

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

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

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, business, 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

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.

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  
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### How to apply

Direct to RMIT University:  
[rmit.edu.au/programs/apply/direct](http://rmit.edu.au/programs/apply/direct)

### Fees

To learn how to calculate your fees visit:  
[rmit.edu.au/programs/fees/postgraduate](http://rmit.edu.au/programs/fees/postgraduate)

[rmit.edu.au/programs/mc267](http://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.

You will learn to build a familiarity with statistical techniques and tools, and develop the technical and analytical skills essential to managing large data sets and making sense of them.

The second year 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.

### 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	Case Studies in Data Science
Year 2	Big Data Processing	Program option courses	Program option courses	Program option courses
	Data Science Postgraduate Project		Program option courses	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 of 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](http://www.rmit.edu.au). RMIT University CRICOS Provider Code: 00122A. RMIT Registered Training Organisation code: 3046. (14672 0817) Revised October 2018.