1. **Title of the module**

MAST6020 (MA602) - Project in Statistics or Probability

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 6

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

15 credits (7.5 ECTS)

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

Autumn and Spring

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

Co-requisites: MAST6007 Mathematical Statistics, MAST6008 Applied Statistical Modelling 1

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

International Masters in Statistics, International Masters in Statistics with Finance (including programmes with an Industrial Placement)

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

8.1 demonstrate appreciation of an area of statistics or probability in more depth than in taught courses;

8.2 apply skills in mathematical computation relevant to the topic;

8.3 draw conclusions from statistical data, mathematical calculations and/or computer output;

8.4 apply mathematical concepts and statistical techniques in a particular context;

8.5 write a coherent account of an area of statistics or probability;

8.6 perform computations that show their understanding of the techniques relevant to the topic;

8.7 demonstrate an improved ability in mathematical and statistical modelling.

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 relevant computing skills, including use of appropriate document preparation and word- processing packages;

9.4 improved problem solving skills;

9.5 awareness of important issues relating to good written presentation of results;

9.6 improved ability to select material from source texts, either recommended to or found by the student, and shown awareness of the relationship of the material to background and to more advanced material;

9.7 improved ability for independent learning and time management.

1. **A synopsis of the curriculum**

This module offers students the opportunity to work on a project in statistics or probability. The student chooses a project and supervisor and attends Key Skills workshops during the Autumn term; they then work on the project with the support of the supervisor in the Spring term. The module offers the opportunity to develop their skills in self-study and report writing.

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

Texts depend on the projects offered. For the Key Skills component:

A Primer of Mathematical Writing, Stephen G. Krantz, American Mathematical Society, 1997. The LaTeX Companion by Frank Mittelbach et al., Addison Wesley; 2 edition (23 April 2004).

How to think like a mathematician: a companion to undergraduate mathematics - Houston, Kevin, CUP 2009.

Handbook of writing for the mathematical sciences - Higham, Nicholas J., SIAM, 1998.

1. **Learning and teaching methods**

Total contact hours: 13

Private study hours: 137

Total study hours: 150

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

Summary of initial reading suitable for a non-specialist audience 1-page 5%

Project 6000 words or 24 pages 95%

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 | 8.6 | 8.7 | 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** | **X** | **X** | **X** |
| Workshops |  |  |  |  | **X** |  |  | **X** |  | **X** |  | **X** |  |  |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Summary of initial reading |  |  |  |  | **X** |  |  | **X** |  |  |  |  | **X** |  |
| Project | **X** | **X** | **X** | **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**

Mastery of the subject-specific learning outcomes, 8.1 to 8.7, will equip students to apply the techniques of this module in a wide range of international contexts. This module develops communication skills in mathematics and statistics, which are directly transferable to English-speaking countries and, with appropriate language skills, to other countries around the world. The typesetting program, LaTeX, is universal.

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.

The published list from which the student selects a topic on which to base their assessment will include a range of topics with an international focus, as well as topics with a UK focus and those that are applicable globally.

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

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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