Combining in-depth studies in chemistry, analytical sciences and chemical engineering, this program will put you at the forefront of developing new technologies that could change the world.

You’ll have the science and engineering skills to work on the development of new products from the initial laboratory stage through to large-scale production.

The program covers the application of chemical, physics and biological sciences and technology for the design and 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 reducing waste.

Your studies in chemistry will involve hands-on experience, combined with a theoretical understanding of analytical, instrumental, organic, inorganic and physical chemistry. While your chemical engineering studies will bring together engineering science with engineering practice and design, providing a practical and vocational focus.

**Industry connections**

In order to graduate you must 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.

Opportunities exist for an overseas work placement of between six and 12 months (this satisfies the engineering industry experience requirement). These placements are normally taken during a break in the middle, or at the end of the third year of the degree.

In your final year, you will complete two major projects that are either industry-based or simulate an industrial situation. You will work with industry leaders using the theory and practical experience gained through the program to solve a problem.

Field trips throughout the program will allow you to see first-hand how the industry works. Industry experts also guest lecture throughout the program.

**Career outlook**

Graduates find work in industries such as

- pharmaceuticals: medicines, vitamins, drugs, antibiotics, sunscreens, painkillers
- polymers: paints and plastics.

Graduates can also work in the process design sector, developing production processes from lab to large-scale. They are well placed to take leadership roles in the development and commercialisation of new chemical products.

**Professional recognition**

This program is fully accredited by Engineers Australia. Graduates of the program are eligible for graduate membership of Engineers Australia.

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.

Graduates are also eligible for graduate membership of the Institution of Chemical Engineers (IChemE), UK. IChemE is the primary international professional society for the chemical engineer. The program is accredited by IChemE (UK) at the BEng level.

This program is also recognised by the Royal Australian Chemical Institute.

**International opportunities**

RMIT partners with over 150 organisations around the world to provide you with global work and study opportunities. You could spend a semester studying abroad, take part in a study tour or complete an international internship.
Program structure

Year 1
You’ll be introduced to the fundamentals of material chemistry including studies in organic, inorganic and physical chemistry.
Chemical engineering studies will look at the mass and energy balances that are critical to processes. This includes heat transfer, fluid flow, mass transfer and reaction engineering for physical, chemical, metallurgical and biological processes.
You’ll also have the opportunity to develop and tackle a group design project, allowing you to put your studies into practice.

Year 2
Second year will focus on developing your chemical engineering knowledge and skills.
You will extend your understanding of chemical engineering processes with studies in process thermodynamics.

Year 3
Your chemistry studies will include analytical spectroscopy where you’ll gain hands-on experience in elemental analysis using atomic spectroscopy techniques.
You will also have the opportunity to conduct engineering experiments, developing your scientific and research skills.

Year 4
You will study your chemical engineering and science specialisation.
Your laboratory skills and knowledge of chemistry will include advanced skills, advanced topics and new concepts. You’ll also develop the critical thinking and skills required to solve structural, energetic and kinetic problems associated with chemical, biological and physical processes.

Year 5
The focus in your final year is on your design and research projects.
You’ll have the opportunity to work on a research projects from your area of interest under the supervision of an academic staff member. You may have the opportunity to collaborate with an external organisation on these projects.

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 Chemistry and in one of Mathematical Methods (CAS) or Specialist Mathematics; and a study score of at least 25 in any English (except EAL) or at least 30 in English (EAL).

Additional information
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.

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).