The quantified contribution of mathematical science research to the UK economy is estimated to be approximately 2.8 million in employment terms and £208 billion in terms of GVA contribution.

For beauty and pleasure. Mathematics is a monument of human imagination and intuition guided by precision. It is sometimes challenging, but the challenge is like ascending a hill to admire an enchanting vista. It is often also just plain fun.

To make a difference to the world. Mathematical techniques and talent are employed to solve real-world problems across industry, business and government. Take the internet, medical imaging, weather forecasting, encryption, the human genome project, data compression... none of these would be possible without mathematics.

To start the journey towards a rewarding career. Our mathematics graduates are in high demand and enjoy a huge choice of fulfilling and creative opportunities. Working in computing, finance, government and education, they conduct research into machine learning, tomography, data systems and financial products.

WHY STUDY MATHEMATICS?

“"The object of pure mathematics is unfolding the laws of human intelligence."

James Joseph Sylvester

Measuring the Economic Benefits of Mathematical Science Research, report for the Engineering and Physical Sciences Research Council (EPSRC) and Council for Mathematical Sciences (CMS)
WHY MATHS AT WARWICK?

+ CHOICE AND DEPTH
We offer a huge number of exciting modules allowing you to develop and pursue your interests within mathematics. Many 3rd and 4th year modules offer a glimpse of the latest developments in mathematics research.

+ FLEXIBILITY OF COURSE COMPOSITION
You are free to do 100% maths if you prefer, but we also offer the opportunity to choose options from several other world-class departments at Warwick. This provides flexibility to tailor your degree to suit your interests, and also your potential career.

+ STRONG PEER SUPPORT
The whole set-up of our department - the breakout areas and common spaces - are all geared to you sharing, collaborating and making life-long friendships.

+ OUR INTERNATIONAL REPUTATION
As a centre of excellence we attract research mathematicians from all over world. We offer an intellectually stimulating atmosphere that few institutions rival.

“You have to be prepared to work hard but once you’re OK with that it’s the most exciting place to study Maths.”
Adday Heller, 3rd year Maths with Study Abroad student and Women in Maths representative

warwick.ac.uk/mathematics
We encourage (but do not require) applicants to sit one of the following admissions tests:

- **MAT** - Mathematics Admissions Test
- **TMUA** - Test of Mathematics for University Admission
- **STEP** - Sixth Term Examination Paper

Preparing for one of these tests will help you develop your problem solving skills and deepen your understanding of mathematics.

Here are some points you should bear in mind:

- The MAT and TMUA are in November
- STEP is in July - there are three STEP papers and we accept all three
- See our MAT, TMUA and STEP page for helpful resources and links explaining how to register for these tests: warwick.ac.uk/mathsstep

Applicants for 2019 entry who take MAT or TMUA in November 2018 and do well are likely to receive the following offer:

A* (Maths), A* (Further Maths), A

Applicants for 2019 entry who do not sit either of the MAT or TMUA (or do not do well in these tests) are likely to receive the following offer:

- Either A* (Maths), A* (Further Maths), A, plus grade 1 in any STEP paper
- or A* (Maths), A* (Further Maths), A*
- or A* (Maths), A* (Further Maths), A, A

We expect to make offers to most Year 13 applicants who are predicted A* A A or higher.

Note:

- We don’t interview but we do invite you to attend an offer holder open day to see the department, and meet staff and current students.
- General Studies and Critical Thinking do not count towards A Level requirements.
Applicants for 2019 entry who take MAT or TMUA in November 2018 and do well are likely to receive the following offer:

- 39 points overall, with 6,6,6 in HL subjects, including HL Maths

Applicants for 2019 entry who do not sit either of the MAT or TMUA (or do not do well in these tests) are likely to receive the following offer:

- either 39 points overall, with 6,6,6 in HL subjects, including HL Maths, plus grade 1 in any STEP paper
- or 39 points overall, with 7 in HL Maths, and 6, 6 in two other HL subjects

We expect to make offers to most IB applicants who are predicted 38 points overall with 6 in HL Maths.

