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Engineers are creative, imaginative, analytical and technical, with excellent teamwork skills. As an engineer you will apply science and mathematics in a practical way to develop new technologies and improve existing ones.

A career in engineering will suit you if you:

- are curious about how things work
- like and are good at maths and science
- enjoy challenges
- are goal oriented
- like working with lots of different people in multidisciplinary teams
- like analysing and solving problems
- have an interest in improving the quality of human life.

More choice; greater flexibility

Engineering is a diverse profession with many options to choose from. That’s why we’ve created an engineering degree that gives you maximum choice and flexibility.

The Common First Year

The Bachelor of Engineering (Honours) kicks off with a common first year, where you’ll gain a better understanding of scientific and design fundamentals, and the interaction between engineering and society. You’ll also get a taste of the 13 engineering specialisations on offer before deciding which to pursue from level 2.

Double Degrees

Many of our students study a double degree, combining engineering with another area for flexibility and diversity.

Professional recognition

Monash Engineering degrees* are accredited by the following professional engineering bodies:

- Engineers Australia
- The Institution of Chemical Engineers (Bachelor of Chemical Engineering (Honours) only)
- Engineering Accreditation Council Malaysia (Malaysian Engineering degrees only)
- Australian Computer Society (Bachelor of Software Engineering (Honours) only).

Australia is a signatory to the Washington Accord, which enables Monash Engineering graduates to work in any other signatory country, without the need to re-qualify.

* Mining, oil and gas, geological and renewable energy engineering are relatively new courses that are in the process of applying for full/provisional accreditation.
Graduate opportunities

Engineering graduates are amongst Australia’s highest earners* and enjoy many and varied career options.

The world relies on engineers to drive innovation and economic growth internationally. With Engineers Australia accreditation, Monash engineering graduates can work in any other country that is a signatory to the Washington Accord, without the need to re-qualify.

At Monash, you can graduate after four years with a specialised engineering (honours) qualification, and begin working immediately as an accredited engineer. To open up even more career opportunities, you can also do a double degree in one of eleven other areas. See page 16 for more information.

An engineering degree from Monash University gives you a competitive edge. As a Monash Engineering graduate, you will not only be highly sought after when you first enter the workforce, it will continue well into your career.

Average Australian engineering salary

$104,725**

An engineering degree from Monash University gives you a competitive edge. As a Monash Engineering graduate, you will be a highly sought-after industry professional when you first enter the workforce and throughout your career.

Extended study

A Bachelor of Engineering (Honours) from Monash offers you the opportunity for extended or postgraduate study.

A double degree with one of eleven other degrees will offer extensive breadth to your course, and can be completed in just one additional year (or two and a half in the case of Engineering and Laws).

You may also wish to further your study with the Master of Advanced Engineering or a research degree.

The Master of Advanced Engineering allows you to explore your discipline on an advanced level and learn how to apply your new knowledge to real problems. The course will also focus on engineering leadership to strengthen your critical reasoning and strategic thinking skills, and will add only one or two years to your study.

A research degree allows you to pursue your particular interests, work on an original idea, have your ideas published, solve a real-world problem, and have the opportunity to work with some of Australia’s leading researchers. You’ll be thoroughly challenged and will further develop your transferable skills such as communication, data analysis, problem solving and time management. A Masters of Engineering Science (Research) is a two year full-time qualification, an Engineering PhD will take you three years of full-time study, and both can be undertaken at the end of your Bachelor of Engineering (Honours).

Faculty guaranteed scholarships

Faculty guaranteed scholarships

Designed for high-achieving final year students, Monash engineering guaranteed scholarships provide an ideal pathway to research studies.

If, at the end of your course, you have achieved an H1 honours-weighted average, we guarantee you a scholarship to undertake a higher degree by research (masters or PhD). The scholarship value is equivalent to the Australian Postgraduate Award rate. Conditions apply.

Masters Accelerated Pathway

This is an accelerated program for high-achieving students to be on track to earn, in just 5 years, both a Bachelor of Engineering (Honours) and an expert master’s degree in Advanced Engineering.

This course allows you to gain practical and theoretical skills for a career in engineering. There are a rich selection of specialist electives to choose from, and the course offers strong links to industry and a focus on leadership skills to strengthen your critical reasoning and strategic thinking skills.

You will graduate as a fully qualified engineer after four years with a Bachelor of Engineering (Honours). You can then cross credit the master’s units towards your master’s course. This pathway is available for the following specialisations: Aerospace, Chemical, Civil, Electrical and Computer Systems, Materials, Mechanical or Mechatronics Engineering.

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**GraduateCareers.com.au

** adzuna.com.au Based on job listings inclusive of wage from the last 90 days (as at 1 February 2017). Figure may incorporate total package.
Outstanding academic performance is not always first on an employer’s must-have list; employers want graduates who are highly skilled, well-rounded individuals. Many place interpersonal and communication skills, critical reasoning and problem-solving, together with passion, at the top of their list.

At Monash we open your eyes to a world outside the classroom. As a Monash Engineering graduate, you leave prepared for leadership, success and – most importantly – life. The following are just a few examples of the activities you can get involved in while at Monash Engineering.

**Monash Engineering Leadership Program**

The Monash Engineering Leadership Program is a three-year extra-curricular program that prepares you to be a leader in your chosen engineering field. We have strong relationships with professionals from the private sector, who deliver the 12 modules of the program. Our partner organisations also host interactive workshops, networking sessions and provide scholarships. The program is open to students who have a scholarship (scholarship eligibility requirements apply) and an application and interview process.

**Engineering Work Ready Program**

This valuable program equips you with job searching skills to help you secure employment. A Monash Engineering degree plus the skills gained via the Work Ready Program will give you the edge in a competitive employment market. Build your confidence in career planning, finding work, developing a professional profile and writing job applications. Participate in mock interviews and meet professional engineers through ‘speed networking’.

**Continuous Professional Development**

Some of the most important lessons occur outside the classroom. That’s why we’ve introduced Continuous Professional Development (CPD) as a compulsory requirement for students graduating semester 2, 2017 and beyond. CPD requires you to engage in business and engineering related activities, such as completing a period of work experience with an engineering related organisation. In doing so, you’ll develop teamwork, leadership, communication and networking skills, as well as learn about ethical conduct and professional accountability.

Completing a period of work experience is an opportunity to gain valuable skills and knowledge by working alongside industry representatives and contributing to real business projects. It will give you a real insight into the life of an engineer as you network, explore and gain on the job training.

**Monash Industry Team Initiative (MITI)**

The MITI program provides an exciting opportunity for you to combine academic theory with practical application while working in a contemporary business environment. The MITI Program is an Australian first and is unique to Monash University. Working as part of a multi-disciplinary team, you will be placed alongside industry experts and given a challenging but well-defined real-world project to deliver, which will push you to use all of your problem solving, innovation and design skills. MITI is an invaluable experience which will equip you for life’s challenges by offering insight into the business world, practical learning, leadership and teamwork opportunities.

Zoe Van Gulick
Bachelor of Materials Engineering (Honours) and Bachelor of Commerce

“…The Monash Engineering Leadership Program teaches me invaluable skills and has heaps of opportunities for networking, both with like-minded students and industry professionals. It is definitely a step in the right direction for securing employment when I graduate.”

