

Bachelor of Engineering (Chemical Engineering)(Honours)/ Bachelor of Business (Management)

2019

Undergraduate

Chemical engineering science, practice, and design are combined with core management principles to give you the ability to work at all levels of industry.

Many engineers quickly move into positions of management within organisations. This double degree will give you an advantage, allowing you to advance into positions of responsibility and influence. A business degree will prepare you to operate in a complex financial system - something often associated with large engineering projects.

The focus of this program is on industrial application, so fundamental engineering and management courses are linked to real situations.

Your chemical engineering studies will cover the application of chemical, physics and biological sciences and technology for the improvement of industrial processes.

You'll learn how to make the processing industries work more efficiently and minimise their environmental impact by using less energy and producing less waste.

Management studies will provide a thorough core of knowledge related to the roles and functions of business management. Managers deal with a range of complex issues, including wider economic and social factors.

Industry connections

There are opportunities for you to spend a week in a process industry in third year and learn about the roles of chemical engineers.

In the final year of your studies you'll undertake a major project that is either industry-based or simulates an industrial situation. Combining and further developing the key theoretical and practical knowledge necessary for your field - as defined by Engineers Australia - you'll work with industry leaders to solve a project challenge.

Before graduating from this program, you are strongly encouraged to complete a minimum 12 weeks of engineering industry experience. This allows you to gain first-hand experience in an engineering practice environment under the supervision of a practising professional engineer. The nature and timing of this engineering experience can take a range of forms.

Opportunities exist for an overseas work placement of between six and 12 months. These placements are normally taken during a one-year break in the middle or at the end of the third year of the degree.

Career outlook

Your degree will be recognised around the world, and many Australian companies provide the opportunity for engineers to travel. In Australia, the major areas of employment are in chemical, petroleum and petrochemicals; the

food industry; water; environmental management and pollution control; mining; plastics/polymers; biomaterials and diagnostic agents; pharmaceuticals and vaccines; cosmetics; electricity and gas; and project design and consulting.

A chemical engineering graduate can work in areas from process and project engineering to marketing or research.

Graduates have gone on to work at a range of organisations including: BP, Cadbury, Cryovac, CSL, CUB and ExxonMobil.

Professional recognition

This program is fully accredited by Engineers Australia. Graduates of the program are eligible for graduate membership of Engineers Australia. Full membership as a professional engineer may be obtained after an appropriate period of professional practice.

Australia is one of 15 countries that are signatories to the International Engineering Alliance, also known as the Washington Accord, for professional engineers. The qualification of graduates from this degree is recognised in all countries that are signatories to the Accord.

The Institution of Chemical Engineers (IChemE), based in the UK, is the primary international professional society for the chemical engineer. The double degree is accredited by IChemE, UK, at the MEng level.

You may also be able to obtain professional membership of the Australian Human Resources Institute (AHRI) or CPA Australia by selecting appropriate minor studies.

Program snapshot

Program code: BH085

Duration

Full-time: 5 years

Location

City Campus

Selection mode

ATAR (2018: 83.30)

How to apply

Semester 1: VTAC
vtac.edu.au

Semester 2: Direct to RMIT
rmit.edu.au/programs/apply/direct

Fees

For local fee information:
rmit.edu.au/programs/fees

Contact

Info Corner
330 Swanston Street
(cnr La Trobe Street)
Melbourne VIC 3000
Tel. +61 3 9925 2260

rmit.edu.au/programs/bh085

Program structure

Year 1

During your first year your skills in chemistry and mathematics are furthered. You are introduced to the fundamentals of chemical engineering (mass and energy balance) and the design of chemical processes.

All engineering students will also study an Introduction to Engineering course, incorporating a humanitarian-focused Engineers Without Borders (EWB) Challenge. You'll have the opportunity to extend this aspect of your studies by completing an EWB elective, enabling you to experience humanitarian engineering first-hand.

Year 2

You will develop your knowledge of core chemical engineering areas such as fluid flow, reaction engineering, biochemical engineering, thermodynamics, and heat transfer.

You'll also complete a work-integrated learning (industry experience) elective in Year 2, 4 or 5.

Year 3

You'll focus on business studies and be introduced to core business concepts and analysis skills, which you build on in the areas of human resources and employment relations, ethics and governance, international business, entrepreneurship, logistics and supply chain management and marketing.

Year 4

You'll hone your skills in environmental, safety and economic analysis of processes, design of process equipment, and control schemes.

Your core chemical engineering skills are consolidated and applied in a major process design project.

Year 5

Your final year (capstone) project will develop and reinforce the skills and knowledge you need - as defined by Engineers Australia - to commence your professional engineering career. You'll specialise in selected areas of engineering to include environmental, metallurgical and/or corrosion engineering.

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| Year 1 | Chemistry of Materials 1 | Introduction to Professional Engineering Practice | Engineering Mathematics B | Chemical Engineering Fundamentals | |
| | Chemistry of Materials 2 | Chemical Engineering Design | Introduction to Management | Mathematics and Statics | Accounting in Organisations and Society |
| Year 2 | Fluid Flow and Particle Mechanics | Process Thermodynamics | Mathematics for Engineers | Marketing Principles | |
| | Numerical Methods/ Statistics for Engineers | Heat and Mass Transfer | Reaction Engineering | Macroeconomics 1 | Prices and Markets |
| Year 3 | Process Principles | Leading for Change | Work in Global Society | Ethics and Governance | |
| | Commercial Law | Organisational Behaviour | Occupational Health and Safety Management | University elective | |
| Year 4 | Engineering Experimental Investigations | Transfer Processes | Environmental and Hazard Analysis | Management in Practice | |
| | Process Systems Design | Process Plant Design and Economics | Process Control and Simulation | Chemical Engineering Computer Design | |
| Year 5 | Engineering Capstone Project Part A | Contemporary Management: Issues and Challenges | Research Project | University elective | |
| | Engineering Capstone Project Part B | Engineering elective | Engineering elective | Business elective | |

Compulsory courses
 Program electives
 University electives

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