YOUR 2020/2021

MATHEMATICS AND STATISTICS

PROSPECTUS

The Open University

FREE YOUR AMBITION

EXPLORE THE OU

FIND AN UNDERGRADUATE COURSE

FIND A POSTGRADUATE COURSE

BEFORE YOU GO

Whatever your ambition – whether you want to further your knowledge and understanding of the fascinating world of mathematics and statistics or develop your analytical and problem-solving skills – we're here to help make it happen.

ACHIEVE YOUR GOALS WITH THE OPEN UNIVERSITY

We're pioneers in distance learning. Since we were founded, we've helped more than two million people realise their potential. Our unique approach to learning means you don't have to put your life on hold to get the qualification you want.

78%
of FTSE 100 companies have sponsored employees on OU courses

We will:

- help you get a qualification to suit you and your goals
- provide you with the teaching and learning resources you'll need
- offer a flexible learning experience based around you and your life
- use technology and teaching methods that enhance your study experience
- be there to support you every step of the way.

You can expect:

- materials that are designed with you in mind
- continuous innovation – we've been leading the way in distance learning for over 50 years, ensuring education is accessible, whatever your circumstances
- access to world-class resources, whenever you need them
- qualifications that are respected by employers the world over.

FIVE REASONS WHY YOU SHOULD CHOOSE US

1.
We're open to you. We make learning available to all, regardless of background, age or additional learning needs.

2.
You can study around your existing commitments. We're experts in helping people fit their studies around their busy lives.

3.
We guarantee outstanding value and a high-quality education at a competitive price.

4.
Our qualifications enable you to put what you learn into practice immediately.

5.
You get more than a highly respected qualification. You'll be able to show you're dedicated and committed – personal qualities that are valued in the workplace.

WHAT YOU NEED TO GET STARTED

Where you start in life shouldn't limit where you go. If you're determined to succeed and prepared to work hard, we can help you get started.

The next few pages will tell you more about how studying with The Open University works, the courses you can study, the funding available to you, and how long your qualification will take.

You can do it

The main reason we're called The Open University is that we're open to everyone. Every year, we help thousands of people achieve extraordinary things.

- There are no formal academic entry requirements for mathematics and statistics at undergraduate level.
- We helped over 24,000 students with disabilities and additional needs last year alone.
- Our students are diverse. Of our new undergraduate students, 34% are under 25. Our oldest students are in their nineties.

What you need

There are just a couple of things that you'll need to be able to study with us.

- A computer with internet access. But don't worry if you haven't got access to one right now – you could receive financial support to help you buy one.
- A good grasp of the English language. We teach all our courses in English. If you're not sure your English is at the right level, go to **openuniversity.co.uk/englishlanguage** for help and guidance.

Have you studied before?

If you've studied at higher education level before, you might be able to count it towards your OU qualification. This can cut down the modules you'll need to study, saving you time and money.

If you tell us what you've done, we'll do the rest.

Go to **openuniversity.co.uk/credit-transfer**.

WHAT YOU CAN STUDY

We offer over 200 highly respected qualifications to help you reach your goals. You can study towards a degree or start with a certificate or diploma of higher education and build on your studies as you go.

Undergraduate

Named degree
Complete modules in a specific subject to earn an honours degree and open doors to a new interest or career.

Open degree
Design an honours degree from across a mix of subjects to suit your needs and interests.

Diploma of higher education
Expand your knowledge and improve your skillset in a specialised area.

Certificate of higher education
Get a general grounding or improve your understanding of a subject area.

Postgraduate

Masters degree
Study modules towards an internationally respected qualification while gaining specialist academic, professional or technical skills.

Postgraduate diploma
Work towards a widely recognised qualification. A postgraduate diploma is equivalent to two-thirds of a masters degree.

Postgraduate certificate
Ideal for professional and career development, this is the first step towards a masters degree as well as being a valuable qualification in its own right.

We'll give you:

- the flexibility to fit study around your other commitments
- the opportunity to improve your career
- freedom to follow your passions in depth.

To find out more about how you build your qualifications and how long it takes, see pages 12–15.

Find the course to match your ambition

If you don't know which type of course is right for you, discover more about the qualifications we offer on our website. Go to **openuniversity.co.uk/course-types**.

LEARN IN A WAY THAT SUITS YOU

You'll have the flexibility to fit study around the other things going on in your life, whatever they may be.

Distance learning with the OU

We've designed our learning experience to combine flexibility and regular contact. We'll give you the help you need to learn in the best possible way. You'll get regular support from tutors and access to all the materials and resources essential to your course.

You'll also have access to student support teams, who'll be there to help you on your learning journey.

How you'll be assessed

You could be assessed in a variety of different ways depending on your choice of course. We use a combination of written assignments, oral or practical assessments, projects, examinations, dissertations and portfolios.

Your assessments will occur at set points during your course. For more information on how you'll be assessed, go to **openuniversity.co.uk/assessment**.

Pioneering technology

We've been using innovative technology to connect with our students since we first started. Examples include our online tutorials and module forums. We'll make sure that you always have what you need, and feel connected.

Connect with other students

You can use our module discussion groups to talk about subjects, course work or study methods.

You can also connect with us on social media or join one of the many informal Facebook groups set up by students.

Students association

You'll become a member of our active students association when you register. You can help influence University decisions, meet fellow students and develop new skills.

Find out more at **openuniversity.co.uk/ousa**.

Or join the conversation on **Facebook.com/OUstudents** **Twitter.com/OUstudents** **Instagram.com/OUstudentslive**.

Do you have additional study needs?

We're committed to helping students with disabilities and additional needs. We'll give you the tools to help overcome obstacles that could stand in the way of your learning – whatever your needs may be.

Disabled Students' Allowance (DSA) – UK residents only

A DSA can help you with study costs that result directly from your disability or specific learning difficulty. They're not means-tested and can go towards specialist equipment (such as an adapted computer), non-medical study support (e.g. a dyslexia support worker) or other related expenses. You can also apply for help with study-related travel costs that result directly from your disability.

For more information, go to **openuniversity.co.uk/disability** or call us on **0300 303 5303**.

What's it like to study with The Open University?

To find out more about distance learning, the OU study experience and how we'll support you throughout your studies, go to **openuniversity.co.uk/learning**.

WELCOME TO MATHEMATICS AND STATISTICS

A calculated career move

We're Europe's largest provider of university-level education in mathematics and statistics, subjects that are inspiring and enjoyable to study. They'll equip you with problem-solving and decision-making skills that will be highly valued across employment sectors. Undergraduates come to us for a solid grounding in the fundamental concepts of mathematics and statistics. Students can develop specialisms in particular aspects of pure mathematics, applied mathematics, statistics or mathematics education.

Why study with us?

Our School of Mathematics and Statistics teaches well over 15,000 students each year; most students study part time but others opt for full time.

Our teaching and research include a broad range of topics in mathematical sciences, across pure mathematics, applied mathematics, mathematics education, statistics and theoretical physics.

We're world leaders in inclusive, innovative and high-impact teaching and research. Our award-winning faculty staff create nationally recognised teaching content. And in the latest Research Excellence Framework – which assesses British academic institutions – 75% of our research outputs were rated as 'world leading' or 'internationally excellent'.

Gender equality matters to us: we hold an Athena SWAN Bronze award and we're working towards a Silver award. We also support the London Mathematical Society's Good Practice Scheme, advancing women's careers in university mathematical sciences departments.

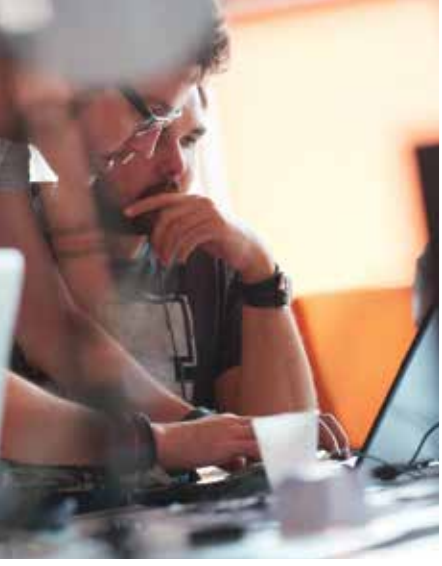
Athena SWAN Bronze Award

Undergraduate

Our undergraduate programme aims to give a solid grounding in the fundamental concepts of mathematics and/or statistics. You'll have options to delve deeper into topics such as chaotic systems, complex analysis or the applications of probability.

Our qualifications range from a Certificate and Diploma of Higher Education in Mathematical Sciences through to BSc (Hons) degrees including Mathematics; Mathematics and Statistics; Mathematics and its Learning; Data Science; and Mathematics and Physics. On most of these qualifications we offer a choice of starting point to match your existing mathematical knowledge, and you can switch between them as your interest in the subject develops.

For those wishing to improve their understanding of data and statistics, we offer a Professional Certificate in Practical Statistics and a more advanced Graduate Certificate in Theoretical Statistics and Probability.



I couldn't do my current job if I hadn't studied with The Open University and passed my degrees. I'm a senior civil servant and the chief statistician for the Department for Work and Pensions. I now have a very successful career; I wouldn't have been able to achieve this without The Open University.

Neil McIvor,
BSc (Hons) Mathematics; MSc Mathematics

Degree holders in England and Wales

If you're looking to re-skill or up-skill in STEM subjects, you could still be eligible for a student loan.

For more information, go to **openuniversity.co.uk/quals**.

Postgraduate

We're proud to have the largest MSc in Mathematics student population in the UK.

By studying at this level, you'll deepen your mathematical learning by delving into advanced aspects of pure and applied mathematics. Subjects at this level include fractal geometry, coding theory and calculus of variations. The MSc is completed by applying your knowledge to a piece of independent study, and could lead onto a research degree at The Open University.

Beyond graduation

Mathematics and statistics graduates are highly sought after for their logical and analytical skills, and generally command high salaries. They find employment in a wide range of sectors including business, education, finance, engineering, communications, environment, science, software development, marketing and the Civil Service. Mathematics and statistics graduates play a key role in the technological developments shaping our modern society. For example, climate modelling uses a range of applied mathematical and statistical techniques to investigate important issues affecting the entire planet.

One of the fastest growing areas of employment is statistical exploration and data science. Mathematics and statistics can help identify trends and significant links in large data sets to help us answer any number of questions about the world we live and work in, and thus inform decision making and policy in all sectors of society.

The quality of OU materials is excellent and in fact my OU texts are still my starting point if I need a particular branch of maths to solve a problem. You'll find that the OU opens doors for you that you may not be aware of, so go for it; your life will be enriched. Without a doubt, the OU has changed my life.

Dr Penny Lynch,
BSc (Hons)
Mathematical Sciences

MORE ONLINE

Learn more about our mathematics and statistics qualifications, and register for your chosen course

Visit **openuniversity.co.uk/courses**

BOOST YOUR CONFIDENCE WITH AN ACCESS MODULE

An Access module is a great place to start if you want a gentle introduction to Open University study. It can also help you find out more about your interests and where you want your learning to take you.

