1. **Title of the module**

MAST4008 (MA350) - Microeconomics for Financial Mathematicians

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 4

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)**

Spring

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

Prerequisite: MAST4006 Mathematical Methods 1

Co-requisite: MAST4007 Mathematical Methods 2

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

BSc Financial Mathematics (including programme with a Year in Industry)

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

8.1 demonstrate knowledge of the underlying concepts and principles associated with microeconomic theory;

8.2 adapt mathematical expressions that describe specific microeconomic models;

8.3 apply the underlying concepts and principles associated with microeconomic theory to an understanding of financial economics.

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

9.1 manage their own learning and make use of appropriate resources;

9.2 understand logical arguments, identifying the assumptions made and the conclusions drawn;

9.3 communicate straightforward arguments and conclusions reasonably accurately and clearly;

9.4 manage their time and use their organisational skills to plan and implement efficient and effective modes of working;

9.5 solve problems relating to qualitative and quantitative information;

9.6 make use of information technology skills such as online resources (Moodle), internet communication;

9.7 communicate technical material competently;

9.8 demonstrate skill in numeracy and computation.

1. **A synopsis of the curriculum**

The aim of this module is to introduce students to the basic tools used by economists to study resource allocation, price formation and decision making. The module focuses on classical theories of consumer and producer behaviour and on the theory of competitive equilibrium.

The module starts with an analysis of the optimisation problems of price-taking consumers and firms. We then analyse market interaction and the formation of prices in the framework of perfect competition. We will introduce decision making under uncertainty and apply it to problems in finance. We will conclude with a brief introduction to game theory.

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

Hal R. Varian, Intermediate Microeconomics with Calculus, WW Norton & Co., 2014.

1. **Learning and teaching methods**

Total contact hours: 42

Private study hours: 108

Total study hours: 150

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

Assessment 1 Exercises, requiring on average between 10 and 15 hours to complete 10%

Assessment 2 Exercises, requiring on average between 10 and 15 hours to complete 10%

Examination 2 hours 80%

The coursework mark alone will not be sufficient to demonstrate the student’s level of achievement on the module.

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 | 9.1 | 9.2 | 9.3 | 9.4 | 9.5 | 9.6 | 9.7 | 9.8 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |
| Private Study | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **X** | **x** |
| Lectures/Exercise classes | **x** | **x** | **x** |  | **x** | **x** |  | **x** |  | **X** | **x** |
| Revision classes | **x** | **x** | **x** |  | **x** |  |  | **x** |  |  | **x** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |
| Examination | **x** | **x** | **x** |  | **x** | **x** | **x** | **x** |  | **X** | **x** |
| Coursework | **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**

This module covers key principles, theories and concepts of economics/finance that are used in a global environment. Mastery of the subject-specific learning outcomes, 8.1 to 8.3, will equip students to apply these principles, theories and concepts 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, research collaboration and of working within the financial sector.

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.

Examples covering various international economic/financial frameworks are included in the module where appropriate.

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.**

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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