

Master of Data Science

swinburne.edu.au/international

The Master of Data Science is designed for students who wish to extend their knowledge in computer science and data analytics with broader data science practices to gain meaningful insights from the data coming from a variety of sources such as science, business and governments by developing skills and experience of using contemporary techniques and tools to manage, analyse and explore data, allowing them to work at the forefront of data science.

The course focuses on the practical aspects of data science, covering the entire life cycle of real-world data-to-discovery or data-to-decision tasks including data collection, management, cleaning, wrangling, analysis and visualisation, as well as the ethical and legal knowledge needed to work as a data science professional.

The course features three industry-supported project-based learning units, one inclusive and Participatory design unit, and aligns closely with the activities of Swinburne Data Science Research Institute to prepare students for best practices within the industry.

Course snapshot

Duration	Two years full-time
Campus	Hawthorn (Melbourne)
Fees	A\$34,000*
Intakes	March, August

*Fees displayed are relevant to 2019 and are subject to annual review. Fees are based on a student's study load in each semester. Please see website for more.

Entry requirements

- A Bachelor degree in a STEM (Science, Technology, Engineering or Mathematics) discipline, or
- A non-STEM Bachelor degree plus three-year industry experience in data analytics, databases, software development or related fields, or
- Successful complete of the Graduate Certificate of Data Science
- English language proficiency (please see website for details)

Scholarship opportunities

Scholarships of up to 25 per cent off tuition fees are available for selected students who apply for and begin this two-year master by coursework program. For more on scholarships, visit swinburne.edu.au/international/scholarships

Why Swinburne?

A world-ranked university in Melbourne, Australia, Swinburne is focused on creating careers. Upon graduation, our students are career-ready professionals who regularly find employment with the world's best companies, including PricewaterhouseCoopers, IBM, Siemens, Mercedes-Benz and more. Swinburne is proud to be recognised as one of the world's top universities under 50 years, ranked number 45 in the 2019 QS Top 50 Under 50.

Situated in Hawthorn, just ten minutes by train from Melbourne's city centre, Swinburne boasts shops, cafes and a train station right on its doorstep. With high-quality teaching and research, state-of-the-art facilities, student accommodation options and a range of support services, Swinburne is the ideal choice for students.

Industry connections

For over 50 years, Swinburne University of Technology has been partnering with leading organisations to offer students practical learning and authentic workplace experiences. Our postgraduate programs are co-designed with industry, and many of our students undertake industry-linked projects or projects with their own employers as part of their studies.



We are really proud of this course. At Swinburne we pride ourselves on producing employment ready graduates with a great depth of understanding. Data science is the emerging new academic interdisciplinary which marries the physical sciences with statistics and computer science; arguably, data science is a major disruptor in all industries. In this course we offer opportunities to learn about the impact, principles and the practicability of data science in a data-driven society. We give students project work so that they can pursue a deep understanding in areas of particular interest to them. We have great facilities, enthusiastic capable teachers and strong links with industry. We believe this course will produce graduates with the depth and breadth to build a successful career in data science and be the future disruptors of the digital economy.

Professor Timos Sellis, FIEEE, FACM
Director of Swinburne Data Science Research Institute

Course overview

You must complete units of study as follows:

- 10 core academic units (as below)
- 3 core project-based learning units (as below)
- 1 or 2 elective units

Core Academic Units

- Introduction to Data Science
- Data Management for the Big Data Age
- Statistical Practice 2
- Introduction to Programming
- Inclusive and Participatory Design
- Data Visualisation
- Multivariate Statistics
- Advanced Data Mining
- Big Data
- Machine Learning

Core Project-Based Learning Units

- Data Science Project 1
- Data Science Project 2
- Data Science Capstone Project

Elective Units

- Object-Oriented Programming
- Minor Thesis
- Internship Project
- Forecasting
- Advanced Statistical Modelling
- Statistical Decision Making

Career outcomes

Data Science is a fast-growing area both in Australia and internationally, creating significantly strong demand for qualified people in this field of study. Within Australia, there are a number of jobs available to those who have a Data Science background.

The Master of Data Science at Swinburne is a unique course that offers a multi-disciplinary, industry-focused degree which prepares graduates for a career across the entire data-to-discovery or data-to-decision lifecycle, e.g., Data Science Developer, Data Scientist, Data Engineer, Data/Statistical Analyst, Data Modeller/Architect, Machine Learning Engineer, and Big Data Engineer.



How to apply

Visit our website for step-by-step application instructions:
www.swinburne.edu.au/international/apply/

More information

+61 3 9214 8444 (outside Australia)
1300 275 794 (within Australia)
international@swinburne.edu.au
swinburne.edu.au/it

The information contained in this flyer was correct at the time of publication, September 2018. The university reserves the right to alter or amend the material contained in this flyer. For the most up-to-date course information, please visit our website.