

UNIVERSITY of STIRLING
**Management
School**



REDEFINE

**WITH A
MASTERS**

MSc DATA SCIENCE FOR BUSINESS

REDEFINE AT STIRLING

WHY AN MSc DATA SCIENCE FOR BUSINESS?

This course addresses the shortage of business leaders and managers with a detailed working knowledge of data analytics. It provides students with a deep understanding of the industrial and scientific relevance of advanced analytics and their application in strategic and operational decision making. It develops graduates with a highly sought after blend of data analytics, business acumen and advanced management skills.

The MSc Data Science for Business is the first in Scotland to be run in partnership with SAS, a global leader in business analytic solutions. It has also been developed in close collaboration with The Data Lab, to produce graduates with the skills that industry needs.

The course gives you the opportunity to develop specialist skills by choosing elective modules from finance, marketing, data science and management. You'll work on real life consultancy-style projects alongside industry leaders in data analytics. Our extensive network of external organisations across all sectors provides opportunities to build your knowledge, skills and experience for a successful career in business analytic roles.

SAS PARTNERSHIP

Our partnership with SAS provides students with access to SAS educational software, plus the opportunity for engaging in projects with an industry leader in the field of business analytics. Global organisations from all sectors use SAS to support strategic decision making. We're confident that this partnership will make students stand out in their chosen career path.

THE DATA LAB

We work closely with The Data Lab, an internationally leading research and innovation centre in data science. Established with an £11.3 million grant from the Scottish Funding Council, The Data Lab will enable industry, public sector and world-class university researchers to innovate and develop new data science capabilities in a collaborative environment. Our students will benefit from a wide range of learning and networking events that connect leading organisations seeking business analytics skills with students looking for exciting opportunities in this field: thedatalab.com





WHY STUDY AT STIRLING?

1

Stirling's global research rating

we're among the top 25 in the UK according to REF 2014

2

Wide-ranging expertise

the course has been developed in close collaboration with key business and research partners across the private and public sectors. It has been endorsed by The Data Lab, Scotland's leading Data Science Innovation Centre. It aims to enable industry, public sector and researchers to innovate and develop new data science capabilities in a collaborative environment

3

Flexible course structure

the flexible design of the degree course means you can specialise in finance, marketing, data science and management

4

Build your global network

study alongside international students across a range of business disciplines

5

Professional development for long-term success

our Flying Start Leadership Programme helps you develop self-awareness about your strengths and acquire new competencies in a supportive environment



COURSE STRUCTURE AND CONTENT

This course is a one-year, full-time course. Its aim is to develop graduates with a highly sought after blend of data analytics, business acumen and advanced management skills. Through a series of core modules, you will acquire the knowledge, skills and experience for a successful career in data analytic roles. You will also develop an understanding of the ways data analytics is used in organisations across different sectors. This will be achieved through data analytics theory and practice, with many opportunities to work with real data sets. You will also have the opportunity to work with industry partners, through consultancy projects, as well as bringing their expertise into the classroom.

Over the two semesters, you will:

- Acquire knowledge, skills and experience for a successful career in data driven roles
- Understand the applications and implications of data analytics in organisations across different sectors
- Develop knowledge and skills of data analytics tools and techniques for business decision making
- Enhance your capabilities and confidence for championing data analytic projects
- Enhance and develop critical, analytical, interpersonal and other transferable skills

Course modules

Semester one involves four compulsory modules. There are two compulsory modules in semester two, plus a choice of six elective modules. Following semester two, to be awarded your Masters degree, you'll complete a dissertation or consultancy project which includes the use of research methods.

Semester One Compulsory Modules:

- Representing and Manipulating Data
- Business Analytics
- Statistics in R
- Personal and Professional Development

Semester Two Compulsory Modules

- Business Consulting Group Project
- Data Analytics

Semester Two Elective Modules (20 credits):

- Relational and non-Relational Databases (20 credits);
- Risk Management in Banking (20 credits);
- Mobile Financial Applications (20 credits);
- Project Management (10 credits);
- Strategic Management (10 credits);
- Innovation Management (10 credits).

Learn more about the course modules: stir.ac.uk/17r

Final Project

For your major project you will have the opportunity to choose between a research-based dissertation and a consultancy project. If you choose to do a consultancy project you will be working in partnership with an external organisation on a live data analytics project. Students funded by The Data Lab will be paid to carry out this consultancy project, with a salary equivalent to those paid for industry placements.

Teaching and assessment

The one-year MSc course is delivered via a mix of lectures, tutorials, case studies, role playing, computer simulations, fieldwork exercises, site visits, guest speakers and company projects. Much of the assessment is continuous. Assessed work is often conducted in groups, developing your teamwork and communication skills.