YOUR WAY IN...

with the International Baccalaureate

if you live outside the UK

The University of Warwick is home to a vast number of international students from over 140 countries, and the Mathematics staff are recruited world-wide and contribute to the Institute’s cosmopolitan outlook. We warmly welcome applications from international students who share our passion for mathematics. Typical offers for 30 international qualifications can be found at warwick.ac.uk/maths/admissions/ug/otherquals

If your qualification is not listed, or if you have any queries about entrance requirements, please contact us at mathsadmissions@warwick.ac.uk

The University of Warwick International Office can also offer help and advice.

warwick.ac.uk/study/international

English language: All applicants must satisfy the University’s Admissions Requirement, including a minimum level of competence in the English language.

warwick.ac.uk/study/undergraduate/apply/language
We offer two single-subject Mathematics degrees:

G100: Mathematics BSc
This is a 3-year maths degree that is broad and highly flexible.

G103: Master of Mathematics (MMath)
This 4-year degree is a natural route for those contemplating a mathematical career in industry, business or academia.

Course Structure for Maths BSc:
• 1st year: 8 core modules (75% of typical workload).
• 2nd year: 5 core modules plus essay (55% of typical workload).
• 3rd year: no core, but do at least 50% maths.

The remaining modules can be chosen from mathematics or one of many subjects.

Course Structure for MMath:
• Same core as BSc.
• Students must do at least 75% maths each year.

Teaching: Most of our teaching is through lectures. These are typically 3 hours per week for each module, and delivered by a member of academic staff. Undergraduates usually take around five modules in each of Term 1 and Term 2. Term 3 is mostly for revision and examinations.

“Studying Maths at Warwick is challenging, but a nice challenge. When you put a lot of effort in and manage to work out something you’ve been stuck on for a while, that feeling is so rewarding.”

Helen Davies, 4th year MMath student

Three or Four Years Maths?
• Maths BSc and MMath have the same entrance requirements.
• Maths BSc and MMath share the same core in the 1st year.
• It is easy to switch from Maths BSc to MMath until the end of the 1st year.
• It is easy to switch from MMath to Maths BSc until the end of the 3rd year.
• If you’re struggling to decide pick either and you can change your mind later.

Taking a gap year before study?
We welcome applicants who wish to take a ‘gap year’ between school and university. Just achieve your admissions offer and your place will be reserved.
1st Year Core Maths Modules:
- Foundations, Differential Equations, Introduction to Abstract Algebra, Analysis I, Analysis II, Linear Algebra, Maths by Computer, Geometry and Motion, Probability A.

1st Year Optional Modules
- From Physics: Classical Mechanics and Relativity, Electricity and Magnetism, Introduction to Astronomy, Introduction to Particle Physics, Quantum Phenomena.
- From Computer Science: Design of Information Structures, Discrete Mathematics and its Applications 2.
- From Philosophy: Mind and Reality, Introduction to Symbolic Logic I.
- From Computer Science: Algorithms, Logic and Verification, Algorithmic Graph Theory.
- From Economics: Mathematical Economics 1A, Mathematical Economics 1B.
- From Philosophy: Logic II, History of Modern Philosophy.
- The Language Centre at Warwick offers academic modules in Arabic, Chinese, French, German, Japanese, Russian and Spanish at a wide range of levels.

"One of my favourite things about studying Maths at Warwick is how flexible the degree has been. I was able to choose options from my very first day - and the number of options has only increased as I've gone along, allowing me to pick modules to my interests."

Emily Wolfenden, 3rd year Maths BSc student

2nd Year Core Maths Modules:
- Vector Analysis, Advanced Linear Algebra, Analysis III, Groups and Rings, Differentiation, Second Year Essay.