We're different to other universities because we're open to people based on their potential rather than their prior qualifications. Our students come from a diverse range of academic backgrounds, so we offer a choice of starting points depending on how confident you are in your study skills. You can either dive straight in with an OU level 1 module, or you might prefer a gentler start with some extra preparation, in which case, an Access module is ideal.

An Access module builds your confidence by helping with things like:

- refreshing your study skills
- using computers
- introducing you to a range of subjects related to your area of interest
- finding out if OU study suits you and your life.

How it works

You'll have a dedicated tutor, who'll provide academic support via email and regular one-to-one telephone tutorials. Your Student Support Team will be on hand to help with everything else, including careers advice, fees and funding, administrative support, and study-related guidance.

Your Access module materials are a blend of printed and online resources. You'll engage with the materials to complete tasks such as online quizzes and tutor-marked assignments. At the end, you'll demonstrate your learning by completing a final written assignment. There's no exam.

Access modules start every February and October and last for 30 weeks. Each week requires around nine or ten hours of study and it's up to you how you organise that time, giving you the flexibility to fit study around your life.

What you need

We'll set you up with access to your module website and make sure your books and other printed materials are posted out to you. All you need is:

- a phone
- a computer with internet access.

What you can study

The following Access module will prepare you to study at undergraduate level.

Science, technology and maths Access module (Y033)

Grow your knowledge in a range of technical subjects, including science; engineering and design; environment; mathematics; and computing and IT. As the foundation for further studies in these fields, this module will help build your confidence and prepare you for more OU study.

We offer two other Access modules, which are more relevant to other subject areas:

Arts and languages Access module (Y031)

People, work and society Access module (Y032)

Do you qualify for a free Access module?

You can study an Access module for **free** if you:

- live in the UK (excludes Channel Islands and Isle of Man) or have a British Forces Post Office address
- are studying the module as part of an OU qualification (this doesn't apply if you live in Scotland)
- have a household income (or, in Scotland, a personal income) of £25,000 or less, or you receive qualifying benefits
- have completed less than one year of a full-time undergraduate programme at FHEQ or CQFW level 4/ SCQF level 7 or above, and not completed 30 credits or more of OU study.

How much does an Access module cost?

If you don't qualify to study for free, the cost depends on where you live.

- In England, the Channel Islands and the Isle of Man it's £774.
- In Northern Ireland, Scotland and Wales it's £258.

You can pay up front by debit or credit card, or by bank transfer. Or spread the cost with an Open University Student Budget Account – see page 17 for more information.

If you're studying an Access module as part of an OU qualification and you live in England, Wales or Northern Ireland, you could cover the cost with a student loan – see page 16 for more information.

Students who start with an Access module are more likely to be **SUCCESSFUL** when they advance to OU level 1 study

"The Access module really helped equip me with the skills and confidence I needed to go on and study at degree level."

Tim Walker,
Bachelor of Laws (Hons) LLB

NEXT STEPS

Order an *Access Modules Prospectus* or speak to our Student Recruitment team

Visit **openuniversity.co.uk/ug-access**
Call **0300 303 0069**

HOW YOU BUILD YOUR QUALIFICATION

Undergraduate students

You'll need to build up a set number of credits to gain your qualification. Here's how it works.

Stages

- Complete one stage for a certificate of higher education, two stages for a diploma of higher education and three stages to gain an honours degree.
- To complete each stage, you must build up a set number of **credits**.

Credits

- You need 120 credits to complete each stage.
- You need a set number of credits to gain your chosen qualification e.g. you need 360 credits to gain an honours degree.
- You gain credits by successfully completing **modules**.

Modules

- With each module you successfully complete, you'll earn a set number of credits, either 30 or 60.
- Modules are either compulsory or selected from a choice of options.
- You choose the modules you want to study, year by year.

Access module

An optional module to build your confidence and prepare you for further study.

Stage 1

To complete **Stage 1**, you'll need 120 credits, studying modules worth 30 or 60 credits.

120 credits

Certi cate of higher education

Stage 2

To complete **Stage 2**, you'll need a further 120 credits, studying modules worth 30 or 60 credits.

240 credits

Diploma of higher education

Stage 3

To complete **Stage 3**, you'll need a further 120 credits, studying modules worth 30 or 60 credits.

360 credits

Honours degree

Postgraduate students

You gain a postgraduate qualification by building up a set number of credits.

Credits

You need:

- 60 credits to gain a postgraduate certificate
- 120 credits to gain a postgraduate diploma
- 180 credits to gain a masters degree.

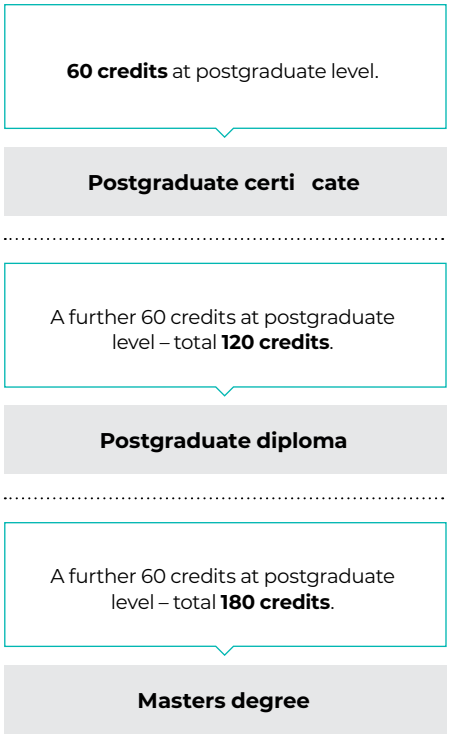
You gain credits by successfully completing **modules**.

Modules

- With each module you successfully complete, you'll earn a set number of credits, usually 30 or 60.
- Modules are either compulsory or selected from a choice of options.
- You choose the modules you want to study, year by year.

Getting started

All you need to do is choose which qualification you want to study and register on a module that counts towards that qualification. You can find out more about the postgraduate qualifications we offer in mathematics from page 42.



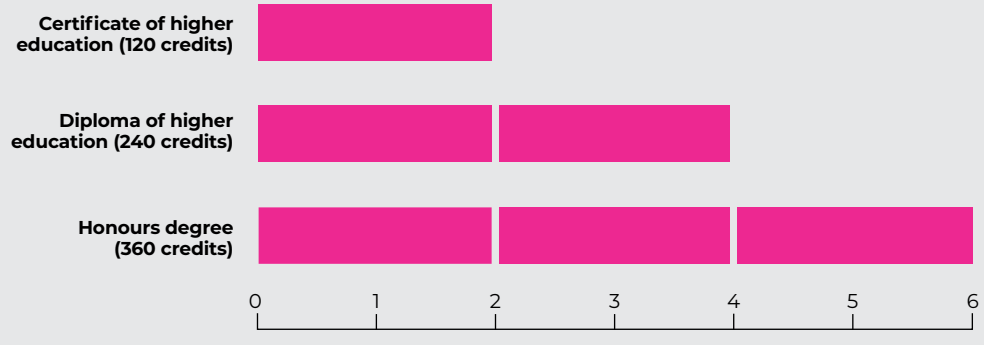
HOW LONG YOUR QUALIFICATION WILL TAKE

We give you the flexibility to choose the amount you want to study each year. This way, you get the qualification you want in a timeframe that's right for you.

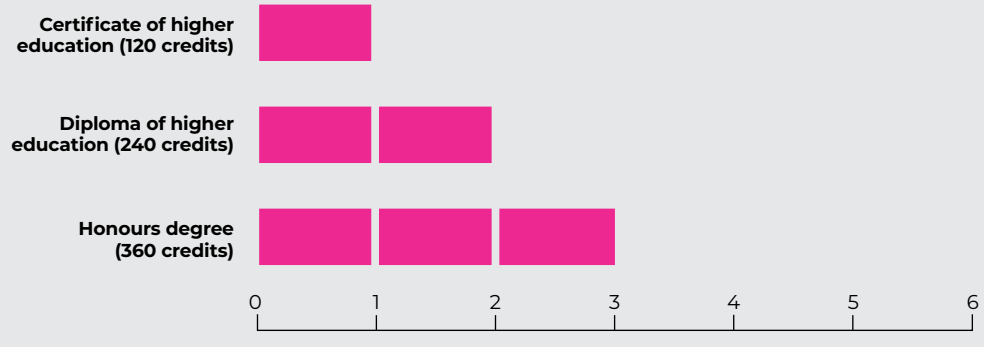
Undergraduate qualifications

Most of our students study part time, taking 60 credits a year. That's like studying at half the rate of a full-time course at a traditional university. If you want to complete your study at a full-time rate, you'll need to study 120 credits per year.

Part time | 60 credits a year | 16–18 study hours a week



Full time | 120 credits a year | 32–36 study hours a week



Some qualifications follow a different pattern of study. See individual descriptions for more information.

Postgraduate qualifications

The time it will take to complete your qualification depends on how it's structured and the number of credits required. All of our postgraduate courses are offered as part-time study and the usual timescales for individual module completion are shown below.

– 30 credit module – typically nine months.

Find out more

For more information on finding time to study, and to use our time planner tool, go to **openuniversity.co.uk/time**.

Part time | 60 credits a year | 16–20 study hours a week

Some qualifications follow a different pattern of study. See individual descriptions for more information.

FEES AND FUNDING

We believe cost shouldn't be a barrier to achieving your potential. That's why our tuition fees are among the most competitive in the UK. And we'll always help you find a way of paying that suits your circumstances.

For undergraduate

You'll pay on a module-by-module basis, rather than for your whole qualification up front. See below to get an idea of costs.

LIVING IN ENGLAND

CREDITS EACH YEAR	COST PER YEAR[1]
30	£1,548
60	£3,096
120	£6,192

[1]2020/21 prices; fees normally increase annually in line with inflation and the University's strategic approach to fees.

In England, the cost for a 360-credit honours degree based on today's prices is £18,576.

LIVING IN NORTHERN IRELAND, SCOTLAND OR WALES

CREDITS EACH YEAR	COST PER YEAR[2]
30	£516
60	£1,032
120	£2,064

[2]2020/21 prices (exceptions apply); fees normally increase annually in line with inflation and the University's strategic approach to fees.

In Northern Ireland, Scotland and Wales, the cost for a typical 360-credit honours degree based on today's prices is £6,192.

Funding – England and Wales

The best way to fund your studies, regardless of age or income, might be with a student loan from Student Finance England or Student Finance Wales. It's the most popular way to pay.

Key facts

- Repayments only start when your salary exceeds the income threshold (£26,575 from April 2020).
- Repayments are deducted automatically from your salary.
- You can pay off the loan early without any penalties.
- Any balance outstanding after 30 years will be written off.

EXAMPLE REPAYMENT AMOUNTS

INCOME EACH YEAR BEFORE TAX	MONTHLY REPAYMENT[3]
Up to £26,575	£0
£28,000	£10.68
£34,000	£55.69
£49,000	£168.19

[3]Repayments are based on what you earn, not what you owe. You'll repay 9% of what you earn over £26,575. For example, if you earn £28,000, you'll repay £128.25 that year (9% of £1,425). That's just over £10 per month.

Already have a degree?

You might still qualify for a student loan. You need to be living in England or Wales and looking to study an eligible qualification.

For more information, go to **openuniversity.co.uk/quals**.

