1. **Title of the module**

MACT9510 (MA951) - PROPHET 2

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

Division of Computing, Engineering and Mathematical Sciences

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**

15 credits (7.5 ECTS)

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

Autumn, Spring or Summer

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

Pre-requisite: MACT9500: PROPHET 1

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

MSc in Applied Actuarial Science also with an Industrial Placement and International Masters

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

8.1 demonstrate high level skills in specific actuarial software and information technology (e.g. PROPHET).

8.2 understand advanced principles of specific actuarial mathematics techniques.

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

9.1 solve actuarial problems using appropriate computer techniques and demonstrate skills using appropriate information technology.

1. **A synopsis of the curriculum**

This module builds on the knowledge of the use of PROPHET introduced to students in MACT9500 – PROPHET 1. Outline syllabus includes: using Example Model Office to perform and check the results (for reasonableness) on Model Office runs using multiple products and the total business summary file including when changes have been made to the assumptions to the global file; using the Model Office run view to analyse the effect that changes to the input data has had on the model; running Model Office with products from the Example Model Office and creating reports on model office runs summarising the results obtained; using PROPHET "goal seek" capability to find a premium rate that achieves a desired level of profitability for a new business model point; using PROPHET "goal seek" capability to find a premium rate that achieves a desired level of profitability for a new business model point using 3 further measures of profitability (Internal Rate of Return, Break Even Month and Profit Margin); using the PROPHET Data Conversion System to read an input file in ASCII format to i) perform a number of calculations on the individual policy data and then produce output files for use by PROPHET system, ii) add validation checks and correction rules to the programme and iii) group the data so that grouped model point file rather than individual model point file data is produced.

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

This is primarily a practical module. The majority of the reading will be provided by specific lecture notes.

1. **Learning and teaching methods**

Total contact hours: 36

Private study hours: 114

Total study hours: 150

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

PROPHET 2 - Test 1 Computer based test 60 minutes 50%

PROPHET 2 - Test 2 Computer based test 60 minutes 50%

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* | *9.1* |
| **Learning/ teaching method** |  |  |  |
| Private Study | **x** | **x** | **X** |
| Classes | **x** | **x** | **X** |
| **Assessment method** |  |  |  |
| Test 1 | **x** | **x** | **X** |
| Test 2 | **x** | **x** | **X** |

1. **Inclusive module design**

The Division 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**

Actuarial Science is an international subject with techniques developed and refined by actuaries, mathematicians and statisticians across the globe. Mastery of the subject-specific learning outcomes (section 8) will equip students to apply the 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.

Examples with an international dimension are included in the module where appropriate.

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

**DIVISIONAL USE ONLY**

**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 delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
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