BUSINESS ANALYTICS
(MSC)

ENTRANCE REQUIREMENTS
Normally a 2.1 Honours degree or equivalent qualification acceptable to the University in any discipline to include one module in a quantitative area. Relevant employment experience in a quantitative area may be considered in lieu of a module in a quantitative area and will be considered on a case-by-case basis.

INTERNATIONAL QUALIFICATIONS
For information on international qualification equivalents, please see: go.qub.ac.uk/YourCountry

ADDITIONAL INFORMATION FOR INTERNATIONAL STUDENTS
International students wishing to apply to Queen's University Belfast (and for whom English is not their first language), must be able to demonstrate their proficiency in English in order to benefit fully from their course of study or research. Non-EEA nationals must also satisfy UK Visas and Immigration (UKVI) immigration requirements for English language for visa purposes.

An IELTS* score of 6.5 with not less than 5.5 in each of the four component elements of listening, reading, speaking and writing taken within the last 2 years.

*Taken within the last 2 years.

For more information on English language requirements for EEA and non-EEA nationals see: go.qub.ac.uk/EnglishLanguageReqs

If you need to improve your English language skills before your study, our partner INTO Queen's University Belfast offers a range of English language courses: www.intohigher.com/qub

FEES AND FUNDING
Northern Ireland (NI): £6,900
England, Scotland or Wales (GB): £6,900
Other (Non-UK/EU): £6,900
International: £19,900

For fees and funding information please see:
Fees: qub.ac.uk/TuitionFees
Funding: go.qub.ac.uk/qubpgfunding

DURATION
1 year full-time

TEACHING METHODS
Tools and techniques learned in the classroom context will be used to address real-life business problems. This will involve a mix of teaching methods to enable students to build the technical and business expertise required for a successful career in analytics. Modules will be taught in mornings and afternoons.

OVERVIEW

The increase in the volume, variety, and velocity of data creates opportunities for businesses to improve decision-making and develop new data-driven products and services. MSc Business Analytics has been developed to meet the demand for qualified professionals, who possess the necessary expertise to realise end-to-end business analytics solutions and are equipped to utilise data for business decision-making purposes.

The programme is built around the three core areas needed to succeed in analytics: business knowledge, statistics, and computing. This includes modules focusing on the application of analytics in core business functions such as marketing and human resources, modules focusing on developing and applying technical skills such as advanced analytics and machine learning, data management, and data-driven decision-making. In total, students will study eight modules in addition to pre-course training and a final dissertation project. The dissertation project will involve the application of the business, technical, and statistical skills learnt during the taught modules.

The programme will include an intensive induction course, where pre-course training in key statistics and computer skills will ensure students from a range of backgrounds have the necessary skills to undertake the course.

CONTENT

Semester 1 (CATS)
- Statistics for Business (15) *Understanding descriptive and inferential statistics using the R programming language.*
- Data Management (15) *Explores the theory and practice of managing data, including identifying and extracting data, data pre processing, data quality, data warehousing, relational databases, and big data solutions.*
- Human Resources Analytics (15) *Consider the practical use of data in HRM, through applications such as monitoring and evaluating employee activity and performance, predicting future performance and predicting employee attrition.*
- Operations Management (15) *Topics include operations strategy, process design and analysis, capacity management, quality management, lean management, inventory management and supply chain management.*

Semester 2 (CATS)
- Advanced Analytics and Machine Learning (15) *Builds on the skills developed in the statistics module in terms of both programming and more advanced statistical techniques, namely the application of machine learning algorithms.*
- Data-driven Decision-making (15) *Focuses on gaining business insights from the effective management and analysis of data, data visualisation and storytelling, and prescriptive analytics techniques.*
- Artificial Intelligence in Business and Society (15) *Builds a deeper understanding of the wider implications of AI, and how students can contribute to responsible development and use of AI in their future career.*
- Marketing Analytics (15) *Using SAS or SPSS software to analyse data for marketing-related decision-making and evaluative purposes.*

Summer Semester
- Dissertation (60 CAT points)

Modules are subject to change.

ASSESSMENT

Assessments will focus on both theory and practical application of business analytics, including the use of data to gain business insights, the development of analytics solutions, essays and group work. It is anticipated that students will have approximately 30 hours direct academic contact time (drawing on methods outlined above) per module. In addition to the direct teaching hours per module, each student will normally be expected to spend approximately 120 hours on individual study time, plus time for assessment completion per module.

CAREERS

The MSc Business Analytics will appeal to students who intend to pursue a career in a business analytics related field, such as data science, business intelligence, consultancy, informatics, or decision intelligence. The programme is aimed at graduates from a range of backgrounds, particularly students who have taken undergraduate degrees in areas from outside maths and computer science domains. Those with undergraduate degrees stemming from a diversity of backgrounds are welcomed. This could include areas such as business and management, accounting, finance, social sciences, psychology, and geography.

WHY QUEEN'S?

Industry Links
Developed by staff with industry and academic backgrounds, the course is tailored towards the key skills required to succeed in a business analytics role.

Career Development
Industry reports show a global shortage for data scientists. Students will learn to use cutting edge and industry standard tools and techniques to enable career development.

World-class Facilities
The MSc Business Analytics is taught in the landscaped setting of Riddel Hall which features excellent facilities, including a dedicated computer lab with the latest analytics software.

Student Experience
Students will learn how to use state-of-the-art, industry standard software over the duration of the programme. This includes software such as R, SAS, KNIME, and Tableau.

Professional Teaching
With a background in industry and academia, Dr Graham specialises in helping businesses to gain benefits from the effective use of data for decision-making and new products and processes. Dr Graham has industry experience in a major healthcare trust, where he specialised in healthcare informatics. He has also worked in data science consultancy for a Big Four firm. Dr Graham has industry expertise in data science across multiple sectors including healthcare, the legal industry, financial services, and retail. His current research focuses on the application of machine learning and other data science approaches to solve business problems.

Queen's Management School is committed to the continuous improvement and enhancement of all of its degree programmes. New modules may be developed and included to replace or enhance those which are mentioned here.

"With the explosion of information and the global shortage in analytics professionals with the skills needed to turn data into business value, the MSc Business Analytics programme is aimed at graduates who aspire to work in this cutting edge industry. The course has been developed to bridge the gap between analytics and business, and includes the latest topics from across core business and analytics areas. Students who successfully complete the programme will graduate with the technical, statistical, and business skills needed to succeed as an analytics professional."

Dr Byron Graham,
Programme Director

APPLY NOW
go.qub.ac.uk/pgapply

CONTACT
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