2nd Year Optional Modules
- From Computer Science: Geophysics, Hamiltonian Mechanics, Climate Change, Computational Physics, Quantum Mechanics and its Applications, Electromagnetic Theory and Optics, Physics of Fluids, Stars, Experimental Particle Physics, Methods of Mathematical Physics.
- From Computer Science: Algorithms, Logic and Verification, Algorithmic Graph Theory.
- From Economics: Mathematical Economics 1A, Mathematical Economics 1B.
- From Philosophy: Logic II, History of Modern Philosophy.
- The Language Centre at Warwick offers academic modules in Arabic, Chinese, French, German, Japanese, Russian and Spanish at a wide range of levels.

1 The list of modules varies from year to year and is subject to changes in curriculum and staff research interests. This list is accurate for the 2017-2018 academic year.

2 The list of modules varies from year to year and is subject to changes in curriculum and staff research interests. This list is accurate for the 2017-2018 academic year.
Modules offered in 3rd year

The 3rd year has no core modules.

3rd Year Optional Modules from Mathematics and Statistics

- Algebra and Discrete Mathematics
  - Galois Theory, Rings and Modules, Groups and Representations, Commutative Algebra, Algebraic Number Theory, Set Theory, Combinatorics II.
- Analysis
- Geometry and Topology
- Real-World Systems and Applied Mathematics
  - Topics in Mathematical Biology, Bifurcations, Catastrophes and Symmetry, Mathematics Modelling with PDEs, Fluid Dynamics, Numerical Analysis and PDEs, Control Theory, Variational Principles.
- Probability and Statistics
- Other
  - Problem Solving, History of Mathematics, Essay, Reading module.

Other modules offered in 3rd year

3rd Year Optional Modules from Other Subjects

- Engineering: Systems Modelling and Control.
- Philosophy: Modal Logic.
- The Language Centre at Warwick offers academic modules in Arabic, Chinese, French, German, Japanese, Russian and Spanish at a wide range of levels.

3 The list of modules varies from year to year and is subject to changes in curriculum and staff research interests. This list is accurate for the 2017–2018 academic year.

4 The list of modules varies from year to year and is subject to changes in curriculum and staff research interests. This list is accurate for the 2017–2018 academic year.
Modules offered in 4th year

4th Year Core Maths Module: Research Project/Maths in Action Project.

4th Year Optional Modules from Mathematics and Statistics:

- Algebra and Discrete Mathematics
  Lie Groups, Representation Theory, Ring Theory, Graph Theory, Group Theory, Analytic Number Theory, Elliptic Curves.

- Analysis
  Fourier Analysis, Stochastic Analysis, Complex Function Theory, Ergodic Theory, Advanced Real Analysis, Advanced PDEs.

- Geometry and Topology

- Real-World Systems and Applied Mathematics

- Probability and Statistics
  Dynamic Stochastic Control, Brownian Motion, Bayesian Forecasting and Intervention, Applied Stochastic Processes, Monte Carlo Methods, Topics in Applied Probability, Multivariate Statistics.

- Theoretical Physics
  Relativistic Quantum Mechanics, High Performance Computing in Physics, Gauge Theories for Particle Physics, General Relativity, Quantum Mechanics Basic Principles and Probabilistic Methods, Statistical Mechanics.

- Other
  Reading module.

I’ve always felt like I can go to a lecturer if I need help. The staff are always happy to answer emails and have office hours so you can speak to them in person. They encourage you to ask questions during lectures if you feel confused, or are happy for you to go to them afterwards if you don’t want to speak in front of the class.

Vicki Patel, 4th-year MMath student

Support for Learning

Tutorials
Your Personal Tutor is a member of academic staff. Tutors will advise on module choices, discuss mathematics with you in detail, help you to overcome minor and major problems, guide you through writing your 2nd-year essay, and write reference letters for you.

