1. **Title of the module**

MAST5780 (MA578) - Dissertation for MMath Mathematics

1. **School or partner institution which will be responsible for management of the module**

School of Mathematics, Statistics and Actuarial Science

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 7

1. **The number of credits and the ECTS value which the module represents**

30 credits (15 ECTS)

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

Autumn & Spring

1. **Prerequisite and co-requisite modules**

For delivery to students completing Stage 1 before September 2016:

Pre-requisite: MA321 (Calculus and Mathematical Modelling), MA322 (Proofs and Numbers), MA323 (Matrices and Probability), MA324 (Exploring Mathematics), MA552 (Analysis), MA553 (Linear Algebra)

Co-requisite: MA7503 (Communicating Mathematics) if MA569 (Starting Research in the Mathematical Sciences) or MA6503 (Communicating Mathematics) not studied in Stage 3

For delivery to students completing Stage 1 after September 2016:

Pre-requisite: Stages 1 to 3 of the MMath Mathematics programme (or equivalent)

Co-requisite: MA7503/MAST7703 (Communicating Mathematics) if MA6503/MAST6703 (Communicating Mathematics) not studied in Stage 3

1. **The programmes of study to which the module contributes**

MMath Mathematics

1. **The intended subject specific learning outcomes.
On successfully completing the module students will:**

8.1 be aware of the breadth, depth and wider relevance of an advanced mathematical topic of current interest;

8.2 have improved their writing and oral communication skills gained in the Starting Research in the Mathematical Sciences (MA569) or Communicating Mathematics (MA6503/MAST6703 or MA7503/MAST7703) module;

8.3 have demonstrated the ability to comprehend problems, abstract the essentials of problems and formulate them mathematically to facilitate their analysis and solution;

8.4 be able to present mathematical arguments and to draw conclusions from mathematical calculation and/or computer output;

8.5 have a reasonable ability to apply mathematical concepts and statistical techniques in a particular context.

1. **The intended generic learning outcomes.
On successfully completing the module students will have:**

9.1 improved communication skills;

9.2 enhanced intellectual independence;

9.3 improved information retrieval skills including appropriate selection of materials and their critical evaluation;

9.4 improved problem solving skills;

9.5 demonstrated computational skills and some basic reasoning skills;

9.6 developed their ability for independent learning and time management.

1. **A synopsis of the curriculum**

The module offers students the opportunity to work independently, under limited supervision, on an area of mathematics of their choice. There is no specific mathematical syllabus for this module. The topic of the dissertation will depend on the mutual interests of the student and the student's chosen supervisor. The coursework will consist of writing a dissertation plan, an oral presentation of material from the dissertation to examiners and an interview of the student by the examiners.

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**

Texts depend on the projects offered.

1. **Learning and teaching methods**

Total contact hours: 10

Private study hours: 290

Total study hours: 300

1. **Assessment methods**
	1. Main assessment methods

Dissertation Plan 1-2 pages 10%

Presentation and Viva 20-25 minutes (of which presentation 10 minutes) 20%

Project 30-40 pages 70%

13.2 Reassessment methods

Like-for-like

1. **Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 9.1 | 9.2 | 9.3 | 9.4 | 9.5 | 9.6 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |
| Private Study | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Supervisor Meetings | **X** |  |  |  |  |  | **X** | **X** |  |  | **X** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |
| Dissertation Plan | **X** |  |  |  |  |  | **X** | **X** |  |  | **X** |
| Presentation and Viva | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Project | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |

1. **Inclusive module design**

The School recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

1. **Internationalisation**

Mathematics is an international language with techniques developed and refined by mathematicians across the globe. Mastery of the subject-specific learning outcomes, 8.1 to 8.5, will equip students to apply the theories and techniques of this module in a wide range of international contexts. The module team is drawn from the School of Mathematics, Statistics and Actuarial Science, which includes many members of staff with international experience of teaching and research collaboration.

In compiling the reading list, consideration has been given to the range of texts that are available internationally and a selection of texts has been identified to complement the delivery of the material.

The support SMSAS provides to its students is also internationally attuned given our international student body.

**FACULTIES SUPPORT OFFICE USE ONLY**

**Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

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| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
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Revised FSO Jan 2018