Visit miti.monash.edu for more information.
At Monash University, we undertake innovative, multidisciplinary research addressing national and international priorities. Monash Engineering has a highly regarded research profile with extensive links to both industry and the research community worldwide.

As an undergraduate engineering student, you’ll have the opportunity to complete 12 weeks of paid research training over the summer university break, which counts towards your Continuous Professional Development requirements.

You will work closely with academic staff on a broad range of fascinating research projects.

Join the Monash Motorsport team to help conceive, design, build and race a formula-style racing car.

Judged by the Society of Automotive Engineers (SAE), the mission of the Monash Motorsport team is to create the most competitive and well-designed car possible. As a member of the Monash Motorsport team, you will build strong links with the local engineering industry and make use of cutting-edge facilities such as Monash’s wind tunnel (for aerodynamic testing).

EWB is an international volunteer organisation that aims to improve the knowledge and physical resources of people in need around the world. EWB works with developing communities to achieve environmentally sustainable, socially responsible and economically viable solutions to engineering problems, with an emphasis on education.

The Monash University chapter is involved in a wide range of projects, and is increasing its membership every year.

Spending part of your engineering degree overseas on exchange will expose you to new ways of learning and living. You will also build an international network, develop independence and enjoy a cross-cultural experience.

Monash has exchange agreements with more than 100 universities in 25 different countries, which enables you to have an international experience while your overseas studies are credited towards your degree. Many students who participate in an approved exchange or study abroad program are eligible to receive a travel grant from Monash.

As an engineering student you will also have the opportunity to study at Monash Malaysia. Students from Monash Malaysia can also apply to spend one semester at Clayton.

The Faculty of Engineering, in conjunction with the Faculty of Arts, allows you to undertake a Diploma of Languages from your second year. If you undertake a Diploma of Languages you may wish to also take part in study abroad or exchange in third year to consolidate your language skills.

Club and societies provide you with the chance to get more out of your university experience. Visit monashclubs.org for information on all of our clubs and societies.

Monash Engineering Students’ Society (MESS)

If you’re looking for an active and social university life then check out the Monash Engineering Students’ Society (MESS).

MESS is a student-run, not-for-profit organisation that will enrich your Monash experience through social and academic experiences that are engaging and fun.

MESS also produces an annual Engineering Careers Guide – a useful resource to help you secure employment when you graduate.

Female Engineers at Monash (FEM)

FEM is here to support you by inspiring you and connecting you with other female engineering students, and with women working in the faculty and the profession. We’re a student-run society, and it’s our hope that our events and industry guides will give you easy access to information to help you make the most out of your university experience, and make a smooth transition into the workplace.

Robogals Monash

Robogals Monash is a not-for-profit, student-run organisation that aims to encourage more young women to pursue STEM career opportunities, with a focus on engineering. We run robotic workshops for year 3-12 students in schools and at Monash. Volunteer with us to get access to professional development opportunities to strengthen your communication and leadership skills, and have a chance to apply for leadership roles at all levels of our international organisation.

EWB works with developing communities to achieve environmentally sustainable, socially responsible and economically viable solutions to engineering problems, with an emphasis on education.

Visiting monashmotorsport.com for more information.

Visit monash.edu/study-abroad/outbound for more information.

Visit monashclubs.org for more information.
The finest facilities

Engineering is a hands on discipline where learning goes beyond the classroom, so it’s important to choose a university with the very best facilities to support your studies. We have computer labs available for you to use 24/7, plus our specialised science and technology resource centre, the Hargrave-Andrew library.

Some of our other world class engineering facilities include:

New Horizons Centre (pictured left)
New Horizons co-locates and integrates around 500 staff from Monash University and CSIRO. The New Horizons Research Centre is dedicated to research and development themes of national and international importance, including manufacturing, biological engineering, renewable energy, modelling and simulation.

Monash Centre for Electron Microscopy
The Monash Centre for Electron Microscopy (MCEM) houses one of the world’s most powerful electron microscopes. The Centre’s suite of instrumentation can determine the composition, structure and bonding of materials down to the atomic scale.

Woodside Innovation Centre
The Woodside Innovation Centre at Monash is focused on researching technology innovation opportunities in the oil and gas industry. Part of Woodside’s FutureLab network, the Centre is a transformational hub for technological innovation integrating rapid prototyping, advanced materials and information technology across all operations.

Monash Wind tunnel
Our wind tunnel is the leading low speed automotive aerodynamic test facility in Australia and the largest in the Southern Hemisphere. It’s used to test the aerodynamics of vehicles like the Monash Motorsport car, aeroplanes and unmanned aerial vehicles, trucks and trains, even buildings, yachts and elite athletes such as Olympic gold medallist Anna Meares.

CAVE2
Monash CAVE2 is a next generation hybrid 2D and 3D virtual reality environment combining Monash’s expertise in high-performance computing, computer graphics and networks, to render massive datasets in unparalleled clarity. As the viewfinder of the 21st Century Microscope, CAVE2 enables the interactive exploration of data from sources including the Australian Synchrotron, electron microscopes and medical imaging instruments.

CAD CAM Centre
The Computer-Aided Design/Computer-Aided Manufacturing centre is where hands-on learning and industry-level equipment are incorporated into the Monash Engineering curriculum to prepare students for success. The centre incorporates six state-of-the-art 3D printers, a laser cutter, stereo microscope and set of Helmholtz coils, creating a revolution in the study of engineering design.
Monash celebrates academic excellence and supports students who are disadvantaged. Monash Engineering offers you a range of scholarships to help ensure that money and circumstances are not barriers to you accessing a world-class engineering education. For details, and a full list of scholarships, bursaries, and awards available, visit monash.edu/scholarships

**Engineering Excellence Award**
Awarded to the highest-achieving eligible year 12 students entering an engineering course at Monash in Australia. Recipients must receive an ATAR or equivalent of at least 98.00. Includes an invitation to participate in the prestigious Monash Engineering Leadership Program (see page 6 for details).

Number available: Up to 50
Total value: $24,000

**Engineering International Undergraduate Award**
Awarded to the highest-achieving eligible international students studying Year 12 or IB in Australia who receive an ATAR or equivalent of at least 90.00.

Number available: Up to 50
Total value: $5000 (One off payment)

**Women in Engineering Scholarship**
Awarded to the highest-achieving eligible year 12 female students commencing an undergraduate engineering program offered by the Faculty of Engineering.

Number available: Up to 50
Total value: $5000 (One off payment)

**Engineering Indigenous Scholarship for Equity**
Offered in conjunction with Monash College, this scholarship is awarded to the highest-achieving indigenous students commencing a Diploma of Engineering at Monash College, and articulating to a Bachelor of Engineering (Honours) degree.

Number available: Variable
Total value: Full tuition fees paid for the Diploma of Engineering at Monash College, plus $6000 per 48 credit points of study for the minimum number of credit points required to complete the Bachelor of Engineering (Honours) degree.

**Industry-funded awards and prizes**
Strong links with industry enable the Faculty of Engineering to offer you a wide range of prizes and scholarships. More than 50 awards and prizes are presented annually.

See back cover for a list of our industry sponsors.

