

## **Course content for MT3000, Mathematics Project**

### **Prerequisites:**

At least 1.5 units of Mathematics taken in Year 2

### **Aims:**

To enable students to make a detailed investigation into one topic in mathematics.

To develop their skills in finding information from a variety of sources.

To develop their skills in writing and talking about mathematics.

### **Learning outcomes:**

On completion of this course the student should

- have acquired detailed knowledge of their chosen topic from several sources;
- show understanding of how the facets of this topic fit together;
- have written a well-constructed dissertation on this topic;
- be able to give a well-prepared presentation on this topic.

### **Course content:**

By the end of the third term of the second year the student should decide on a subject area for the project, and find a lecturer willing to act as supervisor. A guide to the areas in which members of staff are willing to supervise projects can be found from the Department's web site, or you can ask your adviser. The student must inform the course coordinator of the subject area and supervisor. In the first week of Term 1 the student should submit a title and a 2 – 3 page plan of to the Departmental Office. Based on this the course coordinator and the supervisor will agree whether the student can take the course. Students will be allowed to take the course without submitting a plan only in very special cases with the approval of the course coordinator.

The results should be given in a dissertation of 7000 – 8000 words, and in a ten-minute presentation.

### **Teaching and Learning Methods:**

The supervisor will point the student to sources of information, such as books, research papers, databases and suitable software as needed. An introduction to mathematical word processing will be given early in Term 1. There should be regular meetings with the supervisor, totalling 10 hours. The Department will provide advice and facilities as required to enable the student to produce a neat final version of the dissertation and visual aids for the presentation.