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So you want to study ...

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The Guardian, Saturday October 11 2008

A [larger](#) | [smaller](#)

You may already know your ordinary differential from your partial differential equation, but taking a postgraduate course in mathematics will take you away from the textbook to a world where you get to explore your own theories and try to figure out your own solutions. Universities are offering a range of courses in the subject, from pure maths to those mixed with finance and the sciences. While a master's might whet your appetite for further study, graduates are likely to be snapped up in a range of jobs, from banking and IT to meteorology and engineering.

What will I study?

Professor Dwight Barkley, director of postgraduate studies, Warwick Mathematics Institute, University of Warwick

At Warwick we offer three different maths-related MSc degrees: a straight maths MSc, an interdisciplinary maths MSc and a financial maths MSc. The overall structure is the same in each case. One takes high-level lecture modules for about six months. In the case of maths and interdisciplinary maths, students choose from a broad range of modules; for financial maths the lecture modules are prescribed. During this same period students also meet with their supervisors and decide dissertation topics and begin significant background study for the dissertation.

Ozgun Toreyen, student, MSc statistics and operational research, University of Essex

I studied combinatorial and non-linear optimisation, graph theory, data mining and statistical modelling. My thesis deals with solving complex optimisation problems using a multi-agent system based on game theory.

Matthew England, graduate, MSc applied mathematics, Heriot-Watt University

The MSc was a combination of eight taught courses, followed by a research project. Each course was examined by both coursework and a final exam. After that we then had to

choose a research topic to work on over the summer. I wrote my master's dissertation on elliptic curve cryptography.

Why study maths?

Barkley Each academic in our department would likely give you a different answer. A postgraduate degree is a means to establishing one's intellectual independence. People choose to do maths degrees because they love mathematics and want to do it professionally. Throughout an undergraduate degree one learns to understand mathematics, while the MSc degree provides the transition from learning mathematics to creating mathematics.

Toreyen I studied a postgraduate degree in maths, more specifically in operational research and statistics, because I believe that these have a critical role in strategical and analytical decision-making.

England I was approaching the end of my undergraduate degree when I decided I wanted to study a master's in maths. I had really enjoyed studying mathematics and I wanted to take it further. I did not want to get into further debt, so I restricted my search for a master's to courses that offered Engineering and Physical Sciences Research Council (EPSRC) funding.

What are the job prospects?

Barkley A major advantage of a maths degree is its versatility. We have had students go to Rover to work on car design or start an electronics company. IT and banking are generally popular destinations. A large number go on to do PhDs either at Warwick or elsewhere.

Toreyen The importance of these subjects arise daily, increasing the necessity for mathematics graduates. I want to work as an operational research and statistics consultant that structures the strategic-level decisions given by government ministries.

England I am now studying for my PhD at Heriot-Watt. I had enjoyed the research aspect, and wanted to continue. After my PhD I will look at both post doctorate positions and jobs in industry that use mathematics.

Can I get funding?

Barkley Not from the government or Warwick. Our director of MSc studies calls it the perfect communist system. Everybody gets the same: nothing.

Toreyen I had a Jean Monnet scholarship [funded by the European Commission] for my studies. It covered my tuition fees and a 12-month stipend.

England Yes, the EPSRC paid for my tuition fees, and provided me with living expenses.

Course links

MSc maths, University of Warwick

warwick.ac.uk

Cost £3,300 full-time, £1,980 part-time.

Duration 1yr f t, 2yrs pt.

MSc in mathematical sciences, University of Essex

essex.ac.uk

Cost £3,500 ft.

Duration 1yr ft.

MSc in applied mathematics, Heriot-Watt University

hw.ac.uk

Cost £3,790 ft, £2,050 pt.

Duration 1yr ft, 2/3 yrs pt.

(Costs for UK/EU students)

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