

Financial Engineering Masters/MSc

Can't see the video? Try this link ([/Video/college-eps/maths/maths-pgt-video-2013.flv](#)).

Postgraduate Masters / MSC degree programme in Financial Engineering

MSc Financial Engineering is a multi-disciplinary field that involves the application of the computational engineering, software engineering, and computer programming skills, as well as the underlying mathematical and statistical theories to the analysis and management of financial opportunities. Students will receive the most advanced computational and programming techniques which help them advance quickly in the field.

Study here and find out why the University of Birmingham was awarded The Times and The Sunday Times University of the Year 2013-14 (<http://www.birmingham.ac.uk/news/latest/2013/09/20-sep-Birmingham-announced-as-University-of-the-Year.aspx>)

Course fact file

Type of Course: Taught

Study Options: Full time

Duration: 1 year full-time

Start date: September

Related courses

Postgraduate degree courses, School of Mathematics Graduate school (</schools/mathematics/postgraduate/index.aspx>)

Contact

If you would like further information about the course, please contact:

Admissions Tutor: Mrs Janette Lowe

Telephone enquiries: +44 (0)121 4146193

Email: pgoffice@maths.bham.ac.uk (<mailto:pgoffice@maths.bham.ac.uk>)

School of Mathematics (</schools/mathematics/index.aspx>)

Follow us on Twitter (http://twitter.com/eps_unibham)

Details

Financial engineering is a multi-disciplinary field that involves the application of computational engineering, software engineering, and computer programming skills, as well as the underlying mathematical and statistical theories to the analysis and management of financial opportunities.

The programme is for strong (1st, 2.1 or equivalent) graduates from programmes in mathematics, or programmes with advanced mathematical components, and who wish to pursue a career in quantitative analysis in economic or financial sectors with state-of-art mathematical methods, computational skills and programming expertise.

Compulsory modules:

- Research Skills
- Introduction to Quantitative Finance
- Exotic Options, Bonds and Further Quantitative Finance
- Advanced Quantitative Finance: Crashes, Volatility, Multiple Assets and Hedging
- Statistical Methods in Economics
- Computational Methods and Programming
- MSc Software Workshop I
- MSc dissertation

Optional modules (subject to availability):

- Game Theory
- Numerical Methods in Linear Algebra
- Fundamentals: Software Engineering
- Fundamentals: Databases
- Intelligent Data Analysis (Extended)

Related links

- **Postgraduate degree courses, School of Mathematics (</schools/mathematics/postgraduate/index.aspx>)**

Fees and funding

Tuition fees for 2015/2016 are as follows:

- £9,630 for **home/EU students**
- £14,140 for **international students**

Scholarships and studentships

Scholarships may be available. International students can often gain funding through overseas research scholarships, Commonwealth scholarships or their home government.

For further information contact the Department directly or email financialsupport@bham.ac.uk (<mailto:financialsupport@bham.ac.uk>). See also [postgraduate fees and funding \(/postgraduate/pgt-fees/index.aspx\)](#).

Entry requirements

The programme is for strong (First, Upper Second-class or equivalent) graduates from programmes in mathematics, or programmes with advanced mathematical components.

Learn more about [entry requirements \(http://www.birmingham.ac.uk/students/pg/requirements\)](http://www.birmingham.ac.uk/students/pg/requirements)

International students:

Learn more about [international entry requirements \(http://www.birmingham.ac.uk/students/pg/requirements/international\)](http://www.birmingham.ac.uk/students/pg/requirements/international).

[Standard English language requirements \(/postgraduate/requirements-pgt/international/index.aspx\)](#) apply.

How to apply

When clicking on the Apply Now button you will be directed to an application specifically designed for the programme you wish to apply for where you will create an account with the University application system and submit your application and supporting documents online. Further information regarding how to apply online can be found on the [How to apply pages \(http://www.birmingham.ac.uk/students/courses/postgraduate/apply-pg/index.aspx\)](http://www.birmingham.ac.uk/students/courses/postgraduate/apply-pg/index.aspx)

[Apply now \(https://pga.bham.ac.uk/lpages/EPSo72.htm\)](https://pga.bham.ac.uk/lpages/EPSo72.htm)

Related links

[Postgraduate degree courses, School of Mathematics Graduate school \(/schools/mathematics/postgraduate/index.aspx\)](/schools/mathematics/postgraduate/index.aspx)

Learning and teaching

In the Autumn and Spring semesters, you will take masters-level courses in both computational methods and programming and statistical methods in economics, as well as computer science courses such as the Computer Science Workshop, in addition to the core quantitative finance and further quantitative finance modules which are needed for a career in financial engineering and computational finance.