Supervisions (1st and 2nd Year)
Your supervisor is a postgraduate or 4th-year student. Being only a little older than you, your supervisor remembers the challenges of being a 1st and 2nd-year maths undergraduate and will support you through these. The supervisor marks your homework providing feedback, and endeavours to answer your questions.

Support Classes
Most 2nd, 3rd and 4th-year modules have support classes associated with them. These are run by postgraduates who work through examples, provide homework feedback, answer questions, and often offer an alternative point-of-view from the lecturer.

Maths Café
This is a student-led peer support group which offers informal problem-solving sessions and a listening ear.

Teaching Assistant (TA) and fellow students you will gradually be encouraged to move on from the situation where the TA shows you how to solve a problem to the point where you develop your approach to problem solving.

SUPPORT FOR LEARNING

warwick.ac.uk/mathematics
We encourage students to consider spending Year 3 at one of 23 European partner universities in Belgium, France, Germany, Italy, Malta, The Netherlands, Portugal, Spain and Switzerland.

If you’re interested in this option, you can apply for it during your second year. Before you go we can prepare you with the necessary language skills through the Warwick Language Centre. After the year in Europe, you will return to Warwick for your final year. Your degree title will feature ‘with Intercalated Year’ or ‘MMath with Study in Europe’.

“Spending a year in Germany has been a fantastic addition to my Warwick degree. Göttingen is a town that revolves around its student population, and one that has played an important role in mathematical history. Studying mathematics in another language is a unique experience. I learnt a new approach to several topics, meaning that at the end of the year I have not only come away with much improved German skills but also a much better understanding of the mathematics from my first two years. I made some lifelong friends from all over the world, with whom I spent a month travelling around Croatia and the rest of Germany. I am now considering working abroad in the future.”

Natascha Mathews spent a year in Göttingen (2014-15). She followed the G101 Maths with Intercalated Year Programme.

Mathematics is constantly evolving. The Warwick Mathematics Institute is home to a number of world-leading research groups in pure and applied mathematics that keep our department at the forefront of research developments.

Active research areas include Algebraic Geometry, Number Theory, Probability, Geometric Analysis, Dynamical Systems, Mathematical Biology and Complexity Science.

Research initiatives involving mathematics at Warwick include:

- The Warwick Mathematics Research Centre. Founded in 1964, this was the first such centre in the UK. It runs many workshops and conferences, and hosts hundreds of visiting mathematicians every year from all over the world.

- Mathematical Interdisciplinary Research at Warwick, fosters mathematical research and training across 11 academic disciplines.

- The Centre for Scientific Computing, driving high-performance computational research.

- The Centre for Discrete Mathematics and its Applications, brings together researchers in graph theory, combinatorics and operational research from Mathematics, Computer Science and the Business School.

- The Alan Turing Institute. This is the national institute for data science, founded by the Mathematics, Statistics and Computer Science departments at Cambridge, Edinburgh, Oxford, UCL and Warwick.

“One of the best things about studying Mathematics at Warwick’s Mathematics Institute is that you can be taught by and study under some of the most eminent and leading Mathematicians in their field. If you choose to do a third year essay or fourth year research project you have the incredible opportunity to be supervised by an expert in your area of interest.”

Alexandra Embleton, MMath 2011-2015
Kat Rock is an Assistant Professor in the Mathematics Institute. A Warwick MMath graduate herself, she is a mathematical epidemiologist with a particular interest in vector-borne neglected tropical diseases.

Kat investigates and develops models for human African trypanosomiasis (HAT, or more commonly known as sleeping sickness) and leads the Bill and Melinda Gates Foundation-funded research project ‘HAT Modelling and Economic Predictions for Policy’. HAT is a parasitic infection, affecting large parts of Sub-Saharan Africa, that is transmitted by tsetse flies, causing debilitating symptoms and is often fatal without treatment.

The project aims to inform decision-making strategies for the elimination of the disease. Bringing together an international, multidisciplinary team of mathematical modellers, researchers and national programmes, the group assesses local elimination strategies, provides cost-effectiveness analyses and will deliver an investment case for elimination.

