



Queen Mary  
University of London

RUSSELL  
GROUP

**Everyone could be  
the one who uses  
maths to save lives**

**School of Mathematical Sciences**  
Undergraduate Study 2022

[qmul.ac.uk/maths](http://qmul.ac.uk/maths)

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# Contents

## Everyone could be the one who uses maths to save lives

In 2016, a mathematician from Queen Mary, Dr Jamie Griffin, used the power of data and his expertise in modelling malaria transmission to investigate whether the introduction of the RTS,S malaria vaccine should be prioritised over existing interventions across Sub-Saharan Africa. Malaria remains a leading cause of death worldwide, and effective measures to stop its spread are vitally important.

Dr Griffin and his co-authors found that their models suggested vaccination should generally be implemented only after high coverage by existing measures had been achieved. Having solid research backed by mathematical expertise means that more informed policies can be put in place by organisations and charities fighting malaria around the world, and evidence-based decisions can help save lives. It's just one example of how Mathematics at Queen Mary continues to change the world.

**Could you be the next one to decrease the impact of global diseases?**

Welcome to the School of Mathematical Sciences	4
Why choose Queen Mary University of London?	6
Mathematical Sciences at Queen Mary	8
Our building	10
Student life on campus	12
The Mathematics Society	14
Employability	16
Careers support	18
Our alumni	20
Teaching and learning	22
The Professional Placement year	24
Year Abroad	26
Degree programmes	28
Entry requirements, fees and funding	46
Accommodation	48
Campus map	50

### Degree programmes

• Foundation programme	28
• Actuarial Science	30
• Mathematics	32
• Mathematics and Statistics	34
• Mathematics with Finance and Accounting	36
• Mathematics with Management	38
• Mathematics, Statistics and Financial Economics	40
• Pure Mathematics	42
• MSci Financial Mathematics	44

The School of Mathematical Sciences at Queen Mary is renowned for its excellent research and supportive teaching. Our diverse range of single-honours and joint-honours programmes are taught by staff who are experts in their field, and offer undergraduates the opportunity to follow a degree that closely fits their interests.

When you join Queen Mary, you will be welcomed into a diverse family of staff and students from all over the world. The School of Mathematical Sciences hosts leading researchers specialising in the core areas of pure and applied mathematics including recent appointments in computational complexity, financial mathematics, number theory and statistics and data science. This makes us a place of academic and personal self-discovery, and makes studying here an exciting experience.

By providing a supportive environment that caters to the needs of students we aim to make your studies engaging and rewarding. Our priority is to provide our students with every opportunity to build the knowledge and experience required for future success, whether in further study or the world of work.



In the School of Mathematical Sciences we welcome intellectually curious students. We will nurture both your passion for mathematics and your drive to succeed in your chosen career path.”

**Professor Alex Clark**  
Head of School



From your first day with us you'll be assigned an Academic Adviser who you can go to with any queries, as well as meeting our Student Support Officer who can assist you with any non-academic issues.

#### **Why study mathematics?**

If you enjoy solving puzzles and being able to prove you are right, then mathematics is for you. It permeates our daily lives and is used to describe quantity, shape, space and change. Patterns we encounter can be understood and explained using mathematics, inspiring new technologies and allowing us to make informed decisions.

Mathematics is for people who can think logically and creatively and then explain their thoughts precisely. It is a demanding discipline, but identifying the correct answer to a difficult problem is very satisfying. At university you will discover a new world of advanced mathematical concepts and ideas.

You'll encounter unfamiliar kinds of mathematical objects and investigate their common features and abstract natures. But it is not all abstract: our statistics, finance and actuarial modules are very much about the real world – you will use mathematical skills to extract information from data and draw conclusions.

As well as being an interesting subject to study, mathematics opens doors to a wide range of exciting, rewarding and well-paid careers. Our graduates have the skills and expertise needed to pursue careers in a range of fields including business, finance, technology, teaching, engineering, marketing, accountancy and academic research.

# Why choose Queen Mary University of London?

## Russell Group university

Queen Mary is a world-class university, ranking in the UK Top 20 QS World University Rankings 2019. We are a member of the Russell Group and attract some of the very brightest minds to study, teach and undertake research here.

## High-quality teaching

Our teaching is inspired by our world-leading research (we came 9th in the UK in the Research Excellence Framework - REF2014), and you will be taught by academics who are leaders in their field.

## Career success

Our award-winning careers team provides the support you need to succeed in your future career path, with regular careers and networking events, skills workshops and 1:1 support available.

**89%** of our Mathematics graduates are in work or further study within 6 months of graduation (DLHE 2017)

## Friendly campus lifestyle

We offer a completely self-contained residential campus, with all the campus benefits of safety, convenience and a friendly atmosphere while being close to central London.

## Excellent facilities

As well as our 24-hour library, sports centre, and other facilities across campus, you'll benefit from our £18m investment into our new Mathematics building, which has created an inspiring, collaborative space for the School community.

## Our London location

We are a short walk from Brick Lane and Shoreditch, and close to graduate employers in the City and Canary Wharf. Set beside Regent's Canal, the campus is tranquil and green, while excellent public transport links mean that you're within easy reach of all London has to offer.

## A range of support

Queen Mary offers a huge range of support to help you achieve your full potential; from our advice and counselling services and provisions for those with disabilities or dyslexia, to our active Students' Union.

## Scholarships and bursaries

We offer a range of generous scholarships and bursaries to enable the brightest students to study with us. See page 47 for more information.

## International community

Our students and staff come to Queen Mary from more than 162 different countries, making us one of the most internationally diverse universities in the world (Times Higher Education 2017). This helps to make our University a welcoming environment to those coming from overseas and gives you the opportunity to meet other students and staff from around the world.



# Mathematical Sciences at Queen Mary

The School of Mathematical Sciences at Queen Mary University of London is not your typical learning environment. Joining our School means you'll be joining a diverse, international community of like-minded, intellectually curious students, who use both logic and creativity to solve the problems of the 21st century.

It's a supportive community too, working together to achieve goals, with our world leading academics here to inspire you and the opportunity to experience our award-winning Mathematics Society.

