MSc Pure Mathematics

Study advanced and exciting new concepts at a world-leading university

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Modern research oriented taught course

Study topics in algebra, analysis and number theory

Benefit from expert teaching at a research-led university

Provides solid basis for a research career
Broad topics include algebra, analysis and number theory

Overview

The MSc taught course provides you with a broader and deeper understanding of several core areas of pure mathematics that are of strong current interest. It also provides a solid foundation for a career in research in pure mathematics.

The programme covers a wide range of topics in algebra, analysis and number theory. The course is informed by the research interests of the Pure Mathematics research groups, which include algebraic cobordism, analytic and computational number theory, arithmetic geometry. Other interests include Banach algebras, combinational and geometric group theory, complex analysis, higher class field theories, Milnor K-theory and quadratic forms.

Content

Ranked within the top 10 nationally for research power and research quality the School is one of the largest and strongest mathematics departments in the UK. (Research Excellence Framework, 2014)

During this course you will:
- benefit from expertise founded upon the research interests of the members of the research groups Algebra, Analysis, and Number Theory and Geometry
- develop a broader and deeper understanding of several core areas of pure mathematics that are of strong current interest
- become well prepared to study for a PhD or start a research career
- on graduation, be well prepared for a career in the financial sector, industry or commerce

Structure

This course is taken full-time over one year and is made up of both a taught and research component. The taught component includes modules in analysis, algebra and number theory. The research project allows you to develop your interest and expertise in a specific topic and your skills in writing a full scientific report.

Modules

Modules are mainly delivered via lectures and/or problem classes and take place on University Park Campus during the autumn and spring semesters of the academic year. You must take 120 credits and modules include:
- Advanced Group Theory (20 credits)
- Algebraic Geometry (20 credits)
- Combinational Group Theory (20 credits)
- Complex Analysis (20 credits)
- Foundations of Advanced Analysis (20 credits)
- Further Topics in Analysis (20 credits)
- Higher Number Theory (20 credits)

Dissertation

The dissertation is worth 60 credits and is carried out during the summer. You will concentrate on an independent research project, and on writing a substantial dissertation. The topic will be chosen by agreement between you and your supervisor from a list provided.

Past projects include:
- Swiss Cheeses
- Homotopic Topology
- The Birch and Swinnerton-Dyer Conjecture

Entry requirements

At least an upper second class honours (2:1) BSc degree (or international equivalent) in mathematics, or a closely related subject, with substantial pure mathematics content.

Funding your studies

When looking at how to fund your postgraduate studies, it’s worth taking the time to research your options, as funding is available from a variety of sources.

Find out more at nottingham.ac.uk/pgstudy/funding

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