

Harness the power of big data with the Master of Data Science.

With a mix of analytics and computer science you'll be central to business decision-making, corporate strategy and government planning.

We live in a data-driven world that's generating huge volumes of information at ever-increasing rates, via social media, financial transactions, telecommunications, and even scientific discovery.

Handling this "big data" is consequently a top priority for all of us, whether you're in business, industry, government, or even individually, as citizens and consumers.

The emerging interdisciplinary field of data science combines areas of computer science with mathematical statistics and domain expertise to manage and analyse this data.

Though incorporating statistical methods, data science puts a greater emphasis on the specialised computational skills required to manage and analyse big data from sources such as social media, sensors, mobile and transaction data.

Data scientists develop the capability to derive insight and opportunity from the vast repositories of data that many organisations collect.

They help organisations in all sectors of the economy to make sense of these very large volumes of data; enabling businesses to gain a competitive edge, governments to deliver more targeted services, and research teams make new discoveries.

Career outlook

Organisations in all sectors of the economy – IT sector, business sector, science and engineering, government, medical – can gain a competitive edge by better managing and analysing their data. As data science is still a new and emerging field, the roles available for data scientists are quite varied and diverse.

As well as the title of data scientist, other positions include: analytics specialist, business intelligence analyst/developer, data analyst, data architect, data engineer, data miner, research scientist and web analyst.

Learning and teaching

RMIT is committed to providing students with an education that strongly links formal learning with workplace experience.

You will learn through a broad mix of study modes including lectures, tutorials, practical classes, project work and seminars using face-to-face and other flexible delivery mechanisms.

Professional recognition

Students and graduates can join the Institute of Analytics Professionals of Australia (IAPA). IAPA is the professional organisation for the analytics industry in Australia, incorporating business analytics and data mining across multiple disciplines and sectors.

Industry connections

The program has substantial links with the data science profession and related areas of industry, both within Australia and internationally.

The courses are taught by academics with strong research backgrounds and links to industry, as well as sessional teachers and guest lecturers currently working in the industry.

Employers and industry professionals with data science expertise are members of our Industry Advisory Committee and have contributed to the initial development and ongoing improvement of the program.

Their involvement ensures that the program remains relevant to your needs as a graduate and the needs of graduate employers.

Academics teaching in the program are also involved with RMIT Data Analytics Lab, which is a hub for advanced data analytics projects, supporting researchers and helping Australian and Victorian businesses compete on a global scale.

Originally launched as a joint initiative between RMIT University and National ICT Australia (NICTA) – now Data61 – the lab applies text, user and data analytics research to industry-driven projects that solve problems and provide efficiencies in key areas including health, logistics, smart cities, environment and security.

Program snapshot

Program code: MC267

Exit points

After completing 96 credit points of study approved by the program manager, you may exit with a Graduate Diploma in Data Science.

Duration

Full-time: 2 years
Part-time: 4 years

Location

City campus

Program Manager

Dr Zhifeng Bao
Tel. +61 3 9925 1940
Email: zhifeng.bao@rmit.edu.au

How to apply

Direct to RMIT University:
rmit.edu.au/programs/apply/direct

Fees

2018 indicative fees

■ Full fee: \$AU25,950 per annum

For more information and to learn how to calculate your exact tuition fees see:
rmit.edu.au/programs/fees/postgraduate

rmit.edu.au/programs/mc267

Program structure

The first year of the program develops a solid foundation in computer science and statistics – core skills necessary for every data scientist in their professional work.

Students with an undergraduate background in either of these areas may gain some advanced standing, whereas students from other disciplines will first complete the introductory courses needed to prepare them for studying the advanced core courses and electives in the second year.

The second year also includes a major project, which can be working on an industry or research project while based on campus, or off campus as an internship working as a data scientist in industry.

The real-world focus of this program provides an excellent networking environment that can lead to internship and industry-led project opportunities.

Building a familiarity with statistical techniques and tools, you'll develop the technical and analytical skills essential to managing large data sets and making sense of them.

Faced with complex collections of data you'll be able to solve problems through in-depth analysis and evaluation.

Data scientists are often dealing with highly sensitive personal data, so it is imperative that before working on industry projects (for example, as an intern) students undertake case studies with input from industry-based data scientists, looking at the legal, ethical and policy issues in data science.

Program elective examples

- Algorithms and Analysis
- Analysis of Categorical Data
- Applied Bayesian Statistics
- Big Data Management
- Data Mining
- Database Systems
- Forecasting
- Knowledge and Data Warehousing
- Information Retrieval
- Machine Learning
- Mathematical Modelling and Decision Making
- Multivariate Analysis Techniques
- Regression Analysis
- Social Media and Networks Analytics
- Time Series Analysis

Year 1	Practical Data Science	Programming Fundamentals	Database Concepts	Introduction to Statistics
	Data Preprocessing	Advanced Programming	Data Visualisation	Legal, Ethical and Policy Issues in Data Science
Year 2	Program option courses	Program option courses	Program option courses	Program option courses
	Data Science Postgraduate Project		Big Data Processing	Program option courses

 Compulsory courses  Program option courses

Please note: This is an example of the program structure and program option courses. Courses may change and may not be available each semester.

Credit and exemptions

Students who have successfully completed BP094 Bachelor of Computer Science or BP096 Bachelor of Software Engineering degree from RMIT University will be granted 48 credit points of advanced standing (in particular, exemptions will normally be granted for Database Concepts, Programming Fundamentals, Advanced Programming, and Algorithms and Analysis). For all other students, advanced standing and exemptions will be determined on a case-by-case basis.

Entry requirements

You must have one of the following:

- An Australian bachelor degree or equivalent from a recognised tertiary institution with a minimum credit average that equates to a grade point average (GPA) of 2.0 out of 4.0 in computing, science, engineering or health.

OR

- An Australian bachelor degree or equivalent from a recognised tertiary institution with a grade point average (GPA) of at least 2.0 out of 4.0 (equivalent to at least a credit average), where the title does not specify the specialisation (e.g. Bachelor of Arts). In this case relevant completed courses in programming and statistics in an undergraduate or postgraduate degree, or, at least three years' relevant work experience in programming and statistics will be considered on a case-by-case basis.

International qualifications are assessed according to the Australian Qualifications Framework (AQF).

This information is designed for Australian and New Zealand citizens and permanent residents of Australia.

Disclaimer: Every effort has been made to ensure the information contained in this publication is accurate and current at the date of printing. For the most up-to-date information, please refer to the RMIT University website before lodging your application. Visit www.rmit.edu.au. RMIT University CRICOS Provider Code: 00122A. RMIT Registered Training Organisation code: 3046. Prepared August 2017. 14673 0817