Kat explains, “There are two options for disease control – you either treat current infections or focus on preventing the future spread of the disease. Prevention measures vary by disease but might include vaccination and insect control. Smallpox remains the only human disease to have been completely eradicated from the globe by our deliberate intervention. Through treatment and tsetse control it is possible to greatly reduce the prevalence of sleeping sickness to manageable levels. But to get from low cases to no cases is much, much harder. My work looks at the feasibility and value of that.”

“When I started my Maths degree at Warwick I had no idea what job I might do afterwards, although my Dad was keen for me to be an actuary. Some of my friends went down that route but I found the flexibility of the course allowed me to develop my own path. I became drawn to the application of maths to solve real-world problems. Even though I only took Biology to GCSE, by taking specialist modules in the second and third years, as well as undertaking relevant projects I was able to shape my degree to nurture my growing interest in the dynamics of infectious diseases.”

“I frequently employ the skills I developed on my undergraduate course even now. Modules in programming, differential equations, population dynamics and systems biology are all directly relevant to my work.”
You're perhaps curious about research-level mathematics that takes place at Warwick. Here we present a few examples of theorems and ideas due to Warwick mathematicians. These have been chosen because their statements are accessible to A-level students, even though the methods and ideas behind some are very advanced. In perusing these, you'll notice that they're not motivated by practical applications. Some of the maths research at Warwick is aimed at solving real-world problems, but most of it is driven by a burning desire to know. You'll also notice that mathematicians in other countries are involved as collaborators, and this is typical: research is international. These examples also give rise to further natural questions and new directions. Perhaps you might solve one of these some day?

GLIMPSES OF MATHS RESEARCH AT WARWICK

You might have heard of the Four Colour Theorem, proved in 1977 by Appel and Haken. A map is n-colourable if we can colour it using n colours so that no two adjacent regions share the same colour. The Four Colour Theorem simply says that any map is four colourable. You should be able (with a little experimentation) to draw a map that isn't 3-colourable.

A list $R,S,T,U$ of four regions in a map is called a cycle of length 4 if $R$ shares a border with $S$, and $S$ shares a border with $T$, and $T$ shares a border with $U$ and $U$ shares a border with $R$. You can define a cycle of length 5 in the analogous way. A famous problem in graph theory (from 1976) is known as Steinberg’s conjecture. This claims that a map that doesn’t have cycles of length 4 or 5 is 3-colourable. Many graph theorists have tried to prove Steinberg’s conjecture. In 2016 Steinberg’s conjecture was disproved by Warwick graph theorists Daniel Kral and Michael Hebdige, working with colleagues in France and Chile. In fact they constructed a map with 123 regions that doesn’t have cycles of length 4 or 5 and isn’t 3-colourable.

Three Colourings of Maps

A list $R,S,T,U$ of four regions in a map is called a cycle of length 4 if $R$ shares a border with $S$, and $S$ shares a border with $T$, and $T$ shares a border with $U$ and $U$ shares a border with $R$. You can define a cycle of length 5 in the analogous way. A famous problem in graph theory (from 1976) is known as Steinberg’s conjecture. This claims that a map that doesn’t have cycles of length 4 or 5 is 3-colourable. Many graph theorists have tried to prove Steinberg’s conjecture. In 2016 Steinberg’s conjecture was disproved by Warwick graph theorists Daniel Kral and Michael Hebdige, working with colleagues in France and Chile. In fact they constructed a map with 123 regions that doesn’t have cycles of length 4 or 5 and isn’t 3-colourable.