Maintenance support – Wales

New students in Wales studying part time towards a qualification can also apply for maintenance grants, worth up to £4,500 a year, to help with living costs.

Funding – Northern Ireland

You could be eligible for a Part-Time Fee Grant of up to £1,230 a year to help towards your fees. The amount depends on your household income and the rate at which you study. If you're not eligible for the grant, or if it doesn't cover the full cost of your tuition fees, you can pay in full or in part using an alternative payment method, such as a Part-Time Tuition Fee Loan.

Funding – Scotland

If your personal income is £25,000 or less, or you're on certain benefits, and you're studying at least 30 credits, you could qualify for a Part-Time Fee Grant and top-up funding to cover 100% of your course fees. It isn't a loan and you won't need to pay any of it back.

Study support and discretionary funds

If your annual income is less than £25,000, you might be eligible for additional means-tested funding for study-related costs, such as travel, childcare and internet access.

Self-funded study

You can pay using a debit or credit card, or by bank transfer. Or spread the cost with an Open University Student Budget Account – see opposite for more information.

Get sponsored

See whether your employer would help you learn and develop. It's always worth asking.

MORE ONLINE

Find out more about undergraduate fees and funding

Visit **openuniversity.co.uk/ug-fees**
Call **0300 303 5303**

For postgraduate

You pay for postgraduate qualifications module by module. Please go to our website to see the total fee listed for your qualification.

Funding – England

You could be eligible for a maintenance loan of up to £11,222 from Student Finance England.

To be eligible you must:

- be under 60 years old
- be resident in England
- be studying a masters degree that can be completed in no more than three years
- not currently have a masters degree or equivalent
- be studying your qualification from the beginning.

Key facts

- Repayments only start when you earn more than the income threshold (currently, £21,000).
- You'll repay 6% of your income over £21,000 – so, for example, if you earn £25,000, you'll repay only £240 that year (6% of £4,000). That's just £20 a month.
- Payments are deducted automatically from your salary.
- Any balance outstanding after 30 years will be written off.

Funding – Wales

New postgraduate students can apply for financial support, made up of non-repayable grants and top-up loans.

To be eligible you must be:

- resident in Wales
- studying for a masters degree
- under 60 years old.

Key facts

- The support is made up of grants and loans and is worth up to £17,489.
- All eligible students will receive a non-repayable grant of £1,000, rising to a maximum of £6,885, depending on household income.
- Loan repayments only start when you earn more than the income threshold (currently, £21,000).
- You'll repay 6% of your income over the threshold – so, for example, if you earn £25,000, you'll repay only £240 that year (6% of £4,000). That's just £20 a month.

Funding – Northern Ireland and Scotland

You could be eligible for a fee loan of up to £5,500 from Student Finance Northern Ireland or the Student Awards Agency Scotland.

To be eligible you must be:

- resident in Northern Ireland or Scotland
- studying for an eligible postgraduate qualification.

Key facts

- Repayments only start when you earn more than the income threshold (currently, £18,935 in Northern Ireland and £18,330 in Scotland).
- You'll repay 9% of your income over the threshold – so, for example, if you earn £20,000 and live in Scotland, you'll repay only £150.30 that year (9% of £1,670). That's less than £13 a month.
- Payments are deducted automatically from your salary.

Self-funded study

You can pay using a debit or credit card, or by bank transfer. Or spread the cost with an Open University Student Budget Account – see right for more information.

Get sponsored

See whether your employer would want to help you learn and develop. It's always worth asking.

MORE ONLINE

Find out more about postgraduate fees and funding

Visit **openuniversity.co.uk/pg-fees**
Call **0300 303 5303**

Open University Student Budget Accounts Ltd (OUSBA)

When you enrol with us, you'll be offered the opportunity to pay your fees through a loan from OUSBA.

OUSBA will pay your fees to The Open University, and you repay OUSBA either in a single sum before your course starts – in this case there's no interest – or in monthly instalments of up to a year – in this case, interest does apply.

The interest rate is fixed for the duration of the course (representative APR 5.1%).

If you're worried about affordability or a poor credit history, you can apply for a joint loan application with a third party e.g. partner, sibling, friend, etc.

Find out more about OUSBA at **openuniversity.co.uk/ousba**.

As a responsible lender, OUSBA carries out affordability checks as part of the application process.

I AM... MATT GEORGES

After suffering a breakdown and being diagnosed with depression, Matt decided to make some changes in his life. He decided to take a different direction and signed up for a diploma with the OU, which then led to a degree and a new job.

I was in a middle management role at the Environment Agency when I signed up for a Diploma in Economics with the OU. I wanted a change in career direction and to become an economist. I gave it a lot of thought beforehand and discussed it with friends, family and colleagues as well. My manager agreed to fund my tuition fees, and in return I reduced my working hours to ensure I put in the required time and effort.

Studying was such a refreshing change from work. I was learning new things all the time and challenging myself to think more carefully and in a more structured way. After a year or so I decided to take the plunge and applied to study for a degree.

About a year later, there was an opening in the Environment Agency's economics team, so I applied – and I got the job! And three years later I got my degree – a 2:1 in Economics and Mathematical Sciences.

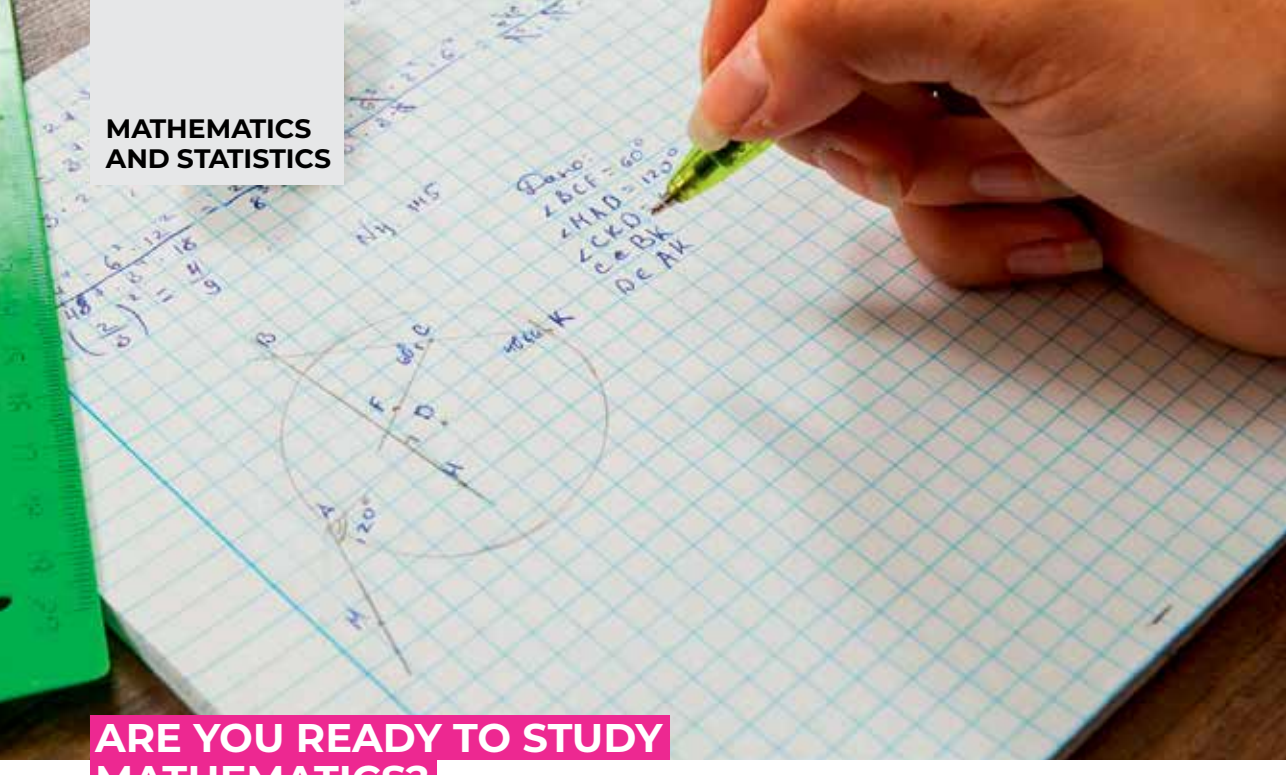
I remember being told that becoming a father was the hardest thing I'd ever do, but that it would also be the most rewarding. That is right, but only just. I had to put my life and relationships back together after my breakdown, and I studied for my degree part-time while working and bringing up two kids. All of that while learning to manage my depression has been tough. But it's been an amazing experience.

Matt Georges,
BSc (Hons) Economics and Mathematical Sciences

FIND AN UNDERGRADUATE COURSE

You can register for the 2020/2021 academic year for undergraduate qualifications from 18 March 2020.

We've based the qualification start dates on the first module(s) you can study as part of your qualification.



ARE YOU READY TO STUDY MATHEMATICS?

As mathematics is a linear subject, you need a good understanding of the basics before moving onto more advanced topics.

Our stage 1 curriculum is common to most mathematics and statistics qualifications. It provides the underpinning knowledge and skills you'll need for more advanced study at later stages. In most qualifications, you'll choose either the **default start** or the **intensive start**, depending on your experience and confidence with mathematics.

The **default start** will suit you if one or more of the following applies:

- You'd like a thorough grounding in topics such as algebra and trigonometry.
- You haven't previously studied mathematics to an advanced level.
- You haven't studied mathematics for some time and need to refresh your skills.

Starting with *Discovering mathematics* (MU123) will give you:

- a broad introduction to university-level study
- the opportunity to improve your skills in mathematical communication and independent learning
- an appreciation of how mathematics pervades aspects of our lives everyday
- a solid foundation in:
  - introductory algebra, geometry and trigonometry
  - mathematical vocabulary and notation
  - mathematical techniques for solving problems
  - interpreting results in real-life contexts
  - simple mathematical arguments
  - explaining mathematical ideas in writing
  - developing skills in learning mathematics
  - describing problems mathematically
  - analysing mathematical reasoning.

On successful completion of *Discovering mathematics* (MU123), you'll be ready to study *Essential mathematics 1* (MST124).

Before you register

Check you're ready for *Discovering mathematics* (MU123) at **openuniversity.co.uk/mu123**.

Did you score highly in the quiz?

The **intensive start** begins at a higher level and a faster pace. You'd start instead with *Essential mathematics 1* (MST124), and later study a module of your choice in place of *Discovering mathematics* (MU123).

The **intensive start** will suit you if you're confident about studying mathematics at university level and, in particular, have a good understanding of algebra and trigonometry. Your background might include one or more of the following:

- AS level in mathematics
- A level or Scottish Higher in mathematics, even if you didn't finish it
- HNC or HND in a relevant subject
- International baccalaureate diploma
- confidence and fluency with most of the topics covered in *Discovering mathematics* (MU123).