Our flexible and wide range of abstract and real world programmes means you can shape your own career path. Our alumni have gone on to work in research and for organisations such as Dyson, JP Morgan,

PwC, KPMG, Goldman Sachs and the Financial Conduct Authority.

We invest in our students, providing the perfect environment for them to thrive, with one of the largest academic staff in the UK and our new £18 million Mathematics building with state-of-the-art facilities, teaching and study spaces.

Our students also benefit from:

- extensive support provision, including a dedicated Student Support Officer within the School and an Academic Adviser assigned to every student
- a dedicated Careers Consultant and an Internships Co-ordinator to help develop employability throughout your studies
- the opportunity to undertake a Professional Placement year across many of our programmes
- the opportunity to study abroad at one of our partner universities.

Become part our community of mathematicians and start your journey of discovery today.

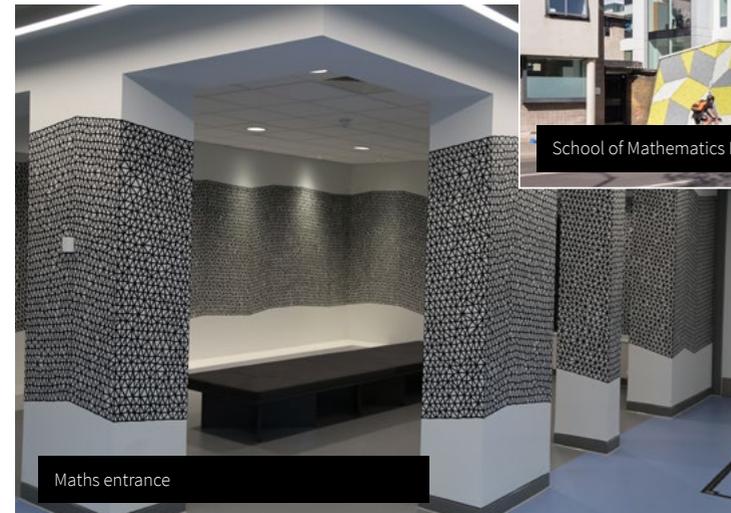


# Our building

We have invested approximately £18m in a transformative project to create an inspiring, collaborative space for our School community.

As well as high-quality teaching rooms for undergraduate seminars and workshops, the new space includes a new lecture theatre which seats up to 144 students. The building also features private and group study areas, a new IT lab space fitted with 42 computers and undergraduate social hub for students to meet, socialise and collaborate.

You can see more photos and a video of the building at: [qmul.ac.uk/maths/our-community/our-building](https://qmul.ac.uk/maths/our-community/our-building)



# Student life on campus



As one of the world's most exciting and culturally rich cities, London is a great place to live and study: you'll never run out of things to see and explore.

Find out more about our students' favourite spots in London: [qmul.ac.uk/study/the-london-advantage](https://qmul.ac.uk/study/the-london-advantage)

## Your Students' Union

Queen Mary Students' Union (QMSU) works hard to keep you happy and busy during your time here. There are over 300 diverse societies and 60 sports clubs for you to join, plus a host of events and activities organised throughout the year. From live music sessions to cultural celebrations, craft workshops to movie nights, there's always something going on.

## Student Village

Set alongside the historic Regent's Canal, our Mile End campus has everything you need to relax, study and socialise.

This is the home of our Student Village and it offers, along with other halls, around 2,000 spaces for both undergraduates and postgraduates. Our campus provides students with a safe and peaceful space to relax, study and socialise. As well as accommodation, lecture theatres and an extensive 24-hour library, we have shops, restaurants, a bar, sports facilities, and a bank, all on-site.

Find out more at [qmul.ac.uk/study/our-campuses/](https://qmul.ac.uk/study/our-campuses/)

## How to apply for accommodation

The Admissions Office will send you full details on how to apply for accommodation once you have firmly accepted an offer to study here.

For virtual tours and full details of the accommodation options, including prices, visit: [residences.qmul.ac.uk](https://residences.qmul.ac.uk)

# The Mathematics Society

Clubs and societies form an important part of your student experience. Run entirely by students and supported by School staff and funding, the Mathematics Society has long been one of the largest and most active at Queen Mary.

Whilst any Queen Mary student can become a member, maths students have the opportunity to develop valuable experience and transferable skills by joining the Mathematics Society committee or helping to organise events.

## What does the Mathematics Society do?

The Mathematics Society organises a wide variety of activities and events. This helps us to foster our fantastic, friendly community. It also gives you a chance to explore your love of maths, increase your knowledge and skills and enhance your employability.

- **Social events** help to reinforce the sense of community. Regular activities include pizza nights, pub quizzes, laser tag, Pi Day celebrations and the Spring Ball, as well as a recent trip to Bletchley Park. They are a fantastic way to meet other maths students outside of your lectures.
- **Residential trips** range from visiting the Mathematikum museum in Germany to camping in Wales.
- **Academic events** such as our annual MathsSoc Conference, include specially arranged talks from academics on a range of mathematical topics not necessarily seen in lectures. Past guest speakers have included 'stand-up mathematician' Matt Parker, author Simon Singh, and Emeritus Professor Peter Cameron.
- **Careers events** are an opportunity for you to meet major employers on campus and find out more about your career options. This includes our annual Maths Impact Day, organised in collaboration with the Careers department.



“

The Maths Society is a free environment and a creative space where every member has a say, no matter what their position within the Society is. Students who are interested in joining the Society can do so and their input on any events and activities is always welcome.”

**Bana Alemseged**

Co-President of Mathematics Society  
(2020-21)

# Employability

You will have excellent career prospects with a BSc from Queen Mary. The latest data shows that 89 per cent\* of our School of Mathematical Sciences graduates are in work or further study within six months of graduation.

The average starting salary for our graduates within six months of graduation is £24,000.

In addition to postgraduate study and research, our graduates go onto work in a variety of roles, including financial investment analysts and advisers, chartered and certified accountants and business management professionals.