During the spring and summer semesters you will carry out a consultancy project with an external organisation tackling a critical business challenge. This will give you an opportunity to integrate and apply the knowledge and skills you develop throughout your degree.

OTHER LEARNING ACTIVITIES TO PREPARE YOU FOR STUDY IN THE UK

Prepare for Success is an interactive web learning tool for international students who are coming to the UK to study.
prepareforsuccess.org.uk



The course was developed with the aim of producing data savvy managers with skills that meet industry needs. It has strong emphasis on the practical application of data analytics and offer students opportunities to work on real life projects with businesses across different sectors.

DR NAJIB MURAD

Course Director



Find out more about the course:
stir.ac.uk/17r

COURSE DIRECTOR

Dr Najib Murad is also a lecturer in Business and Management at the Stirling Management School. Najib's specialism are in innovation; enterprise and stakeholders engagement. His teaching of management subjects include Innovation; Analytics; Enterprise; and Operations. He has extensive experience developing and managing programmes at undergraduate; postgraduate and executive education level.

Najib is a Fellow of the Higher Education Academy. His research interests focus on a broad area of business and management including entrepreneurship; strategy; and development of novel technology particularly life sciences and energy. He is especially interested in the way ethical stance and beliefs systems influence innovation; development of technology; start-ups; and vice versa.



CAREERS AND EMPLOYABILITY

Demand for people with data analytic skills is projected to grow rapidly. Average salaries are higher than the IT average and the skills shortage will make that gap bigger. The Stirling MSc Data Science for Business is run in partnership with industry and is designed to produce graduates with the skills that companies need.

The Tech Partnership UK estimate that:

- By 2020 there will be 56,000 data analytics jobs in the UK alone
- Big data professionals earn on average 31% more than other IT professionals
- 77% of companies say it is difficult to recruit people with the big data skills they need

A 2014 report by Egon Zehnder and the Kellogg School of Management states that “all leaders need a working knowledge of data science” and that “there is no lack of data scientist, rather a lack of data-ready managers”. This is the specific issue that the course is going to address.

There is a clear need for high quality graduates with a blend of skills in data analytics and business management. This MSc will develop graduates with necessary specialist knowledge, technical skills and experience for a successful career in roles requiring data driven decision making across a range of sectors.

This course combines the latest theories with their application in real organisations and brings together two areas of expertise within the University – big data analytics (Computing Science and Mathematics, Faculty of Natural Sciences) and management and leadership (Stirling Management School).

The course has a high level of engagement with industry, research and recruitment partners in the course design, delivery, project work and skill development activities. You will have the opportunity to gain first hand practical experience by working on consultancy style projects with external clients, building your network of contacts and employability skills.

PREPARING BUSINESS LEADERS OF THE FUTURE

Postgraduate education at the University of Stirling Management School goes beyond text books and lecture rooms by also focusing on personal and professional development.

Our unique Flying Start Leadership Programme, at the beginning of the academic year, equips students with the awareness, knowledge and techniques essential for building a successful career. These range from practical skills, like effective public speaking, to developing ways to work under pressure in difficult situations and manage conflict.



FEES, FUNDING AND SCHOLARSHIPS

Fees are reviewed each year and you can pay in full before the course starts in which case you may be eligible for a discount, or by instalments. More on course fees, payment options and scholarships funded by Stirling Management School, the University and external organisations may be found at: stir.ac.uk/2cp

STIRLING MANAGEMENT SCHOOL POSTGRADUATE SCHOLARSHIPS

Stirling Management School is committed to investing in academically talented students, helping them to further their education with one of our degree courses. There are various categories of funding available to support the cost of your studies. More on postgraduate scholarships: stir.ac.uk/c8

SCHOLARSHIPS

There are a number of scholarships available to support your studies. These include:

The Data Lab scholarships – for Home/EU students

OTHER SCHOLARSHIPS AND FUNDING

Information about scholarships and funding may be found at: stir.ac.uk/1j5

POSTGRADUATE TUITION FEE LOAN

This course is currently approved for PTFL (Postgraduate Tuition Fee Loan) funding from SAAS: stir.ac.uk/1b9

COST OF LIVING

Find out about the cost of living for students at Stirling: stir.ac.uk/1b8



ENTRY REQUIREMENTS

You'll need a minimum of a second class Honours degree in any subject, or an equivalent qualification. However, you can still apply if you don't have these formal qualifications, but bring significant work experience in a relevant area.

For details of English language requirements for this course, visit: stir.ac.uk/3f

CONTACT INFORMATION

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stir.ac.uk/management

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Photography: For a list of photographers who have contributed to the University of Stirling photo library, contact: marketingtools@stir.ac.uk

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