrilli and D. Hecker, *Elementary Linear Algebra*, 2nd Ed., PWS-Kent.

H. Anton, *Elementary Linear Algebra*, Wiley.

W.K. Nicholson, *Linear Algebra with Applications*, 3rd Ed., PWS-Kent.

or any other book on Linear Algebra.

PTO.

## Class Times

### Lectures:

**Monday, 13:30-14:30, ENG LT2, Thursday, 10:30-11:30, BEN LT8** every week  
**Wednesday, 10:30-11:30, Ben LT3** in week 3 (18 Oct).

### Problem class:

**Wednesday, 10:30-11:30, Ben LT3**, in weeks 5,7, 9, and 11, i.e. 1 Nov, 15 Nov, 29 Nov and 13 Dec.

### Surgery:

**Wednesday, 12:30-13:30, GP LTA** in weeks 2,4,6, 8 and 10; i.e. 11 Oct, 25 Oct, 8 Nov, 22 Nov and 6 Dec.

### Group work:

**Friday, 14:30-15:30, Ben LT4** every week

(Please notice the swap of the surgeries and the problem classes)

Some of the arrangements for lectures/surgeries/problems classes may be changed round so as to make the best use of time for revision, new material and time to do the assessed homework problems. More details will be given nearer the time.

**Assessment** There will be 4 pieces of assessed work set during the semester, to be handed out at the end of the Thursday lecture every second week: 19 Oct, 2 Nov, 23 Nov, 7 Dec. The homework will be collected in the following week again in the Thursday lecture and will be discussed in the Problem classes on Wednesday in the week after the collection. The first piece of home work, handed out on 19 Oct, will be group work, the other ones single work. There is a particular slot and room for doing group work, namely Friday, 14:30-15:30, Ben LT4.

There will be another question sheet handed out in the first week, which will not be assessed and serves revision purposes.

The four assessed pieces of work will together count for 20% of the final mark with each piece weighted equally.

There will be four questions on the examination paper; any number of questions may be attempted but full marks may be gained from answers to three questions. All questions will carry equal weight.