## Recent Employers

Organisations employing our recent graduates include:

Accenture	Bank of America	Bank of England
Barclays	Berkeley Group	BNP Paribas
Boots	British Gas	Cancer Research UK
Capita	Deloitte	Direct Line
Dyson	EY	Global Aerospace
Goldman Sachs	Grant Thornton	HM Revenue and Customs
JP Morgan	KPMG	London Underground
Macmillan Cancer Support	National Audit Office	NHS
QBE Insurance	Royal Mail	PwC
Santander	Societe General	Standard Chartered

\*All information listed is from the 2015-16 and 2016-17 Destination of Leavers from Higher Education Surveys



Diana speaks to students at our recent Women in Mathematics event, sponsored by the London Mathematical Society



Studying maths gave me such valuable analytical and logical skills that can be used within any industry, and helped me to develop my problem solving skills. I still use methods that I learned in Linear Algebra and Statistical Modelling in my job now."

### Diana Akanho

BSc Mathematics Alumna. Now working as a Senior Insights Manager at Tech Nation.

### Did you know...?

Five years after graduating, maths graduates are the third highest earners on average, compared to other degree subjects (Institute for Fiscal Studies report, 2018)

## Graduate roles

Below is a representative sample of professional roles our recent graduates have gone on to:

Network Management Analyst	Senior Analyst	Global Markets Graduate Analyst
Pricing Analyst	Technology Risk Associate	Trainee Accountant
Financial Modelling Analyst	Business Analyst	Regulatory Reporting Analyst
Graduate Business Accountant	Tax Assistant	Healthcare Assistant
Actuarial Assistant	Commodities and Financial Risk Consultant	Data Scientist

# Careers support

## How we support you

Alongside the University's central Careers and Enterprise service, we have our own dedicated Careers Consultant and Internships Coordinator. Each have expert knowledge of the job market and the skills you need for a successful career. They can help you to identify opportunities, gain work experience, and make strong job applications.

Support available includes:

- One-to-one careers appointments
- CV-checking and mock interviews
- Tailored employability workshops
- Opportunities to meet employers through events (such as Insight Days in Careers and Enterprise's QTaster programme)
- Guidance on internships, part-time jobs and work placements
- Annual Meet Maths Alumni events, in-curriculum careers and employability sessions – where your Careers Consultant works with lecturers to provide tailored employability content within your modules
- Free access to Bloomberg Market Concepts Certification and Datacamp.

## Enterprise

Students and graduates across Queen Mary start new businesses and social ventures each year. We provide support in the form of funding, advice, workshops, workspace, and access to experts and valuable networks. We also offer programmes aimed to develop your entrepreneurial skills such as QIncubator, the perfect testing ground for your business idea, and QAccelerator, designed to support growing businesses in scaling their ventures.

## Work experience

Our Internships Coordinator sources exclusive internships for mathematics students, and provides advice and guidance for students to successfully complete their own search for work experience.

Our work experience scheme, The Student Consultancy Project, allows students to build valuable transferable skills by working with local charities and businesses. There are also plenty of opportunities to work part-time during your studies, including roles on campus.

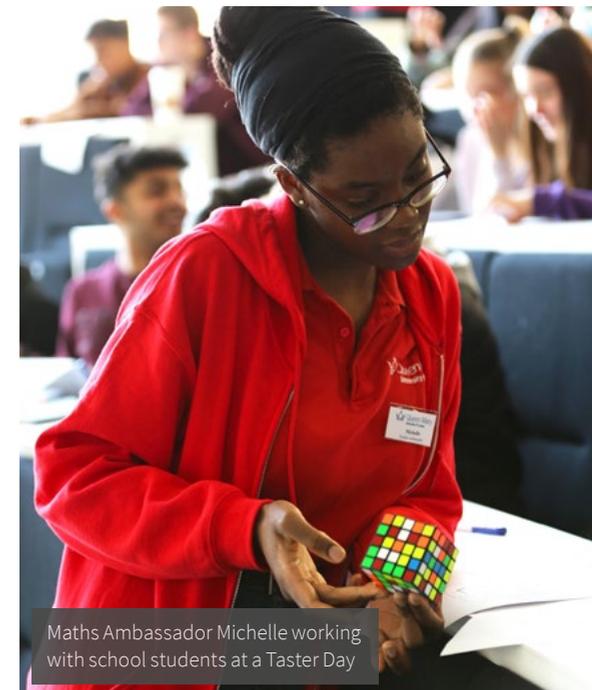


Through the QTaster Scheme, I visited a range of companies, including Barclays, MediaCom and Liberty Mutual. During my first year, those Insight Days have given me a broad perspective on what careers are available and how to market myself.”

### Rehab-Al Mohsin

BSc Mathematics with Actuarial Science (graduated 2019)

QTaster allows you to gain insights into companies who are both well-known and new to you, learn about the day-to-day culture and get hands-on experience with employers in their own office. You can further add to your skill toolkit by becoming a Maths Ambassador. We'll train you and pay you for your time as you represent the University at a variety of engaging activities and events. These take place on campus, in our local community and with our outreach partner organisations. In addition to paid work, the Students' Union offers a whole host of volunteering opportunities. For more information about our careers support, visit: [careers.qmul.ac.uk](https://careers.qmul.ac.uk)



Maths Ambassador Michelle working with school students at a Taster Day

# Our alumni



I really enjoyed the diversity of activities I could get involved in during my time at Queen Mary. From learning a new language to studying abroad, it was great that my degree programme had the flexibility to accommodate this. Within my degree, modules such as Statistical Modelling or Designs of Experiments really helped form the basis of my understanding of statistics.

During the summer of my second year, I completed an internship as a Research Assistant at Queen Mary's Wolfson Institute of Preventative Medicine.

Here I was able to observe the work of Medical Statisticians working in academia and gain an understanding of epidemiology.”

**Abeera Mohammad**  
**BSc Mathematics and Statistics**  
**(graduated 2016). Now Senior Associate**  
**Biostatistician at Amgen.**



I spent four years at Queen Mary as a Mathematics with Business Management student and I had the privilege of learning from some of the best academics in the field. I spent a lot of time at the Students' Union and took part in various volunteering opportunities, where I learned a lot about myself and how far a little help can go. I also developed many new skills, from taking part in all-female coding courses to helping people move into accommodation, and I even developed an idea for a sustainable, youth-driven business. Queen Mary was my home for some of the most defining and exciting years of my life.