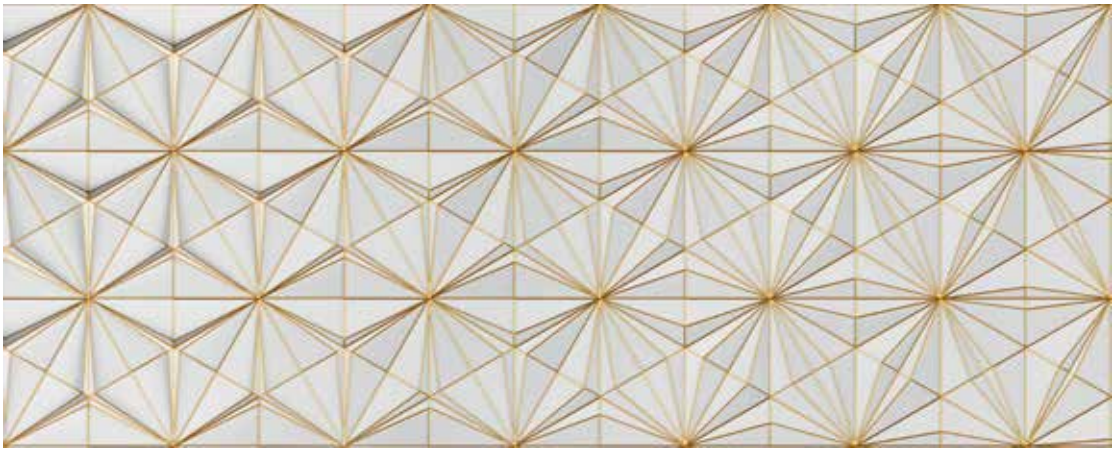
Essential mathematics 1 (MST124) will give you:

- experience using powerful mathematical software
- experience of mathematical topics employed in many areas – such as computing, economics, engineering, physics and science – including:
  - applying algebra, number systems and functions to solve problems
  - expressing mathematical ideas, arguments and procedures clearly
  - using vectors and matrices to investigate mathematical structures
  - using calculus to solve a range of problems.

On successful completion of *Essential mathematics 1* (MST124), you'll be ready for the next module in your qualification.

Before you register

Check you're ready for *Essential mathematics 1* (MST124) at **openuniversity.co.uk/mst124**.



BSc (HONS) MATHEMATICS

Take your understanding of concepts, theories and applications in pure and applied mathematics to graduate level. You can also include optional statistics, theoretical physics or mathematics education.

You'll cover a wide range of topics and develop an understanding of mathematical problems and approaches. Practise with essential methods and tools, and increase your familiarity with mathematical software. Gain an appreciation of the role and construction of rigorous proof. And build your experience of communicating mathematical arguments and conclusions.

There are two starting points: default and intensive. For more information about the best starting point for you, see pages 20–21 or go to **openuniversity.co.uk/start-maths**.

Why choose this qualification?

- Choose pure and applied mathematics modules that fit your needs and interests.
- Include statistics, physics and mathematics education options.
- Develop your experience with mathematical methods and software.
- Start at a point that suits your level of mathematical knowledge.
- Move to a different mathematics/statistics degree, if your aspirations change, even after you've started.

Accreditation

- Institute of Mathematics and its Applications.

Institute of mathematics & its applications

Related qualifications

Diploma of Higher Education in Mathematical Sciences (W43)
openuniversity.co.uk/w43

Certificate of Higher Education in Mathematical Sciences (T14)
openuniversity.co.uk/t14

Qualification structure

You'll choose either:

1. The **default** start

2. The **intensive** start.

The example route shown below is the **default** start. The intensive start will differ at Stage 1, see pages 20–21 or go to **openuniversity.co.uk/q31** for details.

DEFAULT START

Stage 1 120 credits

Discovering mathematics (MU123) (30 credits)

Essential mathematics 1 (MST124) (30 credits)

Introducing statistics (M140) (30 credits)

Essential mathematics 2 (MST125) (30 credits)

Stage 2 120 credits

Pure mathematics (M208) (60 credits)

You'll choose 60 credits from:

Mathematical methods, models and modelling (MST210) (60 credits)

Analysing data (M248) (30 credits)

Mathematical methods (MST224) (30 credits)

Stage 3 120 credits

You'll choose 120 credits from:

Applications of probability (M343) (30 credits)
Complex analysis (M337) (30 credits)
Deterministic and stochastic dynamics (MS327) (30 credits)
Electromagnetism (SMT359) (30 credits)
Further pure mathematics (M303) (60 credits)
Graphs, networks and design (MT365) (30 credits)
Linear statistical modelling (M346) (30 credits)
Mathematical methods and fluid mechanics (MST326) (30 credits)
Mathematical statistics (M347) (30 credits)
Mathematical thinking in schools (ME620) (30 credits)
Optimization (M373) (30 credits)
The quantum world (SM358) (30 credits)

BSc (HONS) MATHEMATICS

Compulsory modules
Option modules
Awarded qualification

Qualification delivery, module availability and qualification structure are subject to change.

AT A GLANCE

Course code	Q31
Total credits	360

Start dates
Oct 2020
Register by 10 Sep 2020

Feb 2021
Register by 14 Jan 2021

Entry requirements
Check you're ready and get advice on your best starting point at **openuniversity.co.uk/start-maths**

Assessment
Based on a mix of:
- Tutor-marked assignments
- Interactive computer-marked assignments
- End-of-module assessments
- Examinations

Study duration
Part time: 6–8 years
Full time: 3–4 years

Mode of study
The learning materials provided are **mostly print with some online**

Electronic versions of printed materials available (e.g. PDF)	✓
Disc-based media (e.g. DVD)	✓
Online forum Optional	✓
Collaborative work Optional	✓

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/q31**
Call **0300 303 5303**

BSc (HONS) MATHEMATICS AND STATISTICS

Gain extensive knowledge of probability and statistics. Combine this with pure mathematics or applied mathematics.

This degree will equip you with problem-solving and decision-making tools. You'll experience using statistical software and practise conducting and communicating statistical investigations. You'll develop your understanding of time series analysis, multivariate data analysis, regression analysis, and hypothesis testing. You'll also explore classical and Bayesian statistics.

There are two starting points: default and intensive. For more information about the best starting point for you, see pages 20–21 or go to **openuniversity.co.uk/start-maths**.

Why choose this qualification?

- Build expertise in analytical approaches, classical and Bayesian statistics, and the underpinning mathematical theory.
- Focus on either pure or applied mathematics to fit your needs and interests.
- Practise conducting and communicating statistical investigations and using professional software.
- Start at a point that suits your level of mathematical knowledge.
- Move to a different mathematics degree, if your aspirations change, even after you've started.

Accreditation

- Institute of Mathematics and its Applications.
- Royal Statistical Society.

Institute of mathematics & its applications

ROYAL STATISTICAL SOCIETY
DATA | EVIDENCE | DECISIONS

Related qualifications

Diploma of Higher Education in Mathematical Sciences (W43)
openuniversity.co.uk/w43

Certificate of Higher Education in Mathematical Sciences (T14)
openuniversity.co.uk/t14

Qualification structure

You'll choose either:

1. The **default** start

2. The **intensive** start.

The example route shown below is the **default** start. The intensive start will differ at Stage 1, see pages 20–21 or go to **openuniversity.co.uk/q36** for details.

DEFAULT START

Stage 1 120 credits

- *Discovering mathematics* (MU123) (30 credits)
- *Essential mathematics 1* (MST124) (30 credits)
- *Introducing statistics* (M140) (30 credits)
- *Essential mathematics 2* (MST125) (30 credits)

Stage 2 120 credits

- *Analysing data* (M248) (30 credits)
- *Practical modern statistics* (M249) (30 credits)
- *Mathematical methods, models and modelling* (MST210) (60 credits) OR *Pure mathematics* (M208) (60 credits)

Stage 3 120 credits

- *Applications of probability* (M343) (30 credits)
- *Linear statistical modelling* (M346) (30 credits)
- *Mathematical statistics* (M347) (30 credits)
- You'll choose 30 credits from:
  - *Complex analysis* (M337) (30 credits)
  - *Deterministic and stochastic dynamics* (MS327) (30 credits)
  - *Graphs, networks and design* (MT365) (30 credits)
  - *Mathematical methods and fluid mechanics* (MST326) (30 credits)
  - *Mathematical thinking in schools* (ME620) (30 credits)
  - *Optimization* (M373) (30 credits)

BSc (HONS) MATHEMATICS AND STATISTICS

Compulsory modules
Option modules
Awarded qualification

Qualification delivery, module availability and qualification structure are subject to change.

AT A GLANCE

Course code	Q36
Total credits	360

Start dates
Oct 2020
Register by 10 Sep 2020

Feb 2021
Register by 14 Jan 2021

Entry requirements
Check you're ready and get advice on your best starting point at **openuniversity.co.uk/start-maths**

Assessment
Based on a mix of:
- Tutor-marked assignments
- Interactive computer-marked assignments
- End-of-module assessments
- Examinations

Study duration
Part time: 6–8 years
Full time: 3–4 years

Mode of study
The learning materials provided are **mostly print with some online**

Electronic versions of printed materials available (e.g. PDF)	✓
Disc-based media (e.g. DVD)	✓
Online forum Optional	✓
Collaborative work Optional	✓

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/q36**
Call **0300 303 5303**

BSc (HONS) MATHEMATICS AND ITS LEARNING

Understand how people learn mathematics and gain insight into different teaching approaches.

We designed this unique degree with teachers – or those interested in mathematics education – in mind. It will develop your knowledge and understanding of mathematics and statistics teaching. And broaden your ideas about what it means to learn and use these subjects. You'll also gain a good grounding in mathematics (pure and applied) and statistics. You can focus your studies on either discipline as you progress.

There are two starting points: default and intensive. For more information about the best starting point for you, see pages 20–21 or go to **openuniversity.co.uk/start-maths**.

Why choose this qualification?

- Understand how we learn mathematics/statistics and associated teaching approaches.
- Advance your own mathematics knowledge, including optional statistics.
- Develop your educational skills alongside problem-solving and reflective skills.
- Start at a point that suits your level of mathematical knowledge.
- Move to a different mathematics or statistics degree, if your aspirations change, even after you've started.

Accreditation

- Institute of Mathematics and its Applications.

Institute of mathematics & its applications

Related qualifications

Diploma of Higher Education in Mathematical Sciences (W43)
openuniversity.co.uk/w43

Certificate of Higher Education in Mathematical Sciences (T14)
openuniversity.co.uk/t14

Qualification structure

You'll choose either:

1. The **default** start

2. The **intensive** start.

The example route shown below is the **default** start. The intensive start will differ at Stage 1, see pages 20–21 or go to **openuniversity.co.uk/q46** for details.

DEFAULT START

Stage 1 120 credits

Discovering mathematics (MU123) (30 credits)

Essential mathematics 1 (MST124) (30 credits)

Introducing statistics (M140) (30 credits)

Essential mathematics 2 (MST125) (30 credits)

Stage 2 120 credits

Pure mathematics (M208) (60 credits)

You'll choose 60 credits from:
Mathematical methods, models and modelling (MST210) (60 credits)
Mathematical methods (MST224) (30 credits)
Analysing data (M248) (30 credits)

Stage 3 120 credits

Mathematical thinking in schools (ME620) (30 credits)

You'll choose 60 credits from:
Developing algebraic thinking (ME625) (30 credits)
Developing geometric thinking (ME627) (30 credits)
Developing statistical thinking (ME626) (30 credits)

You'll choose 30 credits from:
Applications of probability (M343) (30 credits)
Complex analysis (M337) (30 credits)
Deterministic and stochastic dynamics (MS327) (30 credits)
Graphs, networks and design (MT365) (30 credits)
Linear statistical modelling (M346) (30 credits)
Mathematical statistics (M347) (30 credits)
Optimization (M373) (30 credits)

BSc (HONS) MATHEMATICS AND ITS LEARNING

Compulsory modules
Option modules
Awarded qualification

Qualification delivery, module availability and qualification structure are subject to change.