Irrationality of Odd Values of the Riemann-Zeta Function

We call a number rational if it can be written as a ratio of two whole numbers, and otherwise we say it is irrational. In your first week at university you’ll probably see a proof that $\sqrt{2}$ is irrational. Another famous irrational number is $\pi$. For a whole number $n \geq 2$ we let:

$$\zeta(n) = \sum_{m=1}^{\infty} \frac{1}{m^n}$$

This is the Riemann-Zeta function, one of the most fascinating functions in mathematics, and intimately related to the distribution of primes. If $n$ is even then $\zeta(n)$ can be written in terms of $\pi$ for example:

$$\zeta(2) = \frac{\pi^2}{6}, \zeta(4) = \frac{\pi^4}{90}, \zeta(6) = \frac{\pi^6}{945}, \ldots$$

These expressions can be used to show that $\zeta(n)$ is irrational for even $n$. For odd $n$, it seems that $\zeta(n)$ is unrelated to $n$. For a long time mathematicians have been trying to prove the irrationality of these odd values of the Riemann-Zeta function, with the only success being due to Roger Apery who showed in 1978 that $\zeta(3)$ is irrational. Warwick mathematician Keith Ball, in collaboration with Tanguy Rivoal at Grenoble, showed that there are infinitely many irrational odd values of the Riemann-Zeta function.

Open problem: Is there a map that doesn’t have cycles of length 4, 5 or 6 and isn’t 3-colourable?

In 2016 Steinberg’s conjecture was disproved by Warwick graph theorists Daniel Kral and Michael Hebdige, working with colleagues in France and Chile. In fact they constructed a map with 123 regions that doesn’t have cycles of length 4 or 5 and isn’t 3-colourable.

Open problem: Is $\zeta(5)$ irrational?
Mathematical Art

Saul Schleimer is a Warwick geometric topologist. He has a particular talent for helping the public (and undergraduates) appreciate advanced ideas in geometry and topology through mathematical art and concrete models. As an example we mention here one of Saul’s models, developed in collaboration with Henry Segerman at Oklahoma State University. A relatively common sight in graphic designs is of three gears in contact. However, since neighbouring gears must rotate in opposite directions, none of the gears can move. Saul and Henry had the idea of designing a model of three interlocking gears that do actually move, and even printed a functional model using a 3D printer. You might want to google their article “Triple Gear” to see the mathematics that went behind the design or watch the YouTube video showing the gears in motion.

Open problem: Can you design a mechanism with four interlocking gears?

Sums of Cubes

The French mathematician Joseph Lagrange proved in 1770 that every positive whole number can be written as the sum of four squares of whole numbers. Ever since, number theorists have been trying to prove similar theorems with squares replaced by higher powers. In the 19th century a huge experiment was carried out by hand where all numbers up to 12,000 where decomposed as sums of cubes of non-negative whole numbers. On the basis of this experiment the German mathematician Carl Jacobi suggested in 1851 that every whole number bigger than 454 is the sum of seven cubes. Amazingly, besides ingenuity the last step did not require very advanced mathematics and the proof can be understood by a first-year undergraduate.

Open problem: Jacobi also thought that every number bigger than 8,042 is the sum of six cubes. Is he right?

A Module in Focus: Galois Theory

You might have wondered if there is a formula to solve a cubic equation, similar to the familiar quadratic formula. Such a formula was discovered by Niccolo Tartaglia (1500-1557) but is usually attributed to Gerolamo Cardano (1501-1576) who was the first to publish it.

To solve \( ax^3 + bx + c + d = 0 \)

let \( p = \frac{3ac - b^2}{3a^2} \) and \( q = \frac{2b^3 - 9abc + 27a^2d}{27a^3} \).

Then one of the solutions is given by

\[
 x = \sqrt[3]{-\frac{q}{2} + \sqrt{\frac{q^2}{4} + \frac{p^3}{27}}} + \sqrt[3]{-\frac{q}{2} - \sqrt{\frac{q^2}{4} + \frac{p^3}{27}}}
\]

with the other two solutions given by similar expressions. Shortly afterwards Lodovico Ferrari (1522–1565) gave a formula for solving quartic (i.e. degree 4) equations. For the next 250 years mathematicians searched in vain for a formula for solving quintic equations. Evariste Galois (1811-1832) finally showed that there is no such formula (shortly before getting himself killed in a duel). Galois studied the symmetries of the solutions, and realised that when the degree is at least 5 the symmetries are too complicated for there to be a formula. In the third year Galois Theory module these symmetries are studied and measured using the modern language of groups and fields.