**Anna Galli**  
**BSc Mathematics with Business**  
**Management\* (graduated 2019) Now**  
**Financial Modelling Analyst at KPMG UK**

\*This programme name changed to Mathematics with Management in September 2019.



Queen Mary helped me get my current Actuarial Analyst role at AXA XL through both the outstanding education it provides and its incredible careers department. With the exemptions from my degree course and the job application support available, I was able to ace my interviews and get my first 'real' job. My advice for current students is to utilise the amazing careers facilities Queen Mary has to offer. There are different advisors for all sorts of industries and they are all really helpful in getting you to where you want to be.

**Amandeep Bhumber**  
**BSc Mathematics with Actuarial Science**  
**(graduated 2020). Now Actuarial Analyst**  
**at AXA XL**



My time at Queen Mary was thoroughly enjoyable and provided a great foundation for my career. The wide variety of modules allowed me to explore various branches of mathematics and obtain a great set of transferable skills. During my three years at university there were plenty of opportunities to get involved in extracurricular activities including being a Maths Ambassador and a PASS (Peer Assisted Study Support) mentor.

One of my best experiences was working as a consultant for the Student Consultancy Project. The wealth of opportunities provided during my time at Queen Mary helped me grow in confidence, get out of my comfort zone and understand my strengths. I am forever grateful for my time at Queen Mary!

**Luke Brown**  
**BSc Mathematics (graduated 2018)**  
**Now Analytics Analyst at Accenture**



My time at Queen Mary was such a unique part of my life. I joined societies and took part in events that I'd never thought I would join, and I ended up loving them. I had the opportunity to give back to Queen Mary too, by working for the School of Mathematical Sciences as an Ambassador. I also gave talks and tours to prospective undergrads, some of whom recognised and thanked me the next year after joining. My course had a range of modules spanning the spectrum of pure to applied maths. I've leveraged the knowledge I obtained in my finance modules to start my career as an Analyst and I intend to continue growing my knowledge of the field. University teaches you so much but the most important thing you'll learn is about who you are and what you can achieve.

**Muhammed Ali Saleh**  
**BSc Mathematics with Finance and**  
**Accounting (graduated 2017) Now Domain**  
**Architect at 6Point6**



I thoroughly enjoyed my three years at Queen Mary which left me with not only a first-class degree in BSc Mathematics but also the most amazing memories and friendships that will last a lifetime. Studying mathematics enhanced my analytical and problem-solving skills, and during my course, I had the chance to take modules such as Computing and Data Analysis with Excel, Introduction to Computer Programming (Python) and Professional Skills and Data Analysis with SAS, which gave me the transferable technical skills required in my industry.

I also utilised the careers department by attending events, CV improvement sessions and taking part in programmes like QTaster, The Student Consultancy Project, supported by J.P. Morgan, and QMentoring. This equipped me with the knowledge and relevant experience to answer interview questions and successfully make it through the application process. I am now working at KPMG as a Graduate Audit IRM Analyst, where I continue to learn, push myself and make connections.”

**Ma-ai Elven**  
**BSc Mathematics (graduated 2020).**  
**Now Audit IRM Analyst at KPMG UK**

# Teaching and learning

## Our flexible programmes

For all of our students there are a number of core modules designed to develop your strengths in key areas of mathematics. Across many of our degrees you will be able to choose from a range of elective modules in order to tailor your programme to your interests and discover new areas of mathematics.

## Teaching

Each year you will normally take eight modules. The majority are delivered via a combination of lectures and tutorials, and practical computing sessions will be taught in our computer labs.

- **Lectures** are usually delivered to large groups of students and are used to teach new content. Lecturers may use a range of teaching tools such as slides, whiteboards, handouts, demonstrations and interactive technologies.
- **Tutorials** support your lectures and give you the opportunity to work on problems, discuss solutions and ask questions in a smaller group. Academics or PhD students will lead the tutorials and provide guidance.

## Assessment

The majority of modules are assessed by an exam counting for at least 90 per cent of your marks; the remaining ten per cent comes from a test or coursework. A final year project is compulsory for an MSci programme but optional for most BSc students.

## Student Support

You will be assigned an Adviser in your first week, who will support you throughout your studies. Your Adviser can help to guide you through any academic issues, such as choosing which modules to study.

The School of Mathematical Sciences also has a dedicated Student Support Officer to provide you with advice and guidance on any aspect of student life at Queen Mary. The Student Support Officer's role is to promote and support a positive student experience and help you to access further support services.



It's exciting to have students approaching problems from different backgrounds, different viewpoints. Those are my favourite moments as a teacher: when someone asks me a question and I think 'I hadn't thought about it that way'."

**Dr Justin Ward**  
Senior Lecturer in Optimisation

Dr Justin Ward works through a mathematical problem during a tutorial

# The Professional Placement year

Most of our programmes offer you the option to extend your degree to include a Professional Placement year (often referred to as a ‘sandwich’ programme). This takes the form of a one-year paid work placement within a relevant organisation. Students receive lectures from academic staff with industry experience but they also collaborate with the careers team to optimise their chances of successfully obtaining a Professional Placement.

## Why choose a Professional Placement?

A Professional Placement is an excellent opportunity to develop your business skills and gain hands-on experience. As well as helping you to secure graduate employment, this can support your academic achievement by providing additional context to your studies.

If you’re not sure what career path you want to follow after your degree, a placement year can be an excellent way to help you understand your options and make decisions about your future.

## Where would I be working?

You would be working in a paid role within a relevant organisation. As a maths student, this could include: banks and insurance companies, accountants, consultancy firms, industrial firms and manufacturers, retailers, technology companies, and governmental and public sector organisations. Over the past two years, students have gained placements at Renault, EY and Goldman Sachs.

## Who can take a Professional Placement?

We offer the Professional Placement option across the majority of our undergraduate programmes. See the course listing on pages 30-45 for more information.

We support you in identifying and applying for a suitable placement role.