AT A GLANCE

Course code	Q46
Total credits	360

Start dates
Oct 2020
Register by 10 Sep 2020

Feb 2021
Register by 14 Jan 2021

Entry requirements
Check you're ready and get advice on your best starting point at **openuniversity.co.uk/start-maths**

Assessment
Based on a mix of:
- Tutor-marked assignments
- Interactive computer-marked assignments
- End-of-module assessments
- Examinations

Study duration
Part time: 6–8 years
Full time: 3–4 years

Mode of study
The learning materials provided are **mostly print with some online**

Electronic versions of printed materials available (e.g. PDF) – **with the exception of some Stage 3 modules**	✓
Disc-based media (e.g. DVD)	✓
Online forum Optional	✓
Collaborative work Compulsory	✓

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/q46**
Call **0300 303 5303**

BSc (HONS) DATA SCIENCE

Data plays a vital role in almost all private and public sector employment. The need to understand how to use data to inform decision making has never been more important.

This degree equips you with the skills to explore and analyse complex data sets. And to solve practical problems using applied mathematics, statistics and computing. You'll gain a good grounding in mathematical and statistical methods, which provide the foundation for data analysis. You'll learn relevant computing skills, including elements of machine learning and artificial intelligence, and gain experience of using statistical software.

Why choose this qualification?

- Develop familiarity with mathematical, statistical and computational data modelling techniques.
- Build your expertise in a range of software, including Python and R languages.
- Gain experience in communicating and critically commenting on data analysis results.
- Increase your employability in a wide range of sectors.

Find out more

More or Less explains – and sometimes debunks – the numbers and statistics used in political debate, the news and everyday life. The Radio 4 programme is a BBC/Open University co-production and contributes to the OU's mission of increasing the public awareness, interest and understanding of mathematics and statistics.

Related qualifications

Diploma of Higher Education in Data Analysis (W77)
openuniversity.co.uk/w77

Certificate of Higher Education in Data Analysis (T42)
openuniversity.co.uk/t42

Qualification structure

Stage 1 120 credits

Introducing statistics (M140) (30 credits)

Introduction to computing and information technology 1 (TM111) (30 credits)

Essential mathematics 1 (MST124) (30 credits)

Introduction to computing and information technology 2 (TM112) (30 credits)

Certificate of Higher Education in Data Analysis (T42)

Stage 2 120 credits

Analysing data (M248) (30 credits)

Algorithms, data structures and computability (M269) (30 credits)

Mathematical methods (MST224) (30 credits)

Practical modern statistics (M249) (30 credits)

Diploma of Higher Education in Data Analysis (W77)

Stage 3 120 credits

Applied statistical modelling (M348) (30 credits) – planned for Oct 2022

Machine learning & artificial intelligence (TM358) (30 credits) – planned for Oct 2021

You'll choose 60 credits from:
Applications of probability (M343) (30 credits)
Data management and analysis (TM351) (30 credits)
Graphs, networks and design (MT365) (30 credits)
Interaction design and the user experience (TM356) (30 credits)
Mathematical statistics (M347) (30 credits)
Optimization (M373) (30 credits)

BSc (HONS) DATA SCIENCE

Compulsory modules
Intermediate qualifications
Option modules
Awarded qualification

Qualification delivery, module availability and qualification structure are subject to change.

AT A GLANCE

Course code	R38
Total credits	360

Start dates
Oct 2020
Register by 10 Sep 2020

Feb 2021
Register by 14 Jan 2021

Apr 2021
Register by 11 Mar 2021

Entry requirements
Check you've got the mathematics skills needed at **openuniversity.co.uk/mst124**

Assessment
Based on a mix of:
- Tutor-marked assignments
- Interactive computer-marked assignments
- End-of-module assessments
- Examinations

Study duration
Part time: 6 years
Full time: 3 years

Mode of study
The learning materials provided are **a balance of print and online**

Electronic versions of printed materials available (e.g. PDF)	✓
Disc-based media (e.g. DVD)	✓
Online forum Optional	✓
Collaborative work Optional	✓

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/r38**
Call **0300 303 5303**

PROFESSIONAL CERTIFICATE IN PRACTICAL STATISTICS

This certificate introduces key ideas in statistics. Gain the skills to explore, summarise and analyse data to solve practical problems.

Appreciate the breadth of statistical applications and of the role of variability in today's world. Learn to recognise the limitation of statistical analyses. You'll also use a range of statistical software.

Why choose this qualification?

- Cover key topics, from exploratory data analysis to statistical modelling techniques.
- Use statistical software packages for analysis, including linear and generalised linear modelling.
- Learn to communicate about and critically comment on statistical investigations and data analyses.
- Gain the skills to use statistics at work.

Qualification structure

This certificate has only one stage.

Stage 1 120 credits

- *Introducing statistics* (M140) (30 credits)
- *Analysing data* (M248) (30 credits)
- *Practical modern statistics* (M249) (30 credits)
- *Linear statistical modelling* (M346) (30 credits)

PROFESSIONAL CERTIFICATE IN PRACTICAL STATISTICS

Compulsory modules

Awarded qualification

Qualification delivery, module availability and qualification structure are subject to change.

AT A GLANCE

Course code	S03
Total credits	120

Start dates
Oct 2020
Register by 10 Sep 2020

Feb 2021
Register by 14 Jan 2021

Entry requirements
Check you've got the mathematical skills needed at **openuniversity.co.uk/mathstats**

Assessment
Based on a mix of:
- Tutor-marked assignments
- Interactive computer-marked assignments
- End-of-module assessments
- Examinations

Study duration
Part time: 2–4 years

Mode of study
The learning materials provided are **mostly print with some online**

Electronic versions of printed materials available (e.g. PDF)	✓
Disc-based media (e.g. DVD)	✓
Online forum Optional	✓
Collaborative work	×

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/s03**
Call **0300 303 5303**

GRADUATE CERTIFICATE IN THEORETICAL STATISTICS AND PROBABILITY

This certificate teaches the theory that underpins statistical inference and probability. Equipping you to understand the assumptions and limitations of a range of statistical models.

You'll gain a thorough understanding of the theory you need to underpin your work as a professional statistician. Learn to develop probability models for practical situations and investigate the model's properties. Study the mathematical theory underlying methods and concepts used in practical statistical analyses.

Why choose this qualification?

- Cover key analytical approaches, classical and Bayesian statistics and the underpinning mathematical theory.
- Learn about distribution theory and a range of probabilistic models.
- Understand the theory behind statistical inference.
- Gain the skills to critically comment on analyses and model choices.

Qualification structure

This certificate has only one stage.

Stage 1 60 credits

Applications of probability (M343) (30 credits)

Mathematical statistics (M347) (30 credits)

GRADUATE CERTIFICATE IN THEORETICAL STATISTICS AND PROBABILITY

Compulsory modules

Awarded qualification

Qualification delivery, module availability and qualification structure are subject to change.

AT A GLANCE

Course code	S04
Total credits	60

Start dates
Oct 2020
Register by 10 Sep 2020

Entry requirements
An undergraduate degree with a substantial amount of mathematical and/or statistical content. Check you're ready at **openuniversity.co.uk/mathstats**

Assessment
Based on a mix of:
- Tutor-marked assignments
- Interactive computer-marked assignments
- Examinations

Study duration
Part time: 1–2 years

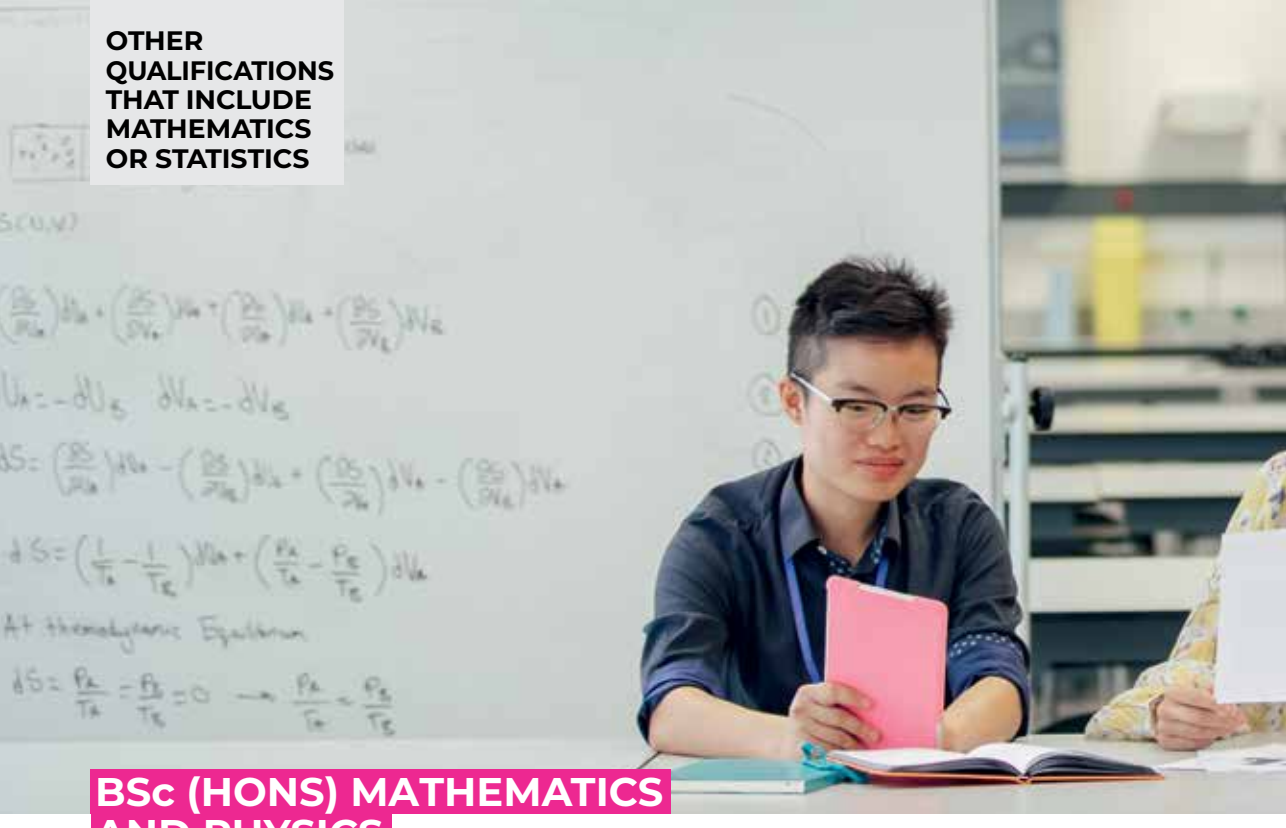
Mode of study
The learning materials provided are **mostly print with some online**

Electronic versions of printed materials available (e.g. PDF)	✓
Disc-based media (e.g. DVD)	✓
Online forum Optional	✓
Collaborative work	✗

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/s04**
Call **0300 303 5303**



BSc (HONS) MATHEMATICS AND PHYSICS

Develop your knowledge and understanding of theoretical physics and the underpinning mathematics.