The language is so powerful that along the way many seemingly hopeless questions are resolved. For example, you probably remember how to bisect an angle using a ruler and compass. In this module it is shown by dimension counting that angles can’t be trisected using a ruler and compass.
As a Warwick graduate with a mathematics degree, you will have excellent prospects for a wide range of careers, the most popular areas being the Financial Sector (Accountancy, Actuarial and Investment Banking), Computing and Education.

Recent graduate job titles have included: Actuary, Business Intelligence Consultant, Chief Analytics Officer, Computer Games Designer, Consultant Software Engineer, Financial Consultant and Adviser, Financial Software Developer, Investment Banking Analyst, Market Risk Manager, and Mathematics Teacher.

Our Careers Service works for you, providing skills training, careers advice and information, and will continue to support you for up to three years after your graduation. See warwick.ac.uk/careersandskills

Why is a Warwick Maths Degree an Excellent Career Move?

In today's workplace, the ability to adapt to change and to learn new things is as important as having a particular range of knowledge.

During a Warwick Mathematics degree you will develop many of the qualities of intellect and temperament needed to meet new challenges, including:

- Analytical Skills
- Logical Thought Processes
- Problem-Solving Ability
- Investigative Skills
- Communication Skills
- Effective Working Habits

"My degree has set me up to either continue with research or pursue an interesting and lucrative professional career. The Warwick Maths course has a deservedly high reputation and I got interviews with very selective international companies based on it."

Samuel Watts, MMath 2008-2012

YOUR FUTURE STARTS HERE

When I started my undergraduate degree in maths at Warwick I was not entirely sure what I wanted to do afterwards and had never considered banking. In my second year I got a summer internship in corporate banking at a UK financial institution, which gave me the opportunity to explore different areas of the bank and I went on to apply for capital/debt markets graduate roles.

I now work in the loans and acquisition finance team at Citi. We raise loan financings for multi-national corporations, financial institutions and governments across Europe, the Middle East and Africa.

I enjoy the diversity of the role, working on a leveraged buyout facility in Poland is very different to a high profile acquisition finance transaction for a FTSE 100 corporate for example, and the different challenges I face, be it a difficult credit, negotiating legal documents or pitching to win business from new clients.

The flexibility in the degree at Warwick enabled me to choose some modules outside of Maths which I have since found useful in my chosen career: a Principles of Finance module gave me a basic introduction into corporate finance and an Advanced Spanish module was particularly useful when working on a Spanish transaction.

I hope to continue to develop and gain experience in my role with the short term goal of progressing to a more senior level. Within banking in London there are few women in senior roles so I’d like to help re-balance this and inspire the next generation of women.

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The Mathematics degree at Warwick is challenging but as a result it is extremely rewarding. As soon as you have understood one topic/module, the next one is never too far away. The flexibility to pursue the areas of Mathematics that you most enjoy is extremely helpful - being able to tailor your degree to what you are most interested in allows you to get the most from it.

I now model pension fund assets and liabilities, helping to advise trustees on potential investment strategies to best meet benefits payable to members.

I applied for the graduate scheme in my final year of university, and have since progressed within the company. I wanted to work in an industry where I could use some of the skills that I had developed throughout my Mathematics degree, and Investment Consulting looked like the right choice.