Working at EY for a year has been enlightening because I’ve been able to get involved in a range of projects and opportunities, which would have not been possible if I had joined as a graduate student.”

### Sameara Ali

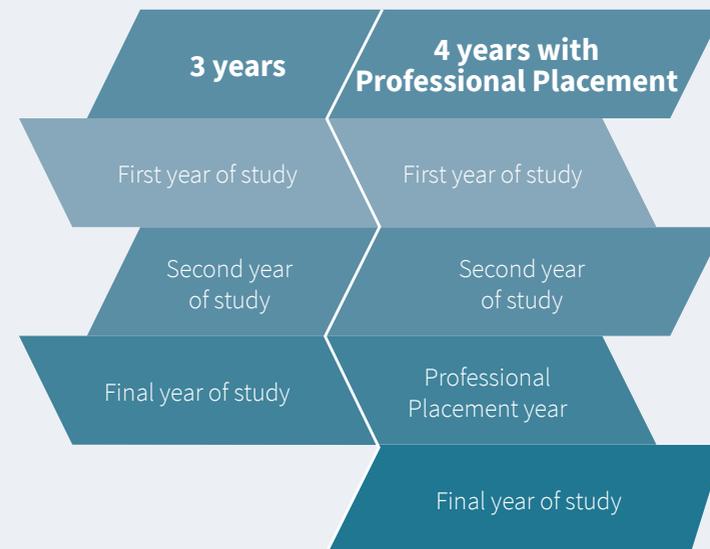
BSc Mathematics, Statistics and Financial Economics. Professional Placement at EY.

## How is the Professional Placement assessed?

Your placement year will be assessed through written coursework, a short presentation and employer feedback.

### Example:

BSc Mathematics course structure



For more information about the Professional Placement year, including FAQs, see our website: [qmul.ac.uk/maths/professionalplacement](https://qmul.ac.uk/maths/professionalplacement)

# Year Abroad

We offer the option to complete an additional Year Abroad, studying at one of our partner institutions overseas, across any of our Mathematics undergraduate programmes.

## Why choose a Year Abroad?

Living and studying in a different country and immersing yourself in another culture helps you to understand, connect with and appreciate the world. International experience enables you to stand out in a crowded employment market; graduates with such experience show they are willing to learn, can problem-solve, act on their own initiative and work very well in diverse teams.

## When does the Year Abroad take place?

Your Year Abroad takes place in your third year of study and lasts the full academic year. You then return after your placement to complete your final year of study (for BSc, or third and fourth years for MSci students).

During your time abroad, you continue to be a Queen Mary student and have full access to support from the University.

## How to apply

You can apply directly to the 'with a Year Abroad' variant of our programmes in UCAS, using the course codes listed on pages 30-45. Alternatively, you will have the option to transfer into the Year Abroad stream of your programme once you are studying with us, so long as you meet the academic progression requirements.

**We currently have partner universities in:**

- Australia
- Canada
- France
- Germany
- Italy
- Hong Kong
- Malaysia
- New Zealand
- Singapore
- South Korea
- USA

To find out more, go to: [qmul.ac.uk/maths/yearabroad](http://qmul.ac.uk/maths/yearabroad)



# Foundation programmes

Integrated Foundation degrees at Queen Mary provide students with alternative routes onto undergraduate degrees. While in your foundation year, you have access to all the University's facilities and will be a full-time student.

Our Mathematics degrees with Foundation combine a foundation year with a traditional university degree into an integrated four-year programme (1+3).

The BSc Mathematics degrees with Foundation are open to home, EU and international students. UK and EU foundation students are eligible to apply for funding through the Student Loans Company. Queen Mary offers tailored pathways for subjects across science and engineering: [qmul.ac.uk/international-students/pathway-programmes/ify/science-and-engineering](https://qmul.ac.uk/international-students/pathway-programmes/ify/science-and-engineering)

Successful completion of the foundation year guarantees you a place on one of the following programmes at the School of Mathematical Sciences, without having to re-apply through UCAS:

- BSc Mathematics
- BSc Mathematics and Statistics
- BSc Mathematics with Finance and Accounting
- BSc Pure Mathematics
- BSc Actuarial Science

## International Science and Engineering Foundation Programme

We also offer an International Science and Engineering Programme (ISEFP), a one-year programme that offers pathways onto undergraduate degrees across science and engineering. The ISEFP is aimed at international students who have AS-level/Year 12 equivalent qualifications, i.e. students who may not have had the opportunity to study to A-level standard. Visit the foundation website to learn more about the programmes:

[qmul.ac.uk/international-students/pathway-programmes/ify](https://qmul.ac.uk/international-students/pathway-programmes/ify)



I feel better prepared for exams now – I've learnt how to structure my revision and I've gained independence. It's been really good preparation for my degree."

### Barbara Sikora

MSci Mathematics with Foundation (graduated 2020)  
Now Implementation Consulting Analyst at IHS Markit

# Actuarial Science

## Actuarial Science

N323 BSc (three years)

N32P BSc (four years with Professional Placement)

N32Y BSc (four years with a Year Abroad)

**A-level:** AAA including mathematics

**IB:** 36 overall with 666 in HL subjects, including mathematics

**BTEC:** See [qmul.ac.uk/undergraduate/entry/btec](https://qmul.ac.uk/undergraduate/entry/btec) for detailed requirements



Accredited programme

Follow a bespoke, accredited programme combining core

mathematics with specialist modules, designed to give you a head start in your actuarial career.

Actuaries are problem-solvers who can think strategically, drawing on their mathematical skills to measure the probability and risk of future events. This profession offers a satisfying and financially rewarding career path across areas such as general insurance, life insurance, pensions and investment.

This degree is currently accredited by the Institute and Faculty of Actuaries (IFoA), and successful students will be able to gain up to six exemptions from the IFoA Core Principles examinations.

The programme combines core mathematics with specialist modules in probability, statistics, actuarial and financial mathematics, and business economics. You will have the opportunity to learn from qualified actuaries with many years of industry experience.

As part of your studies, you will take modules in **Actuarial Professional Development**, gaining relevant skills and industry knowledge in preparation for a successful career.