This degree will teach you how to use essential techniques and relevant software. Explore fundamental physics concepts, including Newtonian mechanics, special relativity, electromagnetism and quantum mechanics. Practise using applied mathematics tools, including mathematical methods, modelling and numerical analysis. You'll also learn skills in communicating clear and concise arguments and conclusions.

Why choose this qualification?

- Combine the concepts of modern theoretical physics with applied mathematics.
- Develop your critical thinking and problem-solving skills.
- Engage with our award-winning OpenSTEM Labs.

Recognition

- Institute of Mathematics and its Applications.
- Institute of Physics.

Institute of mathematics & its applications

IOP Institute of Physics

Qualification structure

Compulsory modules
Option modules
Awarded qualification

Stage 1 120 credits

Questions in science (S111) (60 credits)

Essential mathematics 1 (MST124) (30 credits)

Essential mathematics 2 (MST125) (30 credits)

Stage 2 120 credits

Physics: from classical to quantum (S217) (60 credits)

Mathematical methods, models and modelling (MST210) (60 credits)

Stage 3 120 credits

You'll choose 60 credits from:
Astrophysics (S382) (30 credits)
Electromagnetism (SMT359) (30 credits)
The quantum world (SM358) (30 credits)
The relativistic Universe (S383) (30 credits)

You'll choose 60 credits from:
Applications of probability (M343) (30 credits)
Complex analysis (M337) (30 credits)
Deterministic and stochastic dynamics (MS327) (30 credits)
Graphs, networks and design (MT365) (30 credits)
Mathematical methods and fluid mechanics (MST326) (30 credits)
Optimization (M373) (30 credits)

BSc (HONS) MATHEMATICS AND PHYSICS

Qualification delivery, module availability and qualification structure are subject to change.

AT A GLANCE

Course code	Q77
Total credits	360

Start dates
Oct 2020
Register by 10 Sep 2020

Feb 2021
Register by 14 Jan 2021

Entry requirements
Check you've got the mathematics skills needed at **openuniversity.co.uk/mst124**

Assessment
Based on a mix of:
- Tutor-marked assignments
- Interactive computer-marked assignments
- End-of-module assessments
- Examinations

Study duration
Part time: 6 years
Full time: 3 years

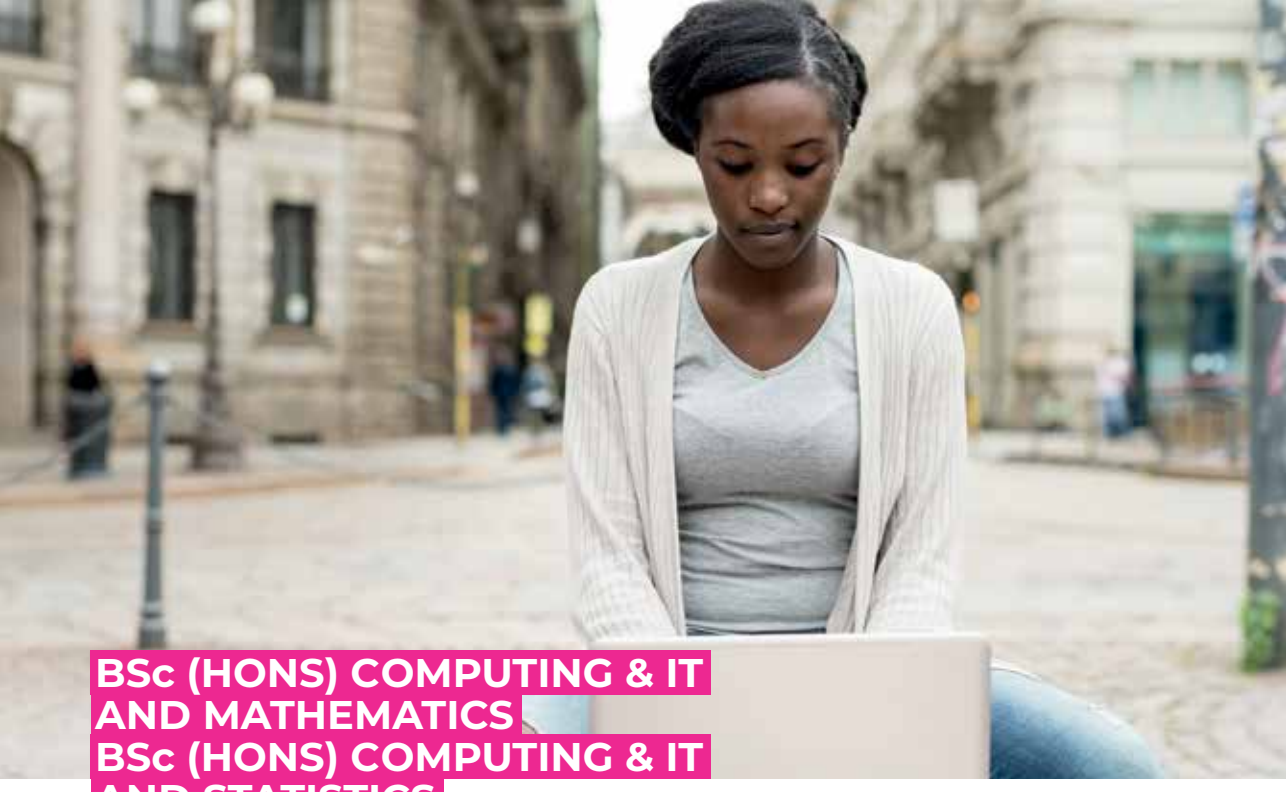
Mode of study
The learning materials provided are **a balance of print and online**

Electronic versions of printed materials available (e.g. PDF)	✓
Disc-based media (e.g. DVD)	✓
Online forum Optional	✓
Collaborative work Compulsory	✓

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/q77**
Call **0300 303 5303**



BSc (HONS) COMPUTING & IT AND MATHEMATICS
BSc (HONS) COMPUTING & IT AND STATISTICS

These degrees combine computing & IT with either mathematics (pure or applied) or statistics. You'll divide your time equally between subjects. Computing & IT studied together with mathematics or statistics can open up careers in a wide range of sectors.

You'll gain a good grounding in mathematical and/or statistical methods. This will complement the skills and knowledge you develop in computing & IT. And you'll pick a computing and IT focus to fit your needs and interests.

Why choose this qualification?

- 50:50 split between computing & IT and mathematics or statistics.
- Choose from four focus options within the computing & IT strand.
- Accredited by BCS, The Chartered Institute for IT.
- Quality assured by the European Quality Assurance Network for Informatics Education (EQANIE).

bcs Accredited Degree

Euro-Inf Bachelor awarded by EQANIE

Related qualifications

Diploma of Higher Education in Computing & IT and Mathematics/Statistics (W42)
openuniversity.co.uk/w42

Certificate of Higher Education in Computing & IT and Mathematics/Statistics (T13)
openuniversity.co.uk/t13

Qualification structure

The example route shown below is **mathematics**. The statistics route will vary, go to **openuniversity.co.uk/q67-cits** for details.

EXAMPLE ROUTE

Stage 1 120 credits

Introduction to computing and information technology 1 (TM111) (30 credits)

Introduction to computing and information technology 2 (TM112) (30 credits)

Essential mathematics 1 (MST124) (30 credits)

Essential mathematics 2 (MST125) (30 credits)

Certificate of Higher Education in Computing & IT and Mathematics (T13)

Stage 2 120 credits

You'll choose a computing & IT focus area, studying 60 credits in: computer science; communications and networking; software development; or web development. For more information, go to openuniversity.co.uk/q67-citm

Mathematical methods, models and modelling (MST210) (60 credits) OR

Pure mathematics (M208) (60 credits)

Diploma of Higher Education in Computing & IT and Mathematics (W42)

Stage 3 120 credits

You'll complete your studies in your computing & IT focus area, choosing one from a selection of 30-credit modules. For more information, go to openuniversity.co.uk/q67-citm

You'll complete your studies in applied or pure mathematics, choosing 60 credits from a selection of modules. For more information, go to openuniversity.co.uk/q67-citm

The computing and IT project (TM470) (30 credits)

BSc (HONS) COMPUTING & IT AND MATHEMATICS

Compulsory modules
Intermediate qualifications
Option modules
Awarded qualification

Qualification delivery, module availability and qualification structure are subject to change.

AT A GLANCE

Course code	Q67
Total credits	360

Start dates
Oct 2020
Register by 10 Sep 2020

Feb 2021
Register by 14 Jan 2021

Apr 2021
Register by 11 Mar 2021

Entry requirements
Check you've got the mathematics skills needed at **openuniversity.co.uk/mst124**

Assessment
Based on a mix of:
- Tutor-marked assignments
- Interactive computer-marked assignments
- End-of-module assessments
- Examinations

Study duration
Part time: 6 years
Full time: 3 years

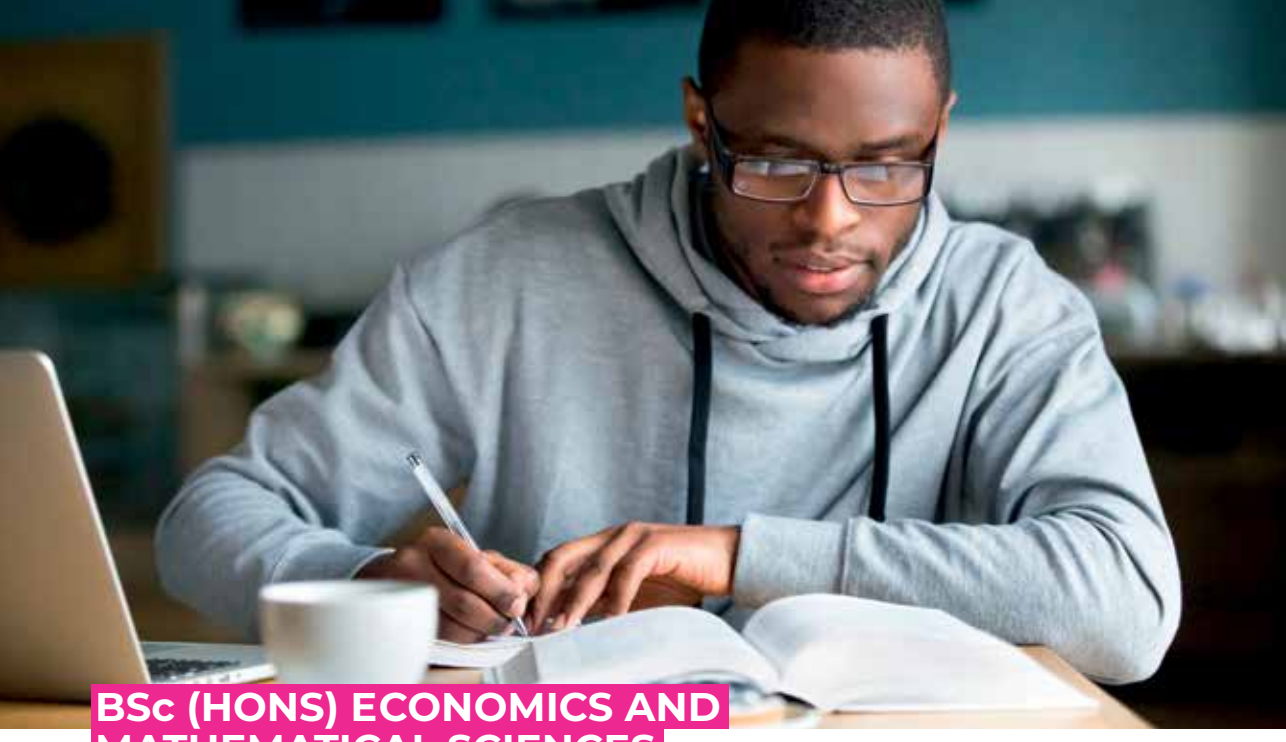
Mode of study
The learning materials provided are **a balance of print and online**

Electronic versions of printed materials available (e.g. PDF)	✓
Disc-based media (e.g. DVD)	✓
Online forum Optional	✓
Collaborative work Compulsory	✓

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/q67**
Call **0300 303 5303**



BSc (HONS) ECONOMICS AND MATHEMATICAL SCIENCES

If you enjoy solving problems and you're interested in the practical application of economics and mathematics, this degree is for you.

