1. **Title of the module**

BUSN9194 (CB9194): Algorithmic Trading

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

Kent Business School

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)**

Spring

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

None

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

MSc Financial Technology

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

8.1 Demonstrate knowledge and understanding of the advanced concepts and theory within the field of finance and financial technology, and their application to a company’s financial decisions

8.2 Apply the research methodologies required to test and evaluate complex finance models

8.3 Demonstrate an in-depth knowledge and understanding of theoretical and practical aspects of algorithmic trading in financial markets

8.4 Demonstrate knowledge and understanding of up-to-date empirical literature in the fields of algorithmic trading and investing

8.5 Apply complex quantitative and statistical methods on financial data

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

9.1 Interpret complex financial data and perform quantitative analysis

9.2 Interpret and systematically evaluate the results obtained from quantitative analysis

9.3 Demonstrate and apply in-depth problem-solving skills

9.4 Analyse complex issues relevant to companies’ financial decisions

9.5 Conduct systematic research in the area of finance and financial technology

1. **A synopsis of the curriculum**

This module will provide students with a core understanding of algorithmic trading, and specifically how to develop and implement quantitative trading strategies. The module will cover the following indicative topics

* High-frequency trading and tick data
* Backtesting and automated execution
* Mean reversion strategies
* Momentum strategies
* Arbitrage strategies
* Risk management
* Performance evaluation

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

E. Chan, “*Algorithmic Trading: Winning Strategies and their Rationale*”, 2013, Wiley, ISBN: 9781118746912

I. Aldridge, “*High-Frequency Trading: A Practical Guide to Algorithmic Strategies and Trading Systems*”, 2009, Wiley, ISBN: 9780470579770

P. Kaufman, “*A Guide to Creating a Successful Algorithmic Trading Strategy*”, 2016, Wiley, ISBN: 9781119224754

1. **Learning and teaching methods**

* Total contact hours: 35
* Private study hours: 115
* Total study hours: 150

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

* Individual report - 1,500 words (30%)
* Individual research project – 3,000 words (70%)

13.2 Reassessment methods

Individual research project (100%)

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 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |
| Lectures | X | X | X | X | X | X | X | X | X | X |
| Seminars/Labs | X | X | X | X | X | X | X | X | X | X |
| Independent study | X | X | X | X | X | X | X | X | X | X |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |
| Individual report | X | X | X | X | X | X | X | X | X | X |
| Individual Research Project | X | X | X | X | X | X | X | 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**

Financial Technology constitutes an area that is international by nature. The module will focus on how disruptive technologies are reshaping the global financial landscape, with practical examples of specific technologies and their impacts across different countries and financial systems around the world.

**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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