The Professional Placement option also provides an excellent opportunity for hands-on experience. For more information, see page 24.

Examples of some modules currently offered:

- Actuarial Financial Engineering
- Actuarial Mathematics
- Computing and Data Analysis with Excel
- Corporate Financial Reporting
- Economics for Business Management
- Financial Mathematics
- Introduction to Machine Learning
- Mathematical Tools for Asset Management
- Probability and Statistics
- Statistics for Insurance
- Survival Models

For further details, including a full list of modules please visit: [qmul.ac.uk/N323](https://qmul.ac.uk/N323)



This course provides the foundation for my path towards becoming a fully qualified actuary and offers a deep level of general mathematical understanding. The specialist modules are taught by professional actuaries, who invite guests to give us a first-hand insight into the field.”

**Simon Onyango**

BSc Mathematics with Actuarial Science

# Mathematics

## Mathematics

G100 BSc (three years)

G101 BSc (four years with Professional Placement)

G10Y BSc (four years with a Year Abroad)

G102 MSci (four years)

G12Y MSci (five years with a Year Abroad)

**A-level:** BSc: ABB including A in mathematics

MSci: AAA including mathematics

**IB:** BSc: 32 overall with 665 in HL subjects including mathematics

MSci: 36 overall with 666 in HL subjects including mathematics

**BTEC:** See [qmul.ac.uk/undergraduate/entry/btec](https://qmul.ac.uk/undergraduate/entry/btec) for detailed requirements

Our most flexible Mathematics programme; take a broad approach to the whole subject, or focus on areas that interest you most.

Discover a new world of concepts and ideas when you study Mathematics at Queen Mary. In your first year you will build a solid grounding in pure, discrete, decision and modern applied mathematics, probability and statistics.

In subsequent years you can choose from modules across all mathematical disciplines, taught by active researchers. You will have the freedom to take new directions on your mathematical journey, studying topics in depth as your interests develop. You can also align your studies to your career goals, choosing modules in actuarial and financial mathematics, computer programming, teaching and more.

The MSci Mathematics includes a wide variety of modules to choose from across maths and physics in the final year. You'll gain specialised knowledge about a topic of particular interest by completing an MSci research project; an excellent opportunity to develop your research skills.

This programme gives you the option to extend your degree with a Professional Placement year, or Year Abroad. For more information see pages 24-27.

### Examples of some modules currently offered:

- Calculus
- Communicating and Teaching Mathematics
- Complex Variables
- Computing and Data Analysis with Excel
- Financial Mathematics
- Number Theory
- Introduction to Machine Learning
- Linear Algebra
- Linear Programming and Games
- Probability and Statistics
- Random Processes
- Statistical Modelling

You will also have the option to choose modules from some other departments, including Languages.

For further details, including a full list of modules please visit: [qmul.ac.uk/G100](https://qmul.ac.uk/G100)



My degree is very flexible: you can choose most of your modules early on, which makes studying much more enjoyable and you can even pick some modules from other departments. This allowed me to really focus on what I am interested in, while still getting a solid mathematical foundation through the compulsory modules in the first year.”

**Anna Veldman**  
BSc Mathematics

# Mathematics and Statistics

GG31 BSc (three years)

GG32 BSc (four years with Professional Placement)

GG3Y BSc (four years with a Year Abroad)

**A-level:** ABB including A in mathematics

**IB:** 32 overall with 665 in HL subjects, including mathematics

**BTEC:** See [qmul.ac.uk/undergraduate/entry/btec](https://qmul.ac.uk/undergraduate/entry/btec) for detailed requirements

Statistics is essential to making advances in science, technology, business and public policy, and is a fascinating field of study in itself.

This BSc combines rigorous all-round mathematical training with in-depth study of statistics. You will spend your first year building a foundation across pure, discrete, decision and modern applied mathematics, probability and statistics.

From the second year you will specialise in statistics, building statistical theory and methodology on mathematical foundations, especially probability theory.

Probabilistic modelling has applications in genetics, quantum physics and risk analysis, and is increasingly used in the financial sector. You can study topics such as statistics for insurance, financial time series and actuarial mathematics.

A choice of second and third year modules allows you to focus on aspects of statistics that most interest you, or align your studies to your career goals, choosing modules in programming, insurance, computational statistics or teaching.

This programme gives you the option to extend your BSc degree with a Professional Placement year, or Year Abroad. For more information see pages 24-27.

Examples of some modules currently offered:

- Bayesian Statistical Methods
- Calculus
- Complex Variables
- Computing and Data Analysis with Excel
- Financial Mathematics
- Introduction to Computer Programming
- Introduction to Machine Learning
- Linear Programming and Games
- Probability and Statistics
- Statistical Modelling
- Time Series

You will also have the option to choose modules from some other departments, including Languages.

For further details, including a full list of modules please visit: [qmul.ac.uk/GG31](https://qmul.ac.uk/GG31)



Thinking that most things can be rendered to numbers and equations is something that has always challenged my perception of the world. This course offers a great deal of modules to choose from and build your own path. On top of that, the University is always eager to offer guidance and support.”

**Ioana Iacobici**

BSc Mathematics and Statistics

# Mathematics with Finance and Accounting

G1N4 BSc (three years)

G1N6 BSc (four years with Professional Placement)

G14Y BSc (four years with a Year Abroad)

**A-level:** ABB including A in mathematics

**IB:** 32 overall with 665 in HL subjects, including mathematics

**BTEC:** See [qmul.ac.uk/undergraduate/entry/btec](https://qmul.ac.uk/undergraduate/entry/btec) for detailed requirements

Develop vital numerical and analytical skills along with a solid grounding in finance and accounting.

Our most popular joint degree programme combines mathematical and statistical training with finance and accounting, including general financial theory and its applications in the world of business and commerce.

In your first year you'll build a solid grounding across all areas of mathematics, probability and statistics, and explore the world of finance with modules in accounting and economics. Over the second and third years, you'll focus on statistics and applied mathematics alongside management accounting and financial mathematics.

Joint teaching from the School of Mathematical Sciences and the School of Business and Management means you'll learn from experts across both fields, and benefit from the support and facilities of two academic schools.

