THE UNIVERSITY OF SYDNEY
MATH2061 LINEAR MATHEMATICS Component
Information Sheet, Summer School 2010

MATH2061 consists of two separate modules – Linear Mathematics and Vector Calculus. Linear mathematics will be taught concurrently with vector calculus for six weeks.
In each module, you attend 3 lectures, one practice session and one tutorial each week.
The **lectures** will present the material covered in this unit. Examples and applications of the theory will also be discussed.

In the **practice sessions**, some material from first year mathematics will be revised, and additional examples will be discussed. These examples will be designed to reinforce the important ideas presented in that week's lectures. Many of the examples will be similar to those you will be asked to attempt in the tutorial session in the following week.

During the **tutorials** you will be expected to work on the supplied problem sets. Your tutor will give you help where needed. You are strongly encouraged to work in a small group in the tutorial, and to discuss the problems with fellow students.

Lecture Times	**Location**
2-4pm Mon and 2-3pm Tues	Carslaw 375
Practice Class	**Location**
3-4pm Tues	Carslaw 375
Tutorial Times	**Location**
4-5pm Mondays or 4-5pm Tuesdays	Carslaw 350/351 Carslaw 350/351
Consultation Time	**Location**
12-1pm Tues	Carslaw 486

Lectures
The linear mathematics lectures run for 6 weeks, starting on Monday 4th January and finishing on Tuesday 9th February. Classes on this last day will be emphasise exam revision and student questions.

Tutorials Attendance at tutorials is essential as your participation in the tutorials will contribute to your assessment.

Web Site
The MATH2061 Linear Mathematics home page may be found by going directly to

`http://www.maths.usyd.edu.au/u/geoffp`

You should check the page regularly, since important announcements relating to the unit will often be posted there. All email enquiries relating to this unit should be sent to `geoffp@maths.usyd.edu.au`.

MATH2061 LINEAR MATHEMATICS

WHAT IS LINEAR MATHEMATICS ABOUT?

Linear mathematics is one of the foundations of modern mathematics. It is important theoretically because so many apparently different processes in the natural world have the same *linear structure* – they are *vector spaces*. In addition, many non–linear processes are often so complicated that they are modelled by linear approximations as a first step towards their understanding.

Assessment for Math2061 Linear Mathematics

Your final raw mark for this unit of study will be calculated as the sum of your marks for the examination (65%), two quizzes (10% each), the assignment (10%) and tutorial participation (10%).

Examination – worth 65%.

There will be an examination in February 2010 about a week after end of lectures.

Quizzes – worth 10% each

The quizzes will be held during your practice session in weeks 3 and 5.

Assignment – worth 10%

One assignment will be collected in week 5 and marked for return in week 6.

Tutorial Participation Mark – worth 5%

Rolls will be kept in tutorials, and you will receive one mark for each tutorial (up to a maximum of 5 marks) for participation (that is, *working*, not just attending).

Textbook

The text is J.Henderson *Lecture Notes for Linear Mathematics*, which will be available from Kopystop, 55 Mountain Street, Broadway, after 11th January 2010.
Also recommended is *"the Little Blue Book"*, which is a compact reference book containing a summary of information from first year mathematics which is essential for many second year mathematics courses. This is available from the Co-op Bookshop on campus.

Reference books

Poole, D. *Modern Algebra An Introduction,* 2^{nd} Edition Thomson.
Easdown, D. *A First Course in Linear Algebra,* 2^{nd} Edition, Pearson Education.
Lay, David C. *Linear Algebra and its Applications*, 2^{nd} Edition. Addison Wesley.
Noble, B. and Daniel, J. *Applied Linear Algebra*, 3^{rd} Edition. Prentice-Hall.