Statistics is the mathematical science of collecting and analysing data to draw conclusions and make predictions.

Statisticians contribute to scientific enquiry by applying their technical knowledge to the design of surveys and experiments; the collection, processing, and analysis of data; and the interpretation of the results.

If you choose to study statistics at RMIT, you’ll learn to use a number of industry-relevant computer packages and gain the skills and knowledge to apply statistics to a broad range of industries.

Statisticians apply problem-solving and data analysis skills to fields including:

- banking and finance (maximising profit and minimising risk)
- medical research (treatment and drug efficacy)
- environmental modelling (resources, biodiversity, weather and climate)
- marketing (market segmentation and clustering).

A wide variety of companies rely on statistics for reporting, data modelling and forecasting operational results.

This program - one of the only stand-alone statistics programs offered in Australia - is highly regarded for its industry engagement and employment focus.

RMIT statistics graduates are prized for their hands-on IT literacy, problem-solving skills and exposure to real-world statistical problems throughout their studies.

Statisticians must know more than statistics. A statistician who works in medicine or in a manufacturing plant or in market research must learn enough about medicine or engineering or marketing to understand the data in their setting.

Statisticians need the ability to work with other people, to listen, and to communicate.

Industry connections

During third year you’ll undertake a project that’s linked to industry and the real problems you’ll face in the workforce.

Students have worked on industry projects in organisations including VicRoads, Victorian Institute of Sport (Melbourne Vixens), Badminton Australia, Bureau of Meteorology, Australian Bureau of Statistics, National Australia Bank, Dairy Innovation Australia, Deloitte Australia, Florey Institute of Neuroscience and Mental Health, Crown Melbourne Limited, Red Cross Blood Bank, The Smith Family, and Biarri Commercial Mathematics, to name just a few.

International opportunities

You can do one or more semesters at an overseas institution through Education Abroad at more than 120 partner universities.

Career outlook

More and more professions, from the everyday to the exotic, depend on data and numerical reasoning.

There is a chronic undersupply of statistics graduates currently, and the Australian Government forecasts a 33% growth in demand for statisticians over the next three years. In other words there has never been a better time to study statistics.

Graduates work in sports statistics at the Australian Institute of Sport and the Australian Football League and public service for organisations like Australian Security Intelligence Organisation, Australian Bureau of Statistics, Bureau of Meteorology and Australia Post. They also enter many banking and finance careers.

Professional recognition

Graduates are eligible to apply for graduate membership of the Statistical Society of Australia and graduate membership of the Australian Society for Operations Research.

www.rmit.edu.au/programs/bp245
Program structure

You’ll undertake core studies in applied statistics, together with several courses from one of three specialisations:

1. environmental modelling
2. finance
3. marketing.

Every year you’ll do a work-integrated learning course typically involving working in a team on a real-life industry problem.

You’ll study the basics of calculus, statistics, discrete mathematics, mathematical programming and professional practice.

Year 2 and 3
You’ll learn about the mathematical foundations of statistics together with the numerous areas of application. It is at this stage that you choose your specialisation.

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<td>1</td>
<td>Calculus and Analysis 1</td>
<td>Introduction to Probability and Statistics</td>
<td>Mathematical Computing</td>
<td>Discrete Mathematics</td>
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<td>Problem Solving and Algorithms</td>
<td>Calculus and Analysis 2</td>
<td>Basic Statistical Methodologies</td>
<td>Data Preparation for Analytics</td>
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<td>2</td>
<td>Linear Algebra and Vector Calculus</td>
<td>Industrial Applications of Mathematics and Statistics 1</td>
<td>Linear Models and Design of Experiments</td>
<td>Statistical Inference</td>
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<td>3</td>
<td>Multivariate Analysis</td>
<td>Industrial Applications of Mathematics and Statistics 2</td>
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<td>Program elective group B</td>
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Entrance requirements
Successful completion of an Australian Year 12 senior secondary certificate of education or equivalent.

Prerequisites
Units 3 and 4 – a study score of at least 20 in one of Mathematical Methods (CAS) or Specialist Mathematics; and a study score of at least 30 in English (ESL) or at least 25 in any other English.

Selection tasks
None

Additional information
Form: Non-Year 12 applicants may submit additional information if they would like it to be considered. For semester 1 intake, this can be completed through the VTAC Personal Statement online. For semester 2 intake, this can be completed through the personal statement in the Apply Direct application.