The option of a Professional Placement year provides an excellent opportunity to gain hands-on experience and prepare for a successful career in the financial sector and beyond. For more information see page 24.

Examples of some modules currently offered:

- Actuarial Mathematics
- Calculus
- Economics for Business
- Introduction to Computer Programming
- Introduction to Machine Learning
- Financial Management
- Financial Mathematics
- Managerial Accounting
- Mathematical Tools for Asset Management
- Probability and Statistics
- Statistical Modelling

You will also have the option to choose modules from some other departments, including Languages.

For further details, including a full list of modules please visit: [qmul.ac.uk/G1N4](https://qmul.ac.uk/G1N4)



I am fascinated with the way my course is structured; my course has allowed me to explore and see different branches of mathematics with the provision of excellent course materials and support from the department.”

**Nirusiya Sriskantharajah**

BSc Mathematics with Finance and Accounting

# Mathematics with Management

G12N BSc (three years)

G1NN BSc (four years with Professional Placement)

G13N BSc (four years with a Year Abroad)

**A-level:** AAB including A in mathematics

**IB:** 34 overall with 665 in HL subjects, including mathematics

**BTEC:** See [qmul.ac.uk/undergraduate/entry/btec](https://qmul.ac.uk/undergraduate/entry/btec) for detailed requirements

The perfect degree for the mathematically gifted student with ambition to be the future leader of a major organisation.

This programme combines the numerical and analytical skills of a mathematics degree with strong business acumen.

You'll study pure, discrete, decision and applied mathematics, probability and statistics. Tailored business modules will help you to develop skills suited to a future career in a financial institution, technology company, or multinational corporation, learning alongside other mathematicians and scientists.

Management modules have a particular emphasis on social justice, sustainability and good governance in the management of private, public and not-for-profit organisations. You'll cover topics such as financial accounting, entrepreneurship, business analytics, strategy, and economics, building an in-depth understanding of the corporate

environment.

The option to undertake a Professional Placement year during your studies provides an excellent opportunity to gain hands-on experience, learn about an industry of interest, and prepare for a successful career. For more information, see page 24.

Examples of some modules currently offered:

- Business Analytics
- Calculus
- Contemporary Strategic Analysis
- Economics for Business
- Entrepreneurship
- Financial Accounting
- Fundamentals of Management
- Introduction to Machine Learning
- Linear Programming and Games
- Probability and Statistics
- Project Management
- Statistical Modelling

You may also have the option to choose modules from some other departments, including Languages.

For further details, including a full list of modules please visit: [qmul.ac.uk/G12N](https://qmul.ac.uk/G12N)



I am fascinated with the unique blend of this course: it covers everything from mathematics, programming and economics to marketing and entrepreneurship. I've gained an in-depth understanding of the business world and was exposed to various mathematical approaches and applications."

**Alise Sevckenko**

BSc Mathematics with Management

# Mathematics, Statistics and Financial Economics

GL11 BSc (three years)

GL12 BSc (four years with Professional Placement)

GL1Y BSc (four years with a Year Abroad)

**A-level:** AAA including mathematics

**IB:** 36 overall with 666 in HL subjects, including mathematics

**BTEC:** See [qmul.ac.uk/undergraduate/entry/btec](https://qmul.ac.uk/undergraduate/entry/btec) for detailed requirements

Mathematics and economics make an excellent match: develop mathematical rigour alongside an in-depth understanding of the economic climate.

This programme is for mathematically excellent students who want to apply their numerical and analytical skills to succeed in a career in the world of economics, investment banking, and finance.

In your first year you'll gain a solid foundation in all the major areas of mathematics, and from second year onwards the programme is evenly split between mathematics and economics modules. The former will focus on statistics and probability, and the latter will cover markets, institutions and corporate finance.

Joint teaching from the School of Mathematical Sciences and the School of Economics and Finance allows you to learn from experts across both fields and benefit from the facilities and support of two academic departments.

This programme gives you the option to extend your BSc degree with a Professional Placement year, or Year Abroad. For more information see pages 24-27.

Examples of some modules currently offered:

- Applied Linear Algebra
- Calculus
- Capital Markets
- Corporate Finance
- Financial Mathematics
- Futures and Options
- Games and Strategies
- Introduction to Machine Learning
- Macroeconomics
- Microeconomics
- Probability and Statistics
- Statistical Modelling
- Time Series

You may also have the option to choose modules from some other departments, including Languages.

For further details, including a full list of modules please visit: [qmul.ac.uk/GL11](https://qmul.ac.uk/GL11)



My degree provides me with a wide knowledge in three different disciplines that really intrigue me. It gives me great flexibility in selecting future career prospects.”

**Riya Vasa**

BSc Mathematics, Statistics and Financial Economics

# Pure Mathematics

G110 BSc (three years)

G1NY BSc (four years with a Year Abroad)

**A-level:** ABB including A in mathematics

**IB:** 32 overall with 665 in HL subjects, including mathematics

**BTEC:** See [qmul.ac.uk/undergraduate/entry/btec](https://qmul.ac.uk/undergraduate/entry/btec) for detailed requirements

Take one of the few UK degrees in pure mathematics, in an academic department renowned for research in algebra, combinatorics and geometry.

This programme is for those who love mathematics for its intrinsic beauty.

The first year of your BSc builds a solid foundation across all areas of mathematics: calculus, discrete mathematics, algebra, geometry, probability and statistics, computing. In the second year you'll encounter a higher level of abstraction, taking further modules in analysis and differential equations. You can choose from a wide selection of optional modules depending on your interests, thanks to the diversity of our research expertise (see [qmul.ac.uk/maths/research](https://qmul.ac.uk/maths/research)).

In the final year you may choose to undertake a mathematical research project, working closely with one of our expert academics to explore your chosen subject in depth and develop your independent research and presentation skills.

You'll have the option to extend your BSc degree with a Year Abroad, studying at one of our partner universities. For more information see page 26.