My main motivation is to keep learning and to keep challenging myself. Where that will take me only time will tell, but I’m looking forward to finding out.
Learning more maths had been my goal for as long as I could remember, so it was only natural to study Mathematics at degree level. As it turned out, Warwick was a great place to develop this interest. The MMath course gave me the opportunity to study a wide range of modules (not only in maths but also, for example, in physics). During my first two years I discovered that my interest was in number theory and algebra, and I was able to study many advanced modules in these areas throughout my degree. During my final year I was fortunate to work with Prof. Samir Siksek, who supervised my MMath research project in number theory. Samir was extremely enthusiastic and helpful, and I enjoyed this project so much I began to think seriously about a career in research. At the same time, a sense of pragmatism kicked in, and I was wondering how best to use all this maths I was excited about. Then it dawned on me: I should try the canonical application of number theory, cryptography!

My role as a PhD student involves conducting research and writing papers. I regularly have the opportunity to present my work at seminars and conferences, both in the UK and abroad. I have recently completed a 3 month internship in the Cryptography group at Microsoft Research, Redmond, USA, and presented some joint work arising from the internship at a workshop in Malta.
Warwick Campus is like a miniature city, with restaurants, cafés, bars, shops, theatres and cinemas, set in beautiful parkland. Sporting facilities include a swimming pool, gym, studio spaces, climbing wall, athletics track, sports pitches and tennis courts, including an indoor tennis centre.

The recently renovated Students’ Union, the hub of campus social life, caters for all tastes, with regular nightclub events and live bands. The Union runs over 300 societies and clubs from Accounting and Bridge to Drama (WUDS), Music Appreciation and Students in Free Enterprise (SIFE). There is also a very active undergraduate Mathematics Society (WMS) that organises weekly Maths Café drop-in help sessions and produces revision notes at exam time.

While at Warwick you could...

• Join a student society or sports club
• Do a short or summer work placement
• Join Warwick Volunteers and take on the role of Project Leader
• Teach schoolchildren in South Africa (Warwick in Africa)
• Do a summer research project
• Mentor young people through Warwick’s Widening Participation Scheme

I’d definitely encourage anyone coming to Warwick to join a society. Being in a society really helps you meet new people, especially from other courses, and is a great way to take breaks from studying.”

Tom MacDonald, 4th year MMath student
How to apply

Applications are made through UCAS ucas.com

We make offers as soon as we can after your application is received and offer places to those who have or are on track to meet our entry requirements. If you accept our offer and get the required grades in your exams we will confirm your place and look forward to warmly welcoming you at the start of your life here at Warwick.

warwick.ac.uk/study/undergraduate/apply

Overseas Applicants

We welcome applications from international students. Local advice about the application procedure is available from all British Council offices and Warwick representatives.

warwick.ac.uk/study/international

Student fees and funding

We want to ensure that, wherever possible, financial circumstances do not become a barrier to studying at Warwick and therefore we provide extra financial support for qualifying students from lower income families.

For more information about fees and funding for both home/EU and Overseas students see

warwick.ac.uk/study/undergraduate/studentfunding

Visit Us

Open Days

The university organise four open days in early summer and in autumn for students wishing to visit the university, including opportunities to visit the academic departments of your choice.

warwick.ac.uk/opendays

Maths Offer Holder Days

If you receive an offer from us, you will be invited to one of our Maths Offer Holder Days between January and March 2019. These give you a chance to meet members of staff, talk to current students and to get a feel for and ask questions about the course, campus life and the style of mathematics we teach.

warwick.ac.uk/study/undergraduate/apply/offerholders/ohod

Accommodation

Warwick Accommodation has over 6000 rooms across a range of well-managed self-catering residences. We also have an excellent network of support staff in the Residential Life Team.

warwick.ac.uk/accommodation

FIND OUT MORE

This course information was accurate at the time of printing. Our course and module content and schedule is continually reviewed and updated to reflect the latest research expertise at Warwick, so it is therefore very important that you check the website for the latest information before you apply and when you accept an offer.

Mathematics Institute
Zeeman Building
Coventry
CV4 7AL

warwick.ac.uk/mathematics