It will give you a thorough grounding in a broad range of mathematical, statistical and computational skills, and a sound knowledge of both micro and macro-economic theory – together with a good understanding of economic issues. You'll develop analytical and model building skills that can be applied in a variety of contexts, engage in economic debate, and assess different kinds of evidence and their usefulness in relation to economic theories. By the end of your studies, you'll be equipped with the knowledge and skills needed for a range of roles in business management, accountancy, banking, investment analysis, risk analysis and market research.

Why choose this qualification?

- Explore fundamental questions about our physical and economic world.
- Learn analytical and model building skills applicable to a variety of contexts.
- Develop essential skills for solving real problems and making sound judgments – from your personal finances to high-level strategic decisions.
- Broaden your experience of using mathematical and statistical software.
- Start at a point that suits your level of mathematical knowledge.

Routes through the degree

There are two starting points: default and intensive. For more information about the best starting point for you, see pages 20–21 or go to **openuniversity.co.uk/start-maths**.

Qualification structure

You'll choose either:

1. The **default** start

2. The **intensive** start.

The example route shown below is the **default** start. The intensive start will differ at Stage 1, go to **openuniversity.co.uk/q15** for details.

DEFAULT START

Stage 1 120 credits

- *Discovering mathematics* (MU123) (30 credits)
- *Economics in context* (DD126) (30 credits)
- *Introducing statistics* (M140) (30 credits)
- *Essential mathematics 1* (MST124) (30 credits)

Stage 2 120 credits

- *Running the economy* (DD209) (60 credits)
- *Analysing data* (M248) (30 credits)
- *Mathematical methods* (MST224) (30 credits)

Stage 3 120 credits

- *Doing economics: people, markets and policy* (DD309) (60 credits)
- *Linear statistical modelling* (M346) (30 credits)
- You'll choose 30 credits from a selection of mathematics options, go to openuniversity.co.uk/q15

Compulsory modules
Option modules
Awarded qualification

BSc (HONS) ECONOMICS AND MATHEMATICAL SCIENCES

Qualification delivery, module availability and qualification structure are subject to change.

AT A GLANCE

Course code	Q15
Total credits	360

Start dates
Oct 2020
Register by 10 Sep 2020

Feb 2021
Register by 14 Jan 2021

Entry requirements
Check you're ready and get advice on your best starting point at **openuniversity.co.uk/start-maths**

Assessment
Based on a mix of:
- Tutor-marked assignments
- Interactive computer-marked assignments
- End-of-module assessments
- Examinations

Study duration
Part time: 6–8 years
Full time: 3–4 years

Mode of study
The learning materials provided are **a balance of print and online**

Electronic versions of printed materials available (e.g. PDF)	✓
Disc-based media (e.g. DVD)	✓
Online forum Compulsory	✓
Collaborative work Compulsory	✓

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/q15**
Call **0300 303 5303**

BSc (HONS) COMBINED STEM

This flexible degree combines science, technology, engineering and mathematics (STEM). Build your own degree from a wide range of STEM modules and study routes, including psychology and sports science. You can build a qualification that's unique to you.

Why choose this qualification?

- Choose modules from across STEM subjects or focus on one or two areas.
- Switch direction if your needs or interests change.
- Count university-level credits you've gained from elsewhere.

Degree holders in England and Wales

If you're looking to re-skill or up-skill in STEM subjects, you could still be eligible for a student loan to fund this degree.

For more information, go to **openuniversity.co.uk/quals**.

How you can focus your combined STEM degree on applied mathematics

This selection of modules shows how you can focus on applied mathematics. Combine it with other STEM subjects that you're interested in.

This is just one example of the many combinations you can study, you're not restricted to this route.

Stage 1 120 credits

Essential mathematics 1 (MST124) (30 credits)

Essential mathematics 2 (MST125) (30 credits)

You'll choose 60 credits from a wide range of OU level 1 modules

Stage 2 120 credits

Mathematical methods, models and modelling (MST210) (60 credits)

You'll choose 60 credits from a wide range of OU level 2 modules

Stage 3 120 credits

You'll choose 60 credits from:
Complex analysis (M337) (30 credits)
Deterministic and stochastic dynamics (MS327) (30 credits)
Graphs, networks and design (MT365) (30 credits)
Mathematical methods and fluid mechanics (MST326) (30 credits)
Optimization (M373) (30 credits)

You'll choose 60 credits from a wide range of OU level 3 STEM modules

BSc (HONS) COMBINED STEM

Mathematics modules
Option modules
Awarded qualification

Qualification delivery, module availability and qualification structure are subject to change.

AT A GLANCE

Course code	R28
Total credits	360

Start dates
Oct 2020
Register by 10 Sep 2020

Feb 2021
Register by 14 Jan 2021

Entry requirements
Check you've got the mathematical skills needed at **openuniversity.co.uk/mathstats**

Assessment
Depending on the modules you choose to study, you may be assessed in any or all of the following ways:
- Tutor-marked assignments
- Interactive computer-marked assignments
- End-of-module assessments
- Examinations

Study duration
Part time: 6 years
Full time: 3 years

Mode of study
As the BSc (Hons) Combined STEM can be made up of a range of different modules, the learning materials provided, use of online forums and inclusion of collaborative work will depend on the modules you choose to study

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/r28**
Call **0300 303 5303**

BA/BSc (HONS) OPEN

Do you want the freedom to study a range of subjects that interest you? Then our Open qualifications are ideal.

The degree allows you to choose modules from a wide range of subject areas so you can, for example, combine mathematics modules with modules from other disciplines, such as science or the humanities.

Why choose this qualification?

- Tailor your qualification to suit your needs.
- Choose modules from a wide range of subject areas.
- Study to fit evolving career ambitions or personal interests.
- Open up your career prospects.
- Count previous university study towards your qualification.

Open qualifications and your career

Achieving an Open qualification demonstrates your exposure to different subjects and disciplines, and the rich world-view you've developed in the process. You'll also have a highly employable set of skills and attributes, including:

- adaptability
- critical thinking
- analysis and problem solving.

Research shows almost 86% of graduate job vacancies are open to graduates of any subject (Institute of Student Employers, 2019). Employers value the personal qualities needed to achieve a degree through distance learning.

"The fact that the OU has the option of choosing an Open degree is fabulous. So many people I have spoken to wish that they'd had this option at university rather than going down one route."

Carol Dow,
BA (Hons) Open

Related qualifications

Diploma of Higher Education Open (W34)
openuniversity.co.uk/w34

Certificate of Higher Education Open (T09)
openuniversity.co.uk/t09

How you can focus your Open degree on mathematics and statistics

This selection of modules shows how you can focus on aspects of mathematics and statistics in combination with other subjects that are of particular interest to you.

However, this is just one example of the many combinations you can study and you're not restricted to this route.

Stage 1 120 credits

Introducing statistics (M140) (30 credits)

Essential mathematics 1 (MST124) (30 credits)

You'll choose 60 credits from a wide range of OU level 1 modules

Certificate of Higher Education Open (T09)

Stage 2 120 credits

Analysing data (M248) (30 credits)

Mathematical methods (MST224) (30 credits)

You'll choose 60 credits from a wide range of OU level 2 modules

Diploma of Higher Education Open (W34)

Stage 3 120 credits

Deterministic and stochastic dynamics (MS327) (30 credits)

Linear statistical modelling (M346) (30 credits)

You'll choose 60 credits from a wide range of OU level 3 modules

BA/BSc (HONS) OPEN[1]

[1] Whether you qualify for a BA or BSc (Hons) Open will be determined by the number of credits you have from modules suitable for a BA or for a BSc.

- Mathematics and statistics modules
- Option modules
- Intermediate qualifications
- Awarded qualification

AT A GLANCE

Course code QD

Total credits 360

Start dates
Oct 2020
Register by 10 Sep 2020

Feb 2021
Register by 14 Jan 2021

Entry requirements
Check you've got the mathematical skills needed at **openuniversity.co.uk/mathstats**

Assessment
Depending on the modules you choose to study, you may be assessed in any or all of the following ways:

- Tutor-marked assignments
- Interactive computer-marked assignments
- End-of-module assessments
- Examinations

Study duration
Part time: 6 years
Full time: 3 years

Mode of study
As the BA/BSc (Hons) Open can be made up of a range of different modules, the learning materials provided, use of online forums and inclusion of collaborative work will depend on the modules you choose to study

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/qd**
Call **0300 303 5303**

FIND A POSTGRADUATE COURSE

To work towards a postgraduate qualification, you first need to choose and register on a module that counts towards that qualification.

MSc IN MATHEMATICS

Delve deep into the aspects of pure and applied mathematics that interest you. Choose from areas such as fractal geometry, coding theory and calculus of variations. Advance your career with a high-level qualification.

Choose from a wide range of modules. There are topics for not only mathematicians but engineers and mathematically inclined scientists. You'll conclude with an independent study, exploring a topic in detail and submitting a dissertation.

Applied mathematicians, or science or engineering graduates, should start with *Calculus of variations and advanced calculus* (M820). Pure mathematicians might prefer to start with *Analytic number theory I* (M823). You can study one or both modules in the first year. Students spend typically 10 hours per week on each module. Then, select from the range of pure and applied mathematics modules in later years.

Qualification structure

MODULE	CREDITS	CODE
You'll choose 30–60 credits from:		
Analytic number theory I	30	M823
Calculus of variations and advanced calculus	30	M820
You'll choose 0–30 credits from:		
Advanced mathematical methods	30	M833
Analytic number theory II	30	M829
Approximation theory	30	M832
Coding theory	30	M836
Fractal geometry	30	M835
Galois theory	30	M838
Nonlinear ordinary differential equations	30	M821
Postgraduate Certificate in Mathematics (C90)		
You'll choose another 60 credits from the modules above:		
Postgraduate Diploma in Mathematics (E23)		
You'll choose another 30 credits from the modules above, plus you'll study the following:		
Dissertation in mathematics	30	M840
MSc IN MATHEMATICS		

Option modules

Intermediate qualifications

Compulsory module

Awarded qualification

Module availability is subject to change.