Examples of some modules currently offered:

- Algorithmic Graph Theory
- Calculus
- Chaos and Fractals
- Communicating and Teaching Mathematics
- Complex Variables
- Computing and Data Analysis with Excel
- Differential and Integral Analysis
- Group Theory
- Introduction to Differential Geometry
- Number Theory
- Probability and Statistics
- Statistical Modelling

You will also have the option to choose modules from some other departments, including Languages.

For further details, including a full list of modules please visit: [qmul.ac.uk/G110](https://qmul.ac.uk/G110)



Studying at Queen Mary has allowed me to be flexible with the modules I've taken and given me the opportunity to learn more about my favourite parts of maths."

**Puja Goradia**

BSc Pure Mathematics

# MSci Financial Mathematics

GN1H (four years)

GN2H (five years with Professional Placement)

GNHY (five years with a Year Abroad)

**A-level:** AAA including mathematics

**IB:** 36 overall with 666 in HL subjects, including mathematics

**BTEC:** See [qmul.ac.uk/undergraduate/entry/btec](http://qmul.ac.uk/undergraduate/entry/btec) for detailed requirements

Combine key areas of pure and applied mathematics with more specialist knowledge of financial mathematics, numerical methods and computing.

Our Financial Mathematics MSci is ideal for students planning a career in the more quantitative areas of finance and banking, and for those wanting to undertake academic research.

In your first year, you'll take modules that will give you a foundation in all the core areas of mathematics and statistics, and gain practical data analysis skills. In later years, you'll have the opportunity to study modules across financial and actuarial mathematics, statistical modelling, financial management, programming and more.

In the final year, you'll take advanced modules and develop your research skills by completing an individual project in contemporary mathematical finance. Projects are supervised by one of the School's academics, many of whom have extensive industry experience in mathematical finance.

This programme gives you the option to extend your MSci degree with a Professional Placement year, or Year Abroad. For more information, see pages 24-27.

Examples of some modules currently offered:

- Actuarial Mathematics
- Advanced Portfolio Theory and Risk Management
- Applied Linear Algebra
- Complex Variables
- Economics for Business
- Financial Mathematics
- Introduction to Machine Learning
- Mathematical Tools for Asset Management
- MSci Project
- Probability and Stochastic Processes
- Professional Skills and Data Analysis with SAS
- Programming in C++ for Finance
- Statistical Modelling
- Statistics for Insurance
- Time Series

You will also have the option to choose modules from some other departments, including Languages.

For further details, including a full list of modules please visit: [qmul.ac.uk/GN1H](http://qmul.ac.uk/GN1H)



I have always loved maths and at the same time wanted to work in banking so Financial Mathematics was a perfect course for me. I have enjoyed the module content and getting involved with different societies.”

**Ibrahim Darwich Ajour**

MSci Financial Mathematics (graduated 2020)  
Now undertaking a PhD in Mathematical Finance at Queen Mary University of London

# Entry requirements, fees and funding

For all full-time higher education programmes at universities and colleges in the UK, you'll need to apply online at [ucas.com](https://ucas.com)

You'll find a step-by-step guide to applying on the Queen Mary website, at: [qmul.ac.uk/undergraduate/apply](https://qmul.ac.uk/undergraduate/apply)

## Entry requirements

For specific entry requirements please see individual programme descriptions on pages **30-45**.

In addition to A-Levels, we accept a wide range of other qualifications, including the International Baccalaureate, Access and Foundation Programmes and overseas qualifications. Full details of our entry requirements and overseas equivalencies can be found on our website: [qmul.ac.uk/undergraduate/entry](https://qmul.ac.uk/undergraduate/entry)

## English language qualifications

We expect all students to have a good level of English in order to be successful on our degree programmes. Our minimum English language requirement is GCSE grade C or 4.

For international students you'll require a score of 6.0 with a minimum of 5.5 in all sections.

A number of accepted equivalent qualifications are listed on our website: [qmul.ac.uk/eng-lang-reqs](https://qmul.ac.uk/eng-lang-reqs)

## Contact us

For undergraduate admissions enquiries:  
Email: [maths@qmul.ac.uk](mailto:maths@qmul.ac.uk)  
Tel: +44(0)20 7882 5440

## Meet us

The best way to get a feel for life in the School of Mathematical Sciences at Queen Mary is to come and meet us.

For the latest open day information, please visit [qmul.ac.uk/undergraduate/openday](https://qmul.ac.uk/undergraduate/openday)

If you are successful in gaining an offer to study with us, you will also be invited to one of our dedicated Offer Holder Days, where you can explore the campus, meet staff and students and experience a taster lecture.



## Funding

There is a wide range of generous bursaries available at Queen Mary to ensure that the best and brightest students are able to study with us and to minimise barriers to learning.

As a guide, our scholarships include the Queen Mary Global Excellence Award, worth £2,000. This is offered to top applicants across all of our Mathematics undergraduate programmes.

Full details of all of our scholarships and bursaries, including eligibility criteria, are available on our website: [qmul.ac.uk/scholarships](https://qmul.ac.uk/scholarships)

Our fees are published for individual courses online, via the undergraduate course finder: [qmul.ac.uk/undergraduate](https://qmul.ac.uk/undergraduate)

# Accommodation

First-year accommodation guaranteed for all undergraduates who meet our eligibility criteria

Queen Mary has one of the largest residential campuses in London at Mile End, only 15 minutes by tube to Oxford Street, Covent Garden and the West End. Living on campus is fun and convenient – not to mention a great way to experience London’s vibrant East End.

- We guarantee accommodation to all first year undergraduate and foundation students. Find out more about eligibility: [qmul.ac.uk/accommodation](https://qmul.ac.uk/accommodation)
- With fees starting from around £98 per week, our halls of residence offer a range of affordable accommodation.

- We can help you live on or near our campuses in Mile End, Whitechapel and Charterhouse Square.
- Our housing advisers can also help you find a range of alternative housing solutions, as well as the right flatmates through our Find a Flatmate events and Student Share message board.

Find the accommodation that’s right for you: [qmul.ac.uk/accommodation](https://qmul.ac.uk/accommodation)

**For all accommodation queries, contact us on:**

Tel: **+44 (0)20 7882 6474**

email: [residences@qmul.ac.uk](mailto:residences@qmul.ac.uk)



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