The Financial Mathematics MSc enables graduates and professionals with a strong mathematical background to research, develop and apply quantitative and computational techniques to investment and risk management. Based in the Department of Mathematics, this course has a superb reputation for research-led teaching and strong links to industry.

**Key benefits**

- A rigorous approach to quantitative finance taught entirely by the Department of Mathematics.
- In-depth coverage of the skills needed for working in the financial, actuarial or related industry: probability theory, optimisation, statistics and computer implementation.
- Unrivalled facilities in central London with City of London’s financial centre close by, and with access to live market data in our Bloomberg Data Laboratory.
- Flexible study course offering the opportunity to study part-time.
- King’s is a member of the London Graduate School in Mathematical Finance which provides advanced courses for students who wish to push beyond the MSc core syllabus.
- Lecturers on the course have extensive experience in consulting and working for financial companies and institutions such as Bank of Finland, Commerzbank, Deutsche Bank, Goldman Sachs, ION Trading, Standard Chartered Bank and Winton Capital Management.

**Course details**

Financial Mathematics studies problems of financial decision by combining various techniques from pure and applied mathematics. This course covers a diverse range of topics, from classical options pricing theory to post-crisis financial mathematics on optimal hedging, investment and risk management. Like any branch of applied mathematics, financial mathematics analyses a given problem by first building a mathematical model for it and then examining the model. Both steps require detailed knowledge in different areas of mathematics, including probability, statistics, optimisation, computer science and many more traditional fields of mathematics.

Our Financial Mathematics MSc is a unique course that encompasses the essential skills required for successful risk management, trading and research in quantitative finance: probability, statistics, optimisation, computing and financial markets.
You will explore probability theories, risk neutral valuation, stochastic analysis as well as interest rate and credit risk modules. We also offer you the opportunity to study an additional zero-credit supportive module called mathematical analysis for financial mathematics.

The Financial Mathematics MSc offers you the choice to study either full or part-time and is made up of optional and required modules. You must take modules totalling 180 credits to complete the course. If you are studying full-time, you will complete the course in one year, from September to September. If you are studying part-time, it will take two years to complete, you will study the required modules with some optional modules in the first year, and a further selection of required and optional modules including the 60-credit financial mathematics report module in your second year.

**Bloomberg terminal laboratory**

King’s is one of only a few academic departments in the UK that offers full access to Bloomberg terminals. These terminals will provide you access to live financial data. They are heavily used within the financial industry, and the data they provide is critical in assisting traders in making investment decisions and for risk managers monitoring investment probabilities. We have a number of Bloomberg terminals available for use by the Financial Mathematics MSc course.

You will use the Bloomberg terminals to:

- gain an intuition for the conduct of real financial markets
- develop potential investment strategies
- experience using real-world investment and risk management software and obtain data for research.

The skills you will learn from using the terminals are highly valued by employers. King’s is part of a strong network of financial mathematics in London with connections both in academia and in the industry.

We are also members of the University of London and by arrangement, you can enrol in optional modules at other institutions within the University of London, which includes Birkbeck, London School of Economics and Political Sciences, University College London and many others.

**Teaching**

We use lectures, seminars and group tutorials to deliver most of the modules on the course. You will also be expected to undertake a significant amount of independent study.

You are expected to spend approximately 10 hours work per credit for each module you attend in your degree, e.g. 150 hours work for a 15 credit module. These hours cover every aspect of the module.

**Assessment**

The primary method of assessment for this course is a combination of written examinations, essays, coursework, individual or group projects, class tests and oral presentations.

**Regulating body**

King’s College London is regulated by the Office for Students.

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**Course structure**

Courses are divided into modules. You will normally take modules totalling 180 credits.

**Required modules**

You are required to take:

- Probability Theory (15 credits)
- Risk Neutral Valuation (15 credits)
- MSc Financial Mathematics Project (60 credits)

**Optional supportive module**

- Mathematical Analysis for Financial Mathematics (0 credits)

**Optional modules**

Additionally, you are required to take modules totalling 90 credits from a range of optional modules that may typically include:

- Financial Markets (15 credits)
- Statistics in Finance (15 credits)
- Stochastic Analysis (15 credits)
- Recent Topics in Financial Mathematics (15 credits)
- Incomplete Markets (15 credits)
- C++ for Financial Mathematics (15 credits)
- Exotic Derivatives (15 credits)
- Interest Rates and Credit Risk (15 credits)
- Econophysics (15 credits)
- Machine Learning (15 credits)

Students taking the part time course should aim to take four modules in each year. The project is taken in the second year.

King’s College London reviews the modules offered on a regular basis to provide up-to-date, innovative and relevant programmes of study. Therefore, modules offered may change. We suggest that you keep an eye on the course finder on our website for updates.

**Location**

The majority of learning for this degree takes place at the King’s College London Strand Campus, with occasional lectures and practical sessions taking place at the Waterloo Campus. The Bloomberg Terminals are available at the recently renovated Bush House, Strand Campus.

Please note that locations are determined by where each module is taught and may vary depending on the optional modules you select.
Career prospects
Our graduates are highly sought after by investment banks, corporate risk management units, insurance companies, fund management institutions, financial regulatory bodies, brokerage firms, and trading companies. Recent employers of our graduates include Capital Investment, Credit Suisse, European Bank for Reconstruction & Development, Fitch Ratings, HSBC and Morgan & Stanley. Some graduates have chosen to pursue research degrees in financial mathematics.

Fees and funding
Full-time and part-time tuition fees – UK
The UK tuition fees for the 2019–20 academic year are available on the course web page.

Please note that the tuition fees for subsequent years of study may be subject to increases in line with King’s terms and conditions.

Full-time and part-time tuition fees – EU
Students starting their programme in 2019/20 (September 2019) who are eligible to pay EU fees will pay the same rate of tuition fees as UK students. This will apply for the duration of their programme, but may be subject to change by the UK Government for subsequent cohorts from 2020/21.

The UK tuition fees for the 2019–20 academic year are available on the course web page.

Please note that the tuition fees for subsequent years of study may be subject to increases in line with King’s terms and conditions.

Full-time and part-time tuition fees – International
The International tuition fees for the 2019–20 academic year are available on the course web page.

Please note that the tuition fees for subsequent years of study may be subject to increases in line with King’s terms and conditions.

Deposit
When you receive an offer for this course you will be required to pay a non-refundable deposit to secure your place. The deposit will be credited towards your total fee payment. The UK/EU deposit is £500. The International deposit is £2,000.

For further information, please visit the fees and funding section of our website: www.kcl.ac.uk/study/postgraduate/fees-and-funding/index.aspx

Additional costs
In addition to your tuition fees, you can also expect to pay for:
• books if you choose to buy your own copies
• library fees and fines
• personal photocopies
• printing course handouts
• society membership fees
• stationery
• travel costs for travel around London and between campuses
• graduation costs.

Disclaimer
Although this PDF was up-to-date at the time it was produced, please make sure you check our website www.kcl.ac.uk/study or contact us directly for the very latest information before you commit yourself to any of our courses.

Contact us
Tel +44 (0)20 7836 5454