The Masters in Mathematical Finance was designed to further the education in quantitative finance of students who already have a Bachelor’s degree in Mathematics, Statistics, Physics, Economics, Finance or Management.

The Masters Programme aims to develop students’ mathematical and computational skills, and also those in financial modelling. The curriculum includes such subjects as probability theory, stochastic calculus, numerical methods, optimisation and control theory, stochastic finance, interest rate models and credit risk. It thus provides a thorough training in modern mathematical finance. In studying for our Masters, students are put in contact with the most important technical and quantitative topics of finance, both theoretical and applied, which range from mathematical background to the latest trends in the financial sector.

Increasingly, the financial sector demands a Masters degree in Mathematical Finance from a prestigious university as a prerequisite for recruitment. Our students have often been recruited by prominent companies whilst still preparing their Masters' thesis, at both a national and an international level. Amongst others, such companies include: EY, Mercer, KPMG, Deloitte, CGD, the Bank of Portugal, BNP Paribas, BPI, Banque Européenne d’Investissement (EIB), Banque Centrale Européenne (ECB), Lloyds Bank, and Santander bank.

ISEG - Lisbon School of Economics and Management, of ULisboa, has well-established departments of Mathematics, Economics and Management, which enables our students to benefit from the consequent synergies, and it provides excellent conditions for hosting the Masters in Mathematical Finance. This fact, together with the high quality of the academic staff of this Masters, all of whom hold PhDs from prestigious universities (such as the Stockholm School of Economics and the Universities of Oxford, Edinburgh and Barcelona), makes it unique in our country.
### 1st Year

<table>
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<tr>
<th>Credits</th>
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<th>Credits</th>
<th>2nd Semester</th>
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</table>
| 6       | MATHEMATICAL METHODS IN FINANCE  
Maria do Rosário Grossinho | | 9       | STOCHASTIC CALCULUS  
João Guerra | |
| 7.5     | FINANCIAL MARKETS AND INSTRUMENTS  
Tiago Cardão-Pito | | 6       | FINANCIAL ECONOMETRICS  
Jorge Caiado | |
| 7.5     | PROGRAMMING TECHNIQUES  
Raúl Brás | | 6       | FOUNDATIONS OF FINANCE THEORY  
Agnieszka Bergel | |
| 9       | PROBABILITY THEORY AND STOCHASTIC PROCESSES  
João Lopes Dias | | 9       | NUMERICAL METHODS IN FINANCE  
Fernando Gonçalves | |

### 2nd Year

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| 6       | STOCHASTIC FINANCE IN CONTINUOUS TIME  
Tomas Björk | | 30      | MASTERS FINAL WORK | |
| 4.5     | INTEREST RATE AND CREDIT RISK MODELS  
Raquel Gaspar | | 4.5     | OPTIMISATION AND CONTROL THEORY IN FINANCE  
Manuel Guerra | |
| 4.5     | LÉVY PROCESSES AND APPLICATIONS IN FINANCE  
João Guerra | | 12      | MASTERS FINAL WORK | |

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