

**Programme Structure FHEQ Level 7**

| <b>Students study all compulsory modules.</b> |   | <b>Core/ Compulsory</b> | <b>Term</b> |
|---|---|-------------------------|-------------|
| <b>Module code</b>                            | <b>Module Title</b>   |                         |             |
| MATH70107                                     | Fundamentals of Option Pricing  | Compulsory              | 1           |
| MATH70108                                     | Statistical methods for Finance   | Compulsory              | 1           |
| MATH70109                                     | Stochastic Processes  | Compulsory              | 1           |
| MATH70110                                     | Quantitative Risk Management  | Compulsory              | 1           |
| MATH70111                                     | Interest Rates Models   | Compulsory              | 2           |
| MATH70112                                     | Computing for Finance (Python & C++)  | Compulsory              | 1&2         |
| MATH70113                                     | Simulation Methods for Finance  | Compulsory              | 2           |
|   |   | Total                   |             |
|   | <b>Elective Module Title</b>  | <b>Core/ Elective</b>   | <b>Term</b> |
| MATH70116                                     | Deep Learning   | Elective                | 1.2         |
| MATH70117                                     | Data Science for Fintech Regtech and Suptech: Methodological Foundations and Key Applications | Elective                | 1.1         |
| MATH70118                                     | Quantum Computing in Finance  | Elective                | 1.2         |
| MATH70119                                     | Numerical Methods for Finance   | Elective                | 2.1         |
| MATH70120                                     | Advances in Machine Learning  | Elective                | 2.1         |
| MATH70121                                     | Topics in Derivative Pricing  | Elective                | 2.1         |
| MATH70122                                     | Convex Optimization   | Elective                | 2.1         |
| MATH70124                                     | Advanced topics in Data Science: Signatures and Rough Paths in Machine Learning               | Elective                | 2.2         |
| MATH70125                                     | Market Microstructure   | Elective                | 2.1         |
| MATH70126                                     | Stochastic Control in Finance   | Elective                | 2.1         |
| MATH70127                                     | Algorithmic and High-Frequency Trading  | Elective                | 2.2         |
| MATH70128                                     | Selected Topics in Quantitative Finance   | Elective                | 2.2         |
| MATH70129                                     | Portfolio Management  | Elective                | 2.2         |
|   |   | Total                   |             |
| MATH114                                       | MSc Mathematics and Finance Research Project  | Core                    | 3           |

**Note: the notation 1.1 means Term 1, first half since Electives are given over half terms. Likewise**

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|         |
| Credits |
| 7.5     |
| 7.5     |
| 7.5     |
| 7.5     |
| 7.5     |
| 5       |
| 7.5     |
| 50      |
| Credits |
| 5       |
| 5       |
| 5       |
| 5       |
| 5       |
| 5       |
| 5       |
| 5       |
| 5       |
| 5       |
| 5       |
| 5       |
| 5       |
| 5       |
| 25      |
| 15      |

*ie 2.1 corresponds to Term 2, first half, and so on.*