

On-line course materials

# MATH30011 - Project - Semester 1

Year: 3 - Semester: 1 - Credit Rating: 10

## Aims

Aims and objectives

The aim of this option is to give third and fourth year students an opportunity to research a chosen mathematical topic in some depth and to improve their communication skills through producing a written account and giving a short verbal presentation on the topic. Every MMath student must take this option in the 4th year of study. All students may take this option in the 3rd year of study. It provides opportunities to develop transferable communication and time-and task-management skills, through researching the topic and organising and producing a written account and a short presentation.

## Brief Description

Supervision

The role of the supervisor is to give guidance, initially and as the project develops, to make you aware of the standard and quantity of work desired, to comment on the general shape of your report and to give a certain amount of detailed feedback, for instance on a sample or draft chapter. For 2 semester projects the student is expected to submit a piece of work to the Teaching and Learning office by the 1 semester project deadline in January. This will typically be an early chapter of the project or a description of what the project will eventually contain. This interim submission will not form part of the examination, but will ensure you are making adequate progress and are comfortable using LaTeX. It will also enable you to discuss with your supervisor, possible improvements to your writing style and presentation. Each project is different, and the frequency of meetings should be determined between you and your supervisor as the project progresses. It is usual to meet with your supervisor every two weeks initially to discuss progress, ideas and methods. However, you are encouraged to work independently and show initiative and creativity and the main responsibility for progress lies with you. If you are stuck or unclear about where you should be heading then you should contact your supervisor: do not postpone this because the deadline seems far away.

## Teaching & Learning Process (Hours Allocated To)

Lectures	Tutorials/ Example Classes	Practical Work/ Laboratory	Private Study	Total
0	0	0	100	100

# Assessment and Feedback

## Oral presentation and examination

There will be an oral examination for every project and this will take place after the submission deadline and will be scheduled by your supervisor. This exam should begin by the student giving a short (10-15 minute) presentation on the project, which is followed by questions from the examiners. The main purpose is to test understanding. The presentation can be delivered with chalk and blackboard, with overhead transparencies or with a computer presentation. The latter two need a bit more organization, so please ensure you give the supervisor adequate notice of which method of delivery you prefer. In such a short presentation, you will not be able to cover all the details of the project, so do not try. It is better to give a short overview describing what you find are the most interesting points, and perhaps selected details.

Students who fail to attend the oral examination without good reason, will see a reduction of marks for Understanding.

## Awards of marks

Marks for all projects are awarded under 5 principal categories (but not every criterion here is relevant to every project):

Structure (10%) Well written introduction and possibly conclusion; bibliography; overall organization of material

Presentation (25%) Precise and effective communication; Clarity of writing and exposition; explanation and coherent use of notation; clearly written equations

Accuracy (20%) Precise mathematical arguments; consideration of accuracy in use of numerical methods;

Initiative (20%) Originality; Independent work; Individual expression and critical writing; Independent use of library;

Understanding (25%) Appreciation of the meaning, context and significance of the work.

While 'quantity' is not explicit in this list, lack of content would be reflected in low marks across all 5 categories.

## Further Reading

[1] N.J. Higham, Handbook of Writing for the Mathematical Sciences, 2nd ed. Society for Industrial and Applied Mathematics (SIAM), Philadelphia, 1998. ISBN 0-89871-420-6.

## Staff Involved

Mr Michael Tso - Lecturer