AT A GLANCE

Course code F04

Total credits 180

Start dates
Oct 2020
Register by 10 Sep 2020

Entry requirements

- An honours degree (with a 2:2 classification or higher) in mathematics
- Alternatively, an honours degree (with a 2:1 classification or higher) in a subject with high mathematical content

Check you're ready at **openuniversity.co.uk/pgmaths**

Study duration
Part time: 2–4 years

Related qualifications

Postgraduate Diploma in Mathematics (E23)
openuniversity.co.uk/e23

Postgraduate Certificate in Mathematics (C90)
openuniversity.co.uk/c90

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/f04**
Call **0300 303 5303**

RECOMMENDED STUDY ROUTES

We recommend you study only one module (30 credits) in your first year. And no more than two modules (60 credits) in later years.[1] Modules last 31 weeks and most students find that each module takes around 300 hours.

Normally, you must:

- complete at least one of the entry modules before studying any intermediate module
- complete *Analytic number theory I* (M823) before studying *Analytic number theory II* (M829)
- complete four modules before studying the *Dissertation in mathematics* (M840).[2]

Otherwise, you may study modules in any order.[3]

[1] If you wish to complete the MSc within two years, an accelerated study schedule is possible.

[2] Some dissertation topics need you to have passed pre-requisite modules.

[3] Some modules start every other year.

Applied mathematics	**Pure mathematics**
Entry	
Calculus of variations and advanced calculus (M820)	
	Analytic number theory I (M823)
Intermediate	
Approximation theory (M832)	
Advanced mathematical methods (M833) *Nonlinear ordinary differential equations* (M821)	*Analytic number theory II* (M829) *Coding theory* (M836) *Fractal geometry* (M835) *Galois theory* (M838)
Claim the **Postgraduate Certificate in Mathematics (C90)** after passing any two modules above	
Claim the **Postgraduate Diploma in Mathematics (E23)** after passing any four modules above	
Dissertation	
Dissertation in mathematics (M840)	
Claim the **MSc in Mathematics (F04)** after passing the dissertation and any other five modules above	

Modules | Intermediate qualifications | Masters qualification

POSTGRADUATE CERTIFICATE IN MATHEMATICS

This certificate comprises two 30-credit modules from a wide choice. Tailor your study to areas that suit you. Develop skills in problem solving and decision making relevant in business, commerce and industry.
It's also the first stage of our postgraduate mathematics programme. You can progress to the postgraduate diploma and then the MSc in Mathematics.

POSTGRADUATE DIPLOMA IN MATHEMATICS

This diploma comprises four 30-credit modules from a wide choice. Topics include analytic number theory, calculus of variations and nonlinear ordinary differential equations. Extend your understanding of areas of mathematics applicable to science, engineering and technology.
It's also the first two stages of our postgraduate mathematics programme. You can achieve the MSc in Mathematics by taking a further two 30-credit modules.

MORE ONLINE

Find out more about these courses, fees and funding, and how to register

Visit **openuniversity.co.uk/c90**

openuniversity.co.uk/e23

Call **0300 303 5303**

MA/MSc OPEN

Do you want the freedom to create a personalised course of study across a range of academic disciplines? Then our MA/MSc Open is ideal.

Put simply, the MA/MSc Open gives you choice. It allows you the freedom to tailor your qualification to suit you. Choose modules from a wide range of related subject areas to fit your evolving ambitions or personal interests.

Qualification structure

There are two routes through this qualification:

Route 1: You can study 180 credits and specialise within one of the following broadly related study areas:

- Arts, Humanities and Language
- Education, Psychology and Health Science
- Science, Technology, Engineering and Mathematics
- Business, Finance, Human Resources and Law.

Route 2: You can choose to study 120 credits, specialising within one study area (as above) and take up to 60 credits from any other study area, including:

- Further professional development modules.

Module availability is subject to change.

Arts, Humanities and Language modules

MODULE	CREDITS	CODE
MA Art History part 1	60	A843
MA Classical Studies part 1	60	A863
MA Creative Writing part 1	60	A802
MA English part 1	120	A815
MA History part 1	120	A825
MA Music part 1	60	A873
MA Philosophy part 1	60	A853
Introduction to translation theory and practice	60	L801

Education, Psychology and Health Science modules

MODULE	CREDITS	CODE
Children and young people's worlds	60	E808
Educational leadership: agency, professional learning and change	60	EE811
Addressing inequality and difference in educational practice	60	EE814
Applied linguistics and English language	60	EE817
Learning and teaching: educating the next generation	60	EE830
Technology-enhanced learning: foundations and futures	60	H880
Openness and innovation in elearning	60	H817
Introduction to mental health science	60	S826
Principles of social and psychological inquiry	60	DD801

Science, Technology, Engineering and Mathematics modules

MODULE	CREDITS	CODE
Information security	30	M811
Digital forensics	30	M812
Software development	30	M813
Data management	30	M816
Calculus of variations and advanced calculus	30	M820
Analytic number theory I	30	M823
Advanced mathematical methods	30	M833
Coding theory	30	M836
Space science	60	S818
Finite element analysis: basic principles and applications	30	T804
Manufacture materials design	30	T805
Network security	30	T828
Environmental monitoring and protection	30	T868
Making environmental decisions	30	T891

Business, Finance, Human Resources and Law modules

MODULE	CREDITS	CODE
Introduction to corporate finance	30	B858
Financial strategy: valuation, governance and ethics	30	B859
Research methods for finance	30	B860
The human resource professional	30	B863
Employment relations and employee engagement	30	B866
Workplace learning with coaching and mentoring	30	B867
Exploring legal meaning	30	W820
Exploring the boundaries of international law	30	W821
Business, human rights law and corporate social responsibility	30	W822

Further professional development modules

MODULE	CREDITS	CODE
Investment and portfolio management	30	B861
Derivatives and risk management	30	B862
Sustainable creative management	15	BB842
Leadership and management in intercultural contexts	15	BB848
The networked practitioner	30	H818
The critical researcher: educational technology in practice	30	H819
Project management	30	M815
Managing technological innovation	30	T848
Strategic capabilities for technological innovation	30	T849
Managing for sustainability	30	T867
Capacities for managing development	30	T878
Conflict and development	30	T879
Making strategy with systems thinking in practice	30	TB871
Managing change with systems thinking in practice	30	TB872
Institutional development	30	TU872
Continuing professional development in practice	30	U810
Advance your independent learning	30	YXM830

AT A GLANCE

Course code F81

Total credits 180

Start dates
Oct 2020
Nov 2020
Feb 2021
May 2021

Entry requirements
Entry to this qualification will typically require a bachelors degree or equivalent qualification relevant to your intended specialist area of study

Study duration
Part time: 3 years

MORE ONLINE

Find out more about this course, fees and funding, and how to register

Visit **openuniversity.co.uk/f81**
Call **0300 303 5303**

OTHER USEFUL INFORMATION

You've taken the first step by requesting this prospectus. Continue your journey by visiting our website at **openuniversity.co.uk** and finding out more about the courses we offer and how studying with the OU works.

You'll be able to:

- read more in-depth information on the qualifications you're interested in
- discover more about the support you can receive from the University and fellow students
- find out how you can fund your studies, including our flexible payment options
- register for your course.

Or, if you'd prefer to speak to one of our advisers, contact us using the details provided on the back of this prospectus.

Alternatively, write to us at:

Student Recruitment
The Open University
PO Box 197
Milton Keynes
MK7 6BJ
United Kingdom

Our other prospectuses

Are you interested in other Open University qualifications?

Download or order one of our other prospectuses at **openuniversity.co.uk/prospectus**.

Subject-specific prospectuses

- Arts and Humanities
- Business and Management
- Computing and IT
- Education, Childhood, Youth and Sport
- Engineering, Design and Technology
- Environment and Development
- Health and Social Care
- Languages and Applied Linguistics
- Law
- Psychology and Counselling
- Science
- Social Sciences

Other prospectuses

- Access Modules
- Open Qualifications
- Undergraduate Courses
- Postgraduate Courses

Equality and diversity

We're committed to creating an inclusive university community where everyone is treated with dignity and respect. We challenge inequality, and anticipate and respond positively to different needs so that everyone can achieve their potential.

Find out more by visiting **openuniversity.co.uk/equality**.

Data protection

We record your personal information when you contact us. We use this to manage enquiries, registration, study, examination and other services. Calls may be recorded to help us improve our service to you. When you contact us, we'll tell you more about how we treat your personal information.

For more information go to **openuniversity.co.uk/privacy**.

AMBITIONS PLANS GOALS

What's next?

Get in touch or go online to find out more:

0300 303 5303
openuniversity.co.uk

Other ways to read this prospectus

You may find it easier to access information from our website at **openuniversity.co.uk**.

We can also supply this prospectus as a PDF and in other formats. Please call **0300 303 5303**, or email us from our website at **openuniversity.co.uk/contact**.

We have made all reasonable efforts to ensure that the information in this prospectus is accurate at the time of publication. However, we shall be entitled, if we consider it reasonably necessary (including in order to manage resources and improve student experience) to make changes, including to the availability of modules and qualifications, to qualification structure and to our regulations, policies and procedures. For current information, please refer to our online prospectus at **openuniversity.co.uk/courses**. If you require further information about the circumstances in which we may make changes, please contact us or refer to the Academic Regulations on our website at **openuniversity.co.uk/academic-regulations**.

GET IN TOUCH

Covid-19 – Contacting The Open University in the current situation

We want to reassure you that online registration remains open as normal. Our registration deadline for October 2020 courses is 10 September 2020, which means there's plenty of time to secure your place to study.

Please note that our current opening times are 09:00–17:30, Monday – Friday.

While we aren't currently accepting incoming calls, if you have any queries about our courses or registration, you can email us by visiting **openuniversity.co.uk/contact**.

It will take us longer than usual to respond to your emails, so we thank you for your patience at this time.

Covid-19 - Cysylltu â'r Brifysgol Agored yn ystod y sefyllfa bresennol

Rydym eisiau eich sicrhau bod y broses gofrestru ar-lein ar agor fel arfer. Ein ddyddiad cau i gofrestru ar gyfer cyrsiau Hydref 2020 yw 10 Medi 2020, sy'n golygu bod digon am amser i gadarnhau eich lle i astudio.

Noder mai ein horiau agor ar hyn o bryd yw 09:00–17:30, Llun-Gwener.

Er nad ydym yn derbyn galwadau ar hyn o bryd, os oes gennych unrhyw ymholiadau ynghylch ein cyrsiau neu gofrestru, gallwch anfon e-bost atom drwy fynd i **openuniversity.co.uk/contact**.

Bydd yn cymryd mwy o amser na'r arfer i ni ymateb i'ch e-byst, felly rydym yn diolch i chi am eich amynedd yn ystod y cyfnod hwn.