In the summer you will undertake a project, working with research leaders in mathematics and computer sciences. This will provide directly relevant training for a career in academic, and quantitative analysis in financial industry. A key component will be training specifically in independent study and research, an essential skill for quantitative analyst.

Employability

Career opportunities

This programme gives an ideal preparation for a career in quantitative analysis in economic or financial sectors with state-of-art mathematical methods, computational skills and programming expertise.

University Careers Network

Preparation for your career should be one of the first things you think about as you start university. Whether you have a clear idea of where your future aspirations lie or want to consider the broad range of opportunities available once you have a Birmingham degree, our Careers Network can help you achieve your goal.

Our unique careers guidance service is tailored to your academic subject area, offering a specialised team (in each of the five academic colleges) who can give you expert advice. Our team source exclusive work experience opportunities to help you stand out amongst the competition, with mentoring, global internships and placements available to you. Once you have a career in your sights, one-to-one support with CVs and job applications will help give you the edge.

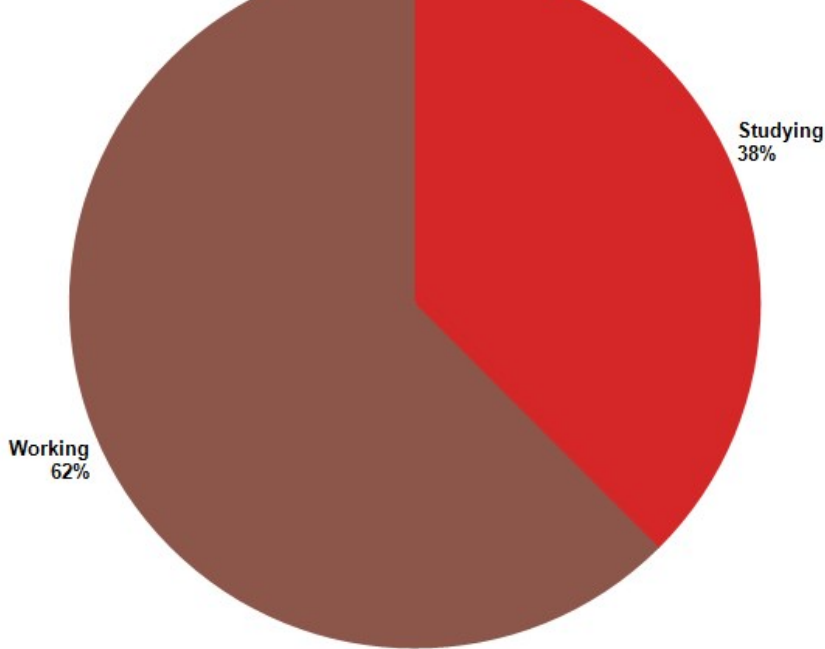
If you make the most of the [wide range of services \(https://intranet.birmingham.ac.uk/as/employability/careers/college/eps/index.aspx\)](https://intranet.birmingham.ac.uk/as/employability/careers/college/eps/index.aspx) you will be able to develop your career from the moment you arrive.

Destinations of Leavers from Higher Education (DLHE) 2011/12

The DLHE survey is conducted 6 months after graduation.

Examples of employers

- Aon Hewitt
- Barnett Waddingham
- Capita



- Deloitte
- Deutsche Bank
- Ernst & Young
- Mercer
- PricewaterhouseCoopers
- Softcat
- Tudor Grange Academy School

Examples of occupations

- Actuarial Trainee
- Actuarial Consultant
- Actuary
- Analyst
- Associate Auditor
- Consultant
- Financial Analyst
- Management Accountant
- Secondary School Teacher
- Software Tester

Further study-examples of courses

- ACA - Accountancy

- ACCA - Accountancy
- MSc Accounting and Finance
- MSc Actuarial Science
- MSc Computing Systems
- MSc Finance and Investment
- MSc Operational Research
- MSc Statistics
- PGCE Mathematics
- PhD Applied Mathematics

Visit the **Careers section of the University website** (<https://intranet.birmingham.ac.uk/as/employability/careers/index.aspx>) for further information.

