1. **Title of the module**

MAST9740 (MA974) - Short Dissertation (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)**

Spring and Summer

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

MAST7703 Communicating Mathematics

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

This is a compulsory module for the MSc in Mathematics and its Applications with Industrial Placement.

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

8.1 demonstrate awareness of the width, depth and wider relevance of an advanced mathematical topic of current interest,

8.2 carefully consider detailed, rigorous mathematical argument, whether within the context of an established mathematical theory or a substantive application of a mathematical theory,

8.3 express logical, coherent mathematical thought in an extended piece of work,

8.4 demonstrate high level technical writing and oral communication skills gained in the Mathematical Inquiry and Communication module, as well as consolidated skills in problem solving, logical argument, and geometric, algebraic and analytic thinking.

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

9.1 read and understand advanced technical material independently,

9.2 plan, implement and complete an extended piece of work to professional level,

9.3 demonstrate initiative in the development of a line of research, argument and exposition,

9.4 demonstrate an ability to formulate detailed rigorous argument,

9.5 communicate in writing the width and depth of their understanding of a substantive body of knowledge,

9.6 speak on an advanced topic and answer questions on it;

9.7 apply basic research methods such as writing a literature survey including appropriate selection of materials and their critical evaluation.

Students successfully completing the module will have acquired and demonstrated a level of intellectual stamina that would enable them to enjoy independent continuing professional development in a mathematical sciences based career.

1. **A synopsis of the curriculum**

The short dissertation represents the culmination of the student's academic work in the programme. It offers students the opportunity to carry out a piece of extended independent scholarship, and to show their ability to organise and present their ideas in a coherent and convincing fashion.

The topic of the dissertation will depend on the mutual interests of the student and the student's chosen supervisor.

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

Texts depend on the individual dissertation topics.

1. **Learning and teaching methods**

Total contact hours: 8

Private study hours: 292

Total study hours: 300

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

Dissertation: 25-30 pages 80%

Presentation and questions: approx. 20-25 minutes (of which 10 minutes presentation) 20%

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* | *9.1* | *9.2* | *9.3* | *9.4* | *9.5* | *9.6* | *9.7* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |
| Private Study | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Meetings with supervisor | **x** | **x** |  | **x** |  |  |  | **x** |  |  | **x** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |
| Dissertation | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |  | **x** |
| Presentation & questions | **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**

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

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