**The Engineering (Honours) Masters Accelerated Pathway Scholarship**
Awarded to the highest-achieving eligible year 12 students intending to enrol in the Bachelor of Engineering (Honours)/Masters vertical double pathway at Monash in Australia. Recipients must achieve a minimum ATAR score of 95.

Total Value: $5000 per 48 credit points of study for the minimum number of credit points required to complete the Bachelor of Engineering (Honours) degree, plus an additional $12,000 for the Master of Advanced Engineering component, with a total value up to $32,000.
Double degrees

Enrol in two degrees at the same time in two completely different areas. More and more organisations seek engineering graduates with expertise in other disciplines. They are continually impressed by the breadth of knowledge and insight evident in double degree graduates from Monash.

A double degree course allows you to pursue a career in either area, or to take up one of the many opportunities emerging at the interface of disciplines. An engineering double degree offers diversity, more career choices and flexibility.

Architectural Design
The building industry needs engineering professionals with strong architectural knowledge.

The combination of architectural design with civil engineering is an exploration of creative solutions to a wide variety of engineering and social problems, like looking at sustainable ways to build or renovating existing structures to work more efficiently.

You will graduate with valuable skills for transforming the built environment, from the design of buildings or bridges to renovating existing structures to work more efficiently. This ability to provide solutions through creative thinking and realistic applications will make you attractive to architectural and engineering firms in Australia and overseas.

Arts
Combining an engineering degree with an arts degree provides complementary skills in technology and communications. You will develop the transferable skills employers are looking for: communication, teamwork, research and critical thinking.

Arts at Monash provides your comprehensive gateway to approximately forty areas of study across the arts, humanities and social sciences. With this dual degree you will have a portfolio uniquely tailored to meet your interests and aspirations.

Biomedical Science
If you're eager to explore a career in biological/biomedical engineering, consider a double degree in engineering and biomedical science.

Advances in biological sciences and demand for technological solutions are creating new opportunities for engineers. In the coming years engineering will be transformed, as it parallels and fuses with developments in biomedical science.

Commerce
Do you dream of making it big in the business world? If so, engineering and commerce is a powerful combination.

Many CEOs of major corporations have engineering qualifications. Many CEOs of major corporations have engineering qualifications. This double degree offers diversity, more career choices and flexibility.

Commerce Specialist
Engineering is about innovation, big-picture thinking and decision making. This combined with commerce specialist prepares you to take on the business world, equipping you with skills that develop your expertise in the specialist areas of actuarial science, economics or finance. This combination will give you genuine depth of study, and the skills to join the next generation of commercial leaders.

Computer Science
Computer science provides solutions to the ever-increasing information challenges in the modern world. Industry needs people who can extract and analyse information from the massive datasets generated by engineering processes and devices.

Big data is the new challenge and opportunity in engineering practice across industries from construction and manufacturing, to transport and the energy sector.

This double degree integrates theoretical and practical skills to solve engineering problems, and create innovative solutions at across the IT spectrum, from hardwares to software.

Design
Have an eye for form and function? Like to build things? Consider combining mechanical engineering with design to become a product design engineer.

Product design engineers design and develop manufactured products that are functional, ergonomic, beautiful, and well engineered.

This double degree integrates the technical and project management skills of an engineer with the creativity and manufacturing know-how of an industrial designer.

Information Technology
In an age of increasing technological advancements the synergy between engineering and information technology will only become stronger. IT underpins engineering practice in all disciplines and industry needs graduates with skills and expertise spanning both.

You could do anything from designing a stunning visualisation of engineering data, to building an app for data collection to setting up the business IT processes to deliver an engineering product via the internet.

This double degree combines creative and problem solving skills to use IT in engineering applications.

Chemical
Chemical engineers can design, run and troubleshoot production facilities, but their training typically excludes the skills to develop pharmaceutical and related products. Similarly, formulation scientists can invent and test new products such as pharmaceuticals, food and cosmetics, but they lack the know-how to manage the product process beyond the laboratory stage.

This double degree combines chemical engineering and pharmaceutical science to produce professionals capable of covering the full spectrum of the pharmaceutical product design and development process.

Pharmaceutical Science
There is an increasing demand for pharmaceutical scientists with the expertise to take products from the design and formulation stage through to manufacturing.

Chemical engineers can design, run and troubleshoot production facilities, but their training typically excludes the skills to develop pharmaceutical and related products. Similarly, formulation scientists can invent and test new products such as pharmaceuticals, food and cosmetics, but they lack the know-how to manage the product process beyond the laboratory stage.

This double degree combines chemical engineering and pharmaceutical science to produce professionals capable of covering the full spectrum of the pharmaceutical product design and development process.

Science
Engineering is concerned with the application of science; however, many engineers are fascinated by scientific investigation and eager to enhance their understanding of the pure sciences.

You may choose to combine engineering with food science or technology, or explore the fundamentals of the cosmos through astrophysics. Or you may be interested in the most fascinating machine of all: the human body.

Laws (Honours)
An engineering and law degree bridges the gap between technological and legal issues.

This double degree combination produces engineers who are sensitive to the legal, corporate and political implications of technology and its applications.

As an engineering and law graduate, you are eligible to practise as a solicitor; alternatively, you might join the legal team of an engineering, manufacturing or technology firm.

Christha Satkunarajah
Bachelor of Civil Engineering (Honours) and Bachelor of Commerce

“In industry there needs to be synergy between the technical and the financial/ commercial demands. I see the engineering and commerce double degree being a powerful combination, allowing me to better understand these demands and position me with greater knowledge as I enter the workforce.”
The Bachelor of Engineering (Honours) at Monash University has a common first year, giving you time and experience before you select your engineering specialisation. You learn about the engineering profession and its specialisations before deciding which to pursue from second year.

Many students change their career paths after exploring the vast field of engineering and its specialisations during the common first year. The common first year allows you to engage yourself in engineering from day one while developing the knowledge to make an informed decision.

In your first year you will solve real engineering problems and develop the fundamental skills to be successful in your studies. You will learn about the role and function of engineers in society and immerse yourself in hands-on design-and-build activities.

You might develop mobile apps, build a bridge then learn how to tear it down using a trebuchet, or build practical power supplies. Learn about aircraft performance, engineering design to make things lighter, faster and stronger, and fundamental skills in mathematics and computing.

Then choose your own future.

### Prerequisite studies

**VCE**
- **English:** Units 3 and 4: a study score of at least 30 in English (EAL) or 25 in English other than EAL.
- **Maths:** Units 3 and 4: a study score of at least 25 in Mathematical Methods (any) or Specialist Mathematics.
- **Science:** Units 3 and 4: a study score of at least 25 in Chemistry or Physics.

**IB**
- **English:** At least 4 in English SL, 3 in English HL, or 5 in English B HL.
- **Maths:** At least 4 in Mathematics SL or 3 in Mathematics HL or 3 in Further Mathematics HL.
- **Science:** At least 4 in Chemistry SL or 3 in Chemistry HL, or 4 in Physics SL, or 3 in Physics HL.

The degree you are awarded will reflect your chosen specialisation.

### Degree awarded

- Bachelor of Aerospace Engineering (Honours)
- Bachelor of Chemical Engineering (Honours)
- Bachelor of Civil Engineering (Honours)
- Bachelor of Construction Engineering (Honours)
- Bachelor of Electrical and Computer Systems Engineering (Honours)
- Bachelor of Environmental Engineering (Honours)
- Bachelor of Geotechnical Engineering (Honours)
- Bachelor of Geotechnical Engineering (Honours)
- Bachelor of Mining Engineering (Honours)
- Bachelor of Mechanical Engineering (Honours)
- Bachelor of Materials Engineering (Honours)
- Bachelor of Mechatronics Engineering (Honours)
- Bachelor of Renewable Energy Engineering (Honours)
- Bachelor of Software Engineering (Honours)

### Specialist courses

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### Specialist courses available

- **Required engineering units**
- **Some choice:** you can choose from a prescribed list
- **Free choice:** you might choose further engineering studies, or you can choose to study units from a different field.

For in-depth course descriptions and structures visit: study.monash/courses
Lauren Clay
Building Physics Engineer, Arup
Bachelor of Aerospace Engineering (Honours) and Bachelor of Arts

“In my role as a Building Physics Engineer, I conduct simulation work to provide advice that encompasses comfortable environments and holistic, whole-building, sustainable design. I use this analysis to inform design decisions regarding natural ventilation, pedestrian wind comfort, building massing optimisation, microclimate, daylighting, thermal comfort and building energy.

As a student, I was offered a place in the Leadership in a Technological Environment program (now the Monash Engineering Leadership Program). The various modules assisted with developing my communication, leadership and networking skills, which complemented my technical training. I developed confidence to network with people from industry, which lead to invaluable career opportunities.”

Bachelor of Engineering (Honours) – Specialisations

Aerospace engineering

Aerospace engineering is concerned with the design and airworthiness, development and maintenance of flight vehicles. It is a multidisciplinary combination of aerodynamics, aerostructures, avionics, propulsion, materials engineering and computational simulation.

As an aerospace engineer, you’ll have the opportunity to tackle many of tomorrow’s global challenges. You may be involved in the creation of more environmentally friendly aircraft, or even help to build a vehicle capable of exploring our solar system and beyond.

Project work includes the use of wind tunnels for aerodynamic testing, computational modelling for predicting structural behaviour, advanced manufacturing, and materials and structural testing.

Location

Clayton campus

Career options

When you graduate you’re likely to work in aircraft design and maintenance, aerospace control systems, aerodynamics, sustainable energy and conservation, lightweight materials, big data analytics, or new manufacturing techniques.

You might join a large aerospace company or a manufacturer that contracts to the aerospace industry. Or you might work at an airline, a government aerospace laboratory or research centre.

Formula One teams also employ aerospace engineers. Aerospace engineering might also lead you to a career in management consulting or finance.

Join a thrilling profession in the midst of developing the next generation of flight vehicles. The Airbus A380, A350, A400M and the Boeing 787 are just some of the astounding advances being led by aerospace engineers.

Career specialisations include:

- Aircraft design and testing
- Avionics and control systems
- Airport operations and management
- Aircraft fleet management
- Manufacturing
- Research and development
- Defence industries
- Renewable energy
- Transportation aerodynamics
- Building and structure design and testing.

Double degrees available with

- Arts
- Commerce
- Commerce Specialist
- Law
- Science

Chemical engineering

Chemical engineers invent, develop and design processes that convert raw materials into useful products, with minimal environmental impact. They are also involved with pollution control, energy generation and conservation, recovering energy from wastes, and protection of the environment.

Many everyday items involve chemical engineering during some stage of their production: petrol, paper, milk, coffee, computer chips and mobile phones, just to name a few.

Chemical engineering blends chemistry with engineering and other fields including biological sciences, environmental science, nanotechnology, mathematical modelling, management, and economics.

Chemical engineering at Monash

A selection of high-achieving students are given the opportunity to undertake integrated industrial training in their final year. You’ll have the benefit of expert industry lecturers teaching several units in third and fourth year, in addition to frequent industry guest lecturers in all year levels.

Location

Clayton, Malaysia campus

Career options

As a chemical engineer, you might:

- design, develop or improve industrial processes and equipment for large scale chemical and biochemical manufacturing
- plan and test methods of manufacturing
- improve energy efficiency or reduce water use at manufacturing sites
- develop methods for the treatment of by-products
- devise production processes that are safe, efficient, profitable and environmentally sound
- research naturally occurring chemical reactions so that these processes can be copied for human benefit
- conduct environmental impact studies
- develop and implement cleaner production technologies
- research new processes and products
- design, develop and use new materials
- develop alternative fuels and energy sources.

Double degrees available with

- Arts
- Biomedical Science
- Commerce
- Commerce Specialist
- Law
- Pharmaceutical Science
- Science

Jacky Song
Digital Business Analyst, AXA
Bachelor of Chemical Engineering (Honours) and Bachelor of Commerce

“There are vast career prospects for chemical engineers. Society will continue to rely on chemical engineers to design and undertake large scale projects, so that we can meet the growing demand for sustainable products and services. I love the thought of being able to one day work on an oil-rig in the middle of the Pacific, or analyse geological data collected from two kilometres under the surface of the ocean.

I’m always astounded to hear from engineering graduates where their degree has taken them.”
There’s something for everyone, from clubs and curricular activities that help in making university the best it can be! I highly recommend a semester abroad.

Vishaka Nagendra
Bachelor of Civil Engineering (Honours) and Bachelor of Architectural Design

“Monash was my first choice for engineering due to their facilities and reputation for research and innovation in the STEM fields. Civil engineering is so diverse, I’ve always been curious about how things work and the profession of engineering seemed like it would allow me to further my curiosity and apply science to come up with better solutions to problems. It covers so many fields like transport, structural, geotechnical and water systems engineering.”

“There’s something for everyone, from clubs to projects or exchange trips. It’s the extra curricular activities that help in making university the best it can be! I highly recommend a semester abroad.”

Sharanya Yoganathan
Bachelor of Electrical and Computer Systems Engineering (Honours) and Bachelor of Commerce

“Engineering is a meaningful and broad career. Electrical and computer systems engineering is fundamental to our modern way of life, and will shape our future. I find it really exciting that as our world rapidly changes and technology develops, electrical and computer systems engineers are at the forefront of shaping this change.”

Bachelor of Engineering (Honours) – Specialisations

Civil engineering

Civil engineers improve systems and processes that allow humans and nature to coexist with minimal impact. Modern society couldn’t function without them.

We need civil engineers to design and build higher-capacity transportation systems. We need them to construct larger commercial and industrial complexes. We need them for water supply and pollution control. We need efficient, cost-effective and innovative repair or replacement of civil infrastructure such as roads, bridges and buildings.

At Monash we help you prepare for your civil engineering career early, with a focus of the fundamentals and a taste of industry experience through specialisation opportunities in the areas below.

Location
Clayton, Malaysia campus

Civil engineering streams

Structures

Structural engineers design buildings, bridges, airports, railways, commercial complexes, towers, offshore platforms and tunnels. They ensure structures remain sound under extreme conditions such as wind, waves and earthquakes.

Water

Water engineers manage water supply and drainage systems for people, agriculture and industry. Typically, a water engineer will develop projects to control flood waters, design dams, spillways, and pipe networks, manage rivers and develop systems to collect and treat wastewater, and develop urban water systems.

Transport

Transport engineers plan the future travel needs of city and country areas. They investigate alternative transport technologies to make existing road and traffic systems safer and more efficient.

Geomechanics

Geomechanical engineers advise on foundation design, support structures, stability of slopes, tunnel design and construction, and the suitability of materials for infrastructure projects.

Career options

Your career prospects as a civil engineer are strong and diverse. When you graduate, you might work in any one of these sectors:

■ private industry
■ government
■ construction and mining
■ marine and resort developments
■ property and land development
■ consulting firms.

Double degrees available with

■ Architectural Design ■ Arts ■ Biomedical Science ■ Commerce ■ Commerce Specialist ■ Computer Science ■ Information Technology ■ Law ■ Science

Electrical and computer systems engineering

Electrical and computer systems engineering is an extremely diverse field, encompassing biomedical, computer systems, electronics, electrical power, robotics and telecommunications. Electrical and computer systems engineers investigate, plan, design, develop, construct, test, market and maintain a wide range of products and systems.

As an electrical and computer systems engineer you might design and develop digital products such as smartphones, virtual reality systems or computer games, or maybe robotic medical devices to assist in surgery and rehabilitation.

Monash will give you the hands-on training and theoretical insight you need for an exciting future as an electrical and computer systems engineer.

You’ll experience industry-standard reprogrammable chips in the laboratories from first year onwards. By third year you’ll be building miniaturised machines with very powerful processing on board. In fourth year you may apply this knowledge to a “product” of your own.

Location
Clayton, Malaysia campus

Career options

As an electrical and computer systems engineer you could work locally or internationally in a wide range of industries including:

■ power generation
■ industrial and power electronics
■ automation systems
■ computer programming
■ robotics
■ health care
■ water and energy.

Many Monash graduates work in large public and private telecommunications, manufacturing and electrical-power companies. Others work for defence and intelligence organisations. You could also work in banking and finance, or with any organisation that creates, stores, encodes, and transmits big data or manages complex systems.

Double degrees available with

■ Arts ■ Biomedical Science ■ Commerce ■ Commerce Specialist ■ Computer Science ■ Information Technology ■ Law ■ Science
Environmental engineering

Few branches of engineering have such a profound impact on our health and quality of life as environmental engineering. Environmental engineering involves the implementation and management of solutions and programs in keeping with the principles of sustainable development. It involves reducing energy and resource use and minimising waste, while providing the community with the development opportunities it needs to grow.

Environmental engineering encompasses water and air-pollution control, recycling, water supply, waste disposal, land management, transport and the built environment, process engineering, and public health issues.

Career options

Environmental problems exist in all countries and industries so your opportunities are broad and far reaching.

You might work in air-pollution control, water supply, land management, impact assessment, hazardous waste management, energy production, stormwater and wastewater management, environmental management systems – and so much more.

Organisations employing environmental engineers include:
- power generation
- engineering consulting firms
- industries that need cleaner production systems
- private and municipal agencies that supply drinking water and treat wastewater
- companies treating and disposing of hazardous waste
- organisations helping to account for carbon and implementing low-carbon solutions
- government agencies monitoring and regulating environmental issues
- universities that teach and conduct sustainability research
- international agencies that aid developing nations.

Double degrees available with
- Arts
- Commerce
- Commerce Specialist
- Science

Environmental engineering

Geological engineering

Geological engineering is an interdisciplinary field, in which principles of geoscience are used to solve engineering and environmental problems. It connects geology to numerous forms of engineering that include mining, oil and gas, civil, foundations and earthquake engineering, tunneling and renewable energy (e.g. hydro-power, geothermal, wind, turbine foundations).

A geological engineer has a versatile set of skills that are applicable to a wide range of contemporary problems and are in high demand by employers both in Australia and throughout the world.

As a Monash geological engineering graduate, you are truly unique. There are no other geological engineering graduates in Australia. You will study subjects including rock mechanics, geophysics, numerical modeling, and geothermal energy.

Career options

Creating solutions for the challenges of sustainable practices, environmental protection, and Australia’s deteriorating infrastructure, geological engineering graduates are in high demand. Geological engineering graduates can work as:
- tunneling engineers
- geotechnical specialists
- numerical modelers
- rock mechanics engineers
- reservoir engineers
- ground support engineers
- foundation engineers
- construction managers
- design engineers.
Bachelor of Engineering (Honours) – Specialisations

Materials engineering
Materials engineering is all about making new materials and improving existing ones. It’s about making things stronger, lighter and more functional, sustainable and cost-effective. It underpins much of engineering – if we want to make things, we need to have materials with the right properties.

Whether it’s a next-generation jet engine, a biodegradable tissue scaffold to grow organs from stem cells, or new types of solar cells and batteries, the structure, properties and processing of materials are crucial to the final product.

Materials engineers work with everything from the thermal protection of space shuttles to high-tech artificial hip and cochlear implants, and nanoparticles that seek and destroy cancer.

Materials engineering is truly interdisciplinary. It involves physics, mathematics, biology and chemistry, culminating in a ground-breaking research field and a thriving job market.

Location
Clayton campus

Career options
Demand for materials engineers continues to outstrip supply, with Monash graduates receiving an exceptional response in the employment market.

Working across a range of exciting industries including aerospace, biomedical, mining, future manufacturing, 3D printing and recycling, materials engineers become:
- biomedical engineers
- metallurgists
- materials designers
- forensic engineers
- failure analysts
- materials selection specialists (aero, auto, structural)
- process engineers
- corrosion or durability engineers
- electrochemists / energy specialists
- research engineers.

As a materials engineer, your expertise will be sought after in:
- the emerging fields of nanotechnology, biomedical materials, electronic materials, recycling and energy generation
- the development of lightweight metal alloys
- the use of materials for energy storage such as batteries and fuel cells
- functional materials made at the nanoscale, including the wonder-material ‘graphene’
- traditional industries such as metallurgy and mining, including next generation additive manufacturing
- failure analysis.

Double degrees available with
- Arts & Biomedical Science & Commerce
- Commerce Specialist & Design & Law & Science

Mechanical engineering
Mechanical engineers are increasingly engaged in the design and operation of devices that require skills that cross traditional discipline boundaries.

As a mechanical engineer, you might design automatic control systems, or create efficiently heated and cooled buildings. You could manage the water supply for a whole state, take charge of the operation of a smart building, design wind turbines or highly efficient, low cost products for the developing world. You might be called on to optimise the aerodynamics of trucks and trains, work with the medical profession to create robots that can operate with greater precision than a human, or be at the cutting edge of advanced manufacturing using 3D printers to create aircraft parts with elegance and function.

Mechanical engineering is about the efficient use of energy for the design and function of all types of mechanisms, from the simplest to the most complex. It builds on physics, chemistry, materials, mathematics and biology to achieve this goal.

Growth industries include communications, banking, public utilities, consulting practices and the entertainment industry.

Location
Clayton, Malaysia campus

Career options
Industries employing mechanical engineers include:
- building systems engineering
- advanced manufacturing
- petrochemical
- consulting
- transportation
- aerospace
- mining
- robotics
- renewable energy.

Double degrees available with
- Arts & Biomedical Science & Commerce
- Commerce Specialist & Design & Law & Science

Eliza Tipping
Engineering Graduate, BP
Bachelor of Materials Engineering (Honours) and Bachelor of Commerce

“My double degree allowed me to be able to think in a multidisciplinary manner, and incorporate innovation into my interests in development of medical technology. I am a Clinical Affairs Associate for a medical device company and am involved in clinical research and development of software and medical tools for surgeons.”

Lisa Mililli
Marketing and Sales Specialist, NuVasive
Bachelor of Mechanical Engineering (Honours) and Bachelor of Biomedical Science

“My double degree allowed me to be able to think in a multidisciplinary manner, and incorporate innovation into my interests in development of medical technology. I am a Clinical Affairs Associate for a medical device company and am involved in clinical research and development of software and medical tools for surgeons.”
Bachelor of Engineering (Honours) – Specialisations

Mechatronics engineering

Mechatronics is the nexus between mechanical and electrical engineering. It’s at the forefront of the development of smart products and intelligent devices.

As a mechatronics engineer you could design the control systems for autonomous vehicles or robots for medical applications. Or you might take an everyday household product and turn it into a truly clever device.

Mechatronics engineers design devices and the programs that control those devices. They are adept in handling vast amounts of data and creating systems that make sense of data in real-time so that a fully automated manufacturing facility can operate safely and efficiently, or a car can drive completely autonomously.

Mechatronics engineers are in high demand as the need for professionals in this space is increasing. They are needed in the advanced manufacturing and aerospace industries as well as by the manufacturers of robots and in data analysis.

Location
Clayton, Malaysia campus

Career options
You will be equipped with the knowledge and skills to design, develop, manufacture and operate the intelligent products and complex systems of today and tomorrow.

Opportunities exist in:
- robotics and automation
- aerospace systems and flight control
- bioengineering
- intelligent systems for motor vehicles
- manufacturing systems and processes
- telecommunications
- medical systems
- software engineering
- mining systems and processes
- nanotechnology.

There are also vast opportunities in consulting, management and finance. You may also pursue a career in research and development, in academia, research institutions or advanced industry sectors.

Double degrees available with
- Arts
- Commerce
- Commerce Specialist
- Science

Mining engineering

Mining engineering is concerned with the development and implementation of safe and economic resource development plans.

Minerals are the basic inputs for the production of building materials, pharmaceuticals and electronic devices. They are also a source of fuel for the manufacturing and utility industries. Mining is essential to our daily lives. If it cannot be grown, it must be mined!

As a mining engineering graduate, you will be highly qualified in areas as diverse as geology, metallurgy, the environment and sustainability, mine planning and project management, safety, communications, and leadership.

Mining engineers are needed in all aspects of exploring, planning, extracting and processing minerals, and increasingly work with the community to produce sustainable solutions with a minimal environmental footprint.

Location
Clayton campus

Career options
Mining engineers are largely employed by mining companies, but can also work in the mining services industry as contractors, suppliers, equipment designers, mine inspectors, government advisors, researchers and technical specialists.

The skill set of a mining engineer also allows them to work in a range of other engineering professions including tunneling, road and railway construction, hydro electric and water supply projects, and the oil and gas industry.

You will be part of a global industry and will find employment throughout Australia and the world.

As a mining engineer you will have a diverse range of potential career paths. These may include:
- Evaluation: Evaluating the accessibility and viability of mineral deposit sites.
- Planning and design: Preparing short- and long-term production plans, designing the safest and most suitable mine layout and access routes for people and equipment.
- Operations: Managing operations of a mining site, including staffing and equipment needs.
- Safety: Coordinating safety, efficiency and environmental management.
- Finance: Reviewing key performance indicators associated with capital, operating costs, and productivity and efficiency.
- People Management: Communication and community consultation are key elements of the mining profession to ensure mining companies continue their social license to operate.
- Automation: Innovative technology will be a major factor as mines of the future will be increasingly automated for efficiency, economy and safety.
Oil and gas engineering

Oil and gas engineers work in a variety of areas associated with exploration and extraction. Typically, an oil and gas engineer specialises in one area, but needs to be aware of the entire process since the engineering and production components work together. Areas of oil and gas specialisation include drilling, production and reservoir management. Monash graduates are specialist extraction experts, with specialities in drilling, production and reservoir management. They also have a strong knowledge of the full value chain and alternative fuels.

Oil and gas engineering is interdisciplinary, and includes knowledge of power and drainage, geology, geomechanics, project, risk and safety management, resource estimation, applied geophysics, drilling and well completion, process control, numerical modelling, production and development planning, and unconventional resources.

Location
Clayton campus

Career options
Job opportunities exist in the fields of:
- Production engineering; involving the design, monitoring and evaluation of oil, gas, and manufacturing production to maximise efficiency
- Reservoir engineering; utilising knowledge of geology and fluid mechanics to locate, analyse and optimise extraction design of oil and gas reserves
- Hydraulic fracturing; managing the equipment and production of the fracturing process in a safe and environmentally responsible way
- Drilling engineering; developing, planning, and supervising the operations necessary for drilling and maintaining oil and gas wells.

Renewable energy engineering

Renewable energy engineering is an emerging discipline, focused on identifying and developing sustainable systems for electricity generation. This qualification allows students that have a passion for the environment to enter the growing clean energy engineering market.

You’ll graduate with a broad knowledge of all renewable energy sources and technologies.

You’ll be equipped to develop and manage the most appropriate and environmentally sustainable energy solutions for any business need, project, or asset.

As a Monash renewable energy engineer, you’ll be at the forefront of renewable energy implementation in Australia, and have the ability to transfer your skills overseas.

Location
Clayton campus

Career options
Renewable energy engineers will be employed to:
- assist with the development and implementation of clean energy policy
- identify sustainable systems for power generation
- understand traditional (hydrocarbon and coal) and alternate renewable power sources and their generation, in order to assess available energy options and optimise outcomes
- provide recommendations and solutions regarding the interaction of traditional power industries and conventional energy sources with renewable energy sources
- manage the process of developing, maintaining and optimising alternative energy assets, and maximising energy usage efficiency.

Juthaporn Chareonphol
Master of Advanced Engineering

“As I’ve been working in the oil and gas industry, I would like to use my knowledge and my experience to contribute to making the industry become sustainable, more economical to explore and operate, safer and more environmentally-friendly.”

Shinian Qian
Bachelor of Renewable Engineering (Honours)

“I chose to study Renewable Energy Engineering because it seemed like the obvious path for me. I want to help build a future with minimal carbon impact, where we can be simultaneously progressive and ecologically aware. I am proud to be a part of a university which advocates for the same sustainable future.”
Software engineering

Software is everywhere. It does everything from dispensing medicine to controlling flight paths to monitoring and shaping our shopping habits. Our world’s major companies, governments and organisations depend on smartly designed and well-built software. And they rely on the expertise of skilled software engineers to make it happen.

As a software engineer, you will apply engineering principles to systematically analyse, develop and improve software to ensure it runs effectively, safely and securely.

You’ll acquire high-level programming expertise, but software engineering goes well beyond writing code. Most modern IT systems are so complicated that teams of people must work together to create them. This specialisation’s emphasis on collaborative studio-based learning will give you strong skills in teamwork, project management and communication.

You have a huge choice of IT electives from Australia’s leading IT faculty, from cyber security to games development to business information systems. You can apply for the highly regarded IT Industry Based Learning (IBL) program to do a half-year placement with a leading organisation. Placements count towards your course and are supported by $17,000 scholarships.

Location
Clayton, Malaysia campus

Career options
Software engineers work in teams with other software engineers, scientists, managers, and business people. These teams might consist of people in the next office or of people in locations all over the world.

This project-rich specialisation is designed to address industry demand for tech-savvy graduates with large-scale software systems project capability.

Why not join this young and exciting field of engineering which is constantly evolving as new technologies emerge? Specialise in software engineering at Monash for an exciting career designing and creating the cutting-edge IT software systems that we all rely on. The Bachelor of Software Engineering (Honours) is also accredited by the Australian Computer Society.

Double degrees available with
- Arts
- Commerce
- Commerce Specialist
- Computer Science
- Information Technology
- Science

Nadia Antanovskii
Senior Developer, MYOB
Bachelor of Software Engineering (Honours)

“As a software engineer you never stop learning. You’re encouraged to broaden your skills and explore new technologies. Working in such an innovative area for several consultancies in Australia and across Europe has meant the pace of my work is quite fast. I never get bored!”

Bachelor of Engineering (Honours) – Specialisations
Monash College is the preferred pathway for students who aspire to study engineering at Monash University but who narrowly miss the academic requirements for direct entry. The course you choose depends on your current level of study and future career plans.

Monash University Foundation Year
The Monash University Foundation Year is the preferred alternative pathway into the Faculty of Engineering at Monash University. The program provides international students with the skills and knowledge required to succeed at Monash University.

After successfully completing the Foundation Year and achieving the required marks, you will have a guaranteed place in the first year of relevant courses in the Faculty of Engineering.

Diploma of Engineering
Monash College diplomas offer specialist preparation for second-year entry into your chosen engineering course. During the program you will study the same curriculum and complete the same assessments as first-year university students. After successfully completing Diploma Part 2 with a minimum 60 per cent average, you will be guaranteed a place in the second year of your chosen degree.

English-language courses
The Monash University English Language Centre is the preferred English pathway into Monash University. If you do not meet the English language requirement for direct entry into your course you may receive a conditional offer for one of our programs.

Monash English Bridging
Monash English Bridging is ideal if you have met the academic requirements for Monash, but haven’t quite met the English requirements. Monash English Bridging offers students direct entry into Monash University.* Students who successfully complete the Bridging program do not need more testing.

Monash English
Monash English will improve your English-language skills to prepare you for entry into Monash English Bridging or Monash University. The program is taught from beginner to advanced levels. As you improve, you can move to the next level of Monash English.

To enter the University you will need to sit an IELTS test. We have workshops to help you practise and develop the skills you need to sit the test. There are Monash English courses throughout the year.

Maths Bridging
Monash Maths Bridging is for domestic students who narrowly miss the mathematics prerequisite for a Monash University undergraduate degree in Engineering, Information Technology, Science or Business and Economics.

Monash Maths Bridging provides you with the knowledge, essential skills and methods to meet the mathematics prerequisite for your chosen Monash University course.

If you successfully pass the Monash Maths Bridging course, and you meet all other course entry requirements you will be considered for a Round 2 offer.

Domestic Student Entry Requirements
Monash Maths Bridging is available for domestic students who have scored between 20-24 in VCE Mathematics Methods Units 3 & 4, and have met all other entry requirements for a Monash University Engineering, Science, Information Technology or Business and Economics undergraduate degree.

International Student Entry Requirements
Monash Maths Bridging is available for Monash University Foundation Year international students who have scored between 40-64 in Monash University Foundation Year Unit 1 Mathematics: Functions and Calculus, and have met all other entry requirements for a Monash University Engineering, Science, Information Technology or Business and Economics undergraduate degree.

For more information on Monash College academic pathways visit: monashcollege.edu.au/courses

* Entry requirements and subject prerequisites apply.

For more information on English-language pathways visit: monashcollege.edu.au/english-courses

* Not accepted for entry into all degrees. If you need extra English help, consider Monash English.
### Admissions, ATARs and prerequisites

**Bachelor of Engineering (Honours)**

<table>
<thead>
<tr>
<th>Specialisation</th>
<th>Campus</th>
<th>Indicative ATAR Score</th>
<th>Indicative IB Score</th>
<th>Common First Year</th>
<th>Course Length (Full-time)</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace</td>
<td>Clayton</td>
<td>91</td>
<td>35+</td>
<td>Yes</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
</tr>
<tr>
<td>Chemical</td>
<td>Clayton</td>
<td>91</td>
<td>35+</td>
<td>Yes</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<tr>
<td>Civil</td>
<td>Clayton</td>
<td>91</td>
<td>35+</td>
<td>Yes</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<tr>
<td>Electrical and Computer Systems</td>
<td>Clayton</td>
<td>91</td>
<td>35+</td>
<td>Yes</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<tr>
<td>Environmental</td>
<td>Clayton</td>
<td>91</td>
<td>35+</td>
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<td>4 Years</td>
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<td>Geothermal</td>
<td>Clayton</td>
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<td>35+</td>
<td>Yes</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<tr>
<td>Oil and Gas</td>
<td>Clayton</td>
<td>91</td>
<td>35+</td>
<td>Yes</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<tr>
<td>Materials</td>
<td>Clayton</td>
<td>91</td>
<td>35+</td>
<td>Yes</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<tr>
<td>Mechanical</td>
<td>Clayton</td>
<td>91</td>
<td>35+</td>
<td>Yes</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<td>Mechatronics</td>
<td>Clayton</td>
<td>91</td>
<td>35+</td>
<td>Yes</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<tr>
<td>Mining</td>
<td>Clayton</td>
<td>91</td>
<td>35+</td>
<td>Yes</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<tr>
<td>Renewable Energy</td>
<td>Clayton</td>
<td>91</td>
<td>35+</td>
<td>Yes</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
</tr>
</tbody>
</table>

**Bachelor of Engineering (Honours) at Monash University Malaysia**

<table>
<thead>
<tr>
<th>Specialisation</th>
<th>Campus</th>
<th>Entry Score</th>
<th>Common First Year</th>
<th>Course Length (Full-time)</th>
<th>Prerequisites</th>
</tr>
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<tbody>
<tr>
<td>Chemical</td>
<td>Malaysia</td>
<td></td>
<td>Yes</td>
<td>4 Years</td>
<td>Direct application to Malaysian campus. See monash.edu.my for further information.</td>
</tr>
<tr>
<td>Civil</td>
<td>Malaysia</td>
<td></td>
<td>Yes</td>
<td>4 Years</td>
<td>Direct application to Malaysian campus. See monash.edu.my for further information.</td>
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<tr>
<td>Electrical and Computer Systems</td>
<td>Malaysia</td>
<td></td>
<td>Yes</td>
<td>4 Years</td>
<td>Direct application to Malaysian campus. See monash.edu.my for further information.</td>
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<tr>
<td>Mechanical</td>
<td>Malaysia</td>
<td></td>
<td>Yes</td>
<td>4 Years</td>
<td>Direct application to Malaysian campus. See monash.edu.my for further information.</td>
</tr>
<tr>
<td>Mechatronics</td>
<td>Malaysia</td>
<td></td>
<td>Yes</td>
<td>4 Years</td>
<td>Direct application to Malaysian campus. See monash.edu.my for further information.</td>
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<tr>
<td>Software</td>
<td>Malaysia</td>
<td></td>
<td>Yes</td>
<td>4 Years</td>
<td>Direct application to Malaysian campus. See monash.edu.my for further information.</td>
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### Double degrees

<table>
<thead>
<tr>
<th>Course</th>
<th>Campus</th>
<th>Indicative ATAR Score</th>
<th>Indicative IB Score</th>
<th>Common First Year</th>
<th>Course Length (Full-time)</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Design</td>
<td>Clayton and Caulfield</td>
<td>91+ RC</td>
<td>Yes</td>
<td>5 Years</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<td>Arts</td>
<td>Clayton</td>
<td>91</td>
<td>Yes</td>
<td>5 Years</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<tr>
<td>Biomedical Science</td>
<td>Clayton</td>
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<td>Yes</td>
<td>5 Years</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<tr>
<td>Commerce</td>
<td>Clayton</td>
<td>91</td>
<td>Yes</td>
<td>5 Years</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
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<tr>
<td>Commerce Specialist</td>
<td>Clayton</td>
<td>91</td>
<td>Yes</td>
<td>5 Years</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Clayton</td>
<td>91</td>
<td>Yes</td>
<td>5 Years</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
</tr>
<tr>
<td>Design</td>
<td>Clayton and Caulfield</td>
<td>91+ RC</td>
<td>Yes</td>
<td>5 Years</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
</tr>
<tr>
<td>Information Technology</td>
<td>Clayton</td>
<td>91</td>
<td>Yes</td>
<td>5 Years</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
</tr>
<tr>
<td>Law</td>
<td>Clayton</td>
<td>91</td>
<td>Yes</td>
<td>6.5 Years</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
</tr>
<tr>
<td>Pharmaceutical Science</td>
<td>Clayton and Parkville</td>
<td>91</td>
<td>Yes</td>
<td>5 Years</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
</tr>
<tr>
<td>Science</td>
<td>Clayton</td>
<td>91</td>
<td>Yes</td>
<td>5 Years</td>
<td>4 Years</td>
<td>English (EAL) or any other English</td>
</tr>
</tbody>
</table>
# International Admissions

## Bachelor of Engineering (Honours) at Clayton and Malaysia

### All India Senior School Certificate

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Requirements</th>
<th>Calculation of Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>81% Overall average of the best four academic subjects (excluding Physical Education). Minimum English language requirement met by successful completion of English Core with an overall average of 60% or above.</td>
<td></td>
</tr>
<tr>
<td>Australian Year 12</td>
<td>AGAR 67.5 Final ATAR score.</td>
<td></td>
</tr>
<tr>
<td>GCE A Level</td>
<td>Total score of a maximum of 3 A levels subjects taken within two years. Two AS Levels subjects can be counted in place of one A Level subject, provided that the subject has not been taken at A Level and there is at least one A Level subject in the calculation. Score A Levels as follows: A* or A = 4; B = 3; C = 2; D = 1; E = 0.5. English met by a minimum of C Grade in IGCSE Literature (English), English Literature, or First Language English O/Level or GCE A Level English Language or Literature in English, or GCE A Level General Paper, English Language, or Language and Literature in English, or A Level in GCE AS English as a Second Language, or Grade B in GCE A Level English Language or Literature in English.</td>
<td></td>
</tr>
<tr>
<td>Hong Kong Diploma of Secondary Education</td>
<td>21 Total of the best five subjects (Category A and C only). Scores graded as follows: Level 1 = 4, Level 2 = 3; Level 3 = 2; Level 4 = 1. Minimum English language requirement met by successful completion of IELTS English Language with an achievement of Level 4 or above.</td>
<td></td>
</tr>
<tr>
<td>Indian School Certificate Examination</td>
<td>70% Overall average of the best four academic subjects (excluding Physical Education). Minimum English language requirement met by an overall average of 60% or above in English.</td>
<td></td>
</tr>
<tr>
<td>International Baccalaureate (IB) Diploma</td>
<td>31 Total final score as shown in transcript. Evidence of successful completion of this diploma is required. Minimum English language requirement met by an overall average of 60% or above in English.</td>
<td></td>
</tr>
<tr>
<td>National Certificate of Educational Achievement Level 3, New Zealand</td>
<td>AGAR 67.5 Equivalent ATAR. To view NCEA entry requirements, refer to: <a href="https://www.monash.edu/admissions/entry-requirements/nz-ncea-entry-requirements">https://www.monash.edu/admissions/entry-requirements/nz-ncea-entry-requirements</a></td>
<td></td>
</tr>
<tr>
<td>Monash University Foundation Year (MUFY)</td>
<td>76.25% Overall average of the best eight units plus any bonus points that may apply. The undergraduate entry requirements published in this brochure are for students who commenced the MUFY program in 2015/2017. Minimum English language requirement met by successful completion of English A and English B with an overall average of 60% or above.</td>
<td></td>
</tr>
<tr>
<td>Ontario Secondary School Diploma – Grade 12, Canada</td>
<td>83.3% Overall average of the best six academic Grade 12 subjects (excluding workplace preparation courses and open courses). Students must achieve a minimum total of 30 credits and complete Community Involvement. Minimum English language requirement met by an overall average of 60% or above in Grade 12 English.</td>
<td></td>
</tr>
<tr>
<td>RMIT Foundation Studies</td>
<td>83% Overall average of percentage grades for all subjects completed, including fails. Minimum English language requirement met by successful completion of English Academic, Business, Research Skills, and English Critical Analysis with an overall average of 60% or above.</td>
<td></td>
</tr>
<tr>
<td>La Trobe Foundation Studies</td>
<td>83% Overall average of percentage grades for all subjects completed, including fails. Minimum English language requirement met by successful completion of English Academic, Business, Research Skills, and English Critical Analysis with an overall average of 60% or above.</td>
<td></td>
</tr>
<tr>
<td>SAT (Scholastic Aptitude Test) from March 2016</td>
<td>1350 Total of the Critical Reading, Mathematics and Writing scores. A completed regionally accredited Year 12 American High School Diploma must also be provided. Minimum English language requirement met by successful completion of Grade 12 English with an overall average of 70% or above (for American High School Diplomas that use a national scale varying from 0 to 120).</td>
<td></td>
</tr>
<tr>
<td>South Africa: National Senior Certificate (awarded from 2000 and onwards)</td>
<td>38 Total scores of the best six subjects (excluding Life Orientation). A minimum of 2 A level passes is required for achieving English Home Language achievement of Level 3 or above. A = 4; B = 3; C = 2; D = 1; E = 0. Minimum English language requirement met by an overall average of 60% or above in English Home Language.</td>
<td></td>
</tr>
<tr>
<td>Sri Lanka GCE A Level</td>
<td>12 Total score of a maximum of the best 3A Level subjects taken in one examination sitting. Score A Level grades as follows: A* or A = 4; B = 3; C = 2; D = 1; E = 0. Minimum English language requirement met by an ETLS overall score of 6.5 with no band less than 6.0.</td>
<td></td>
</tr>
<tr>
<td>STPM, Malaysia</td>
<td>8.67 Total of the best three subjects (excluding Pengajian Am (General Studies)). Minimum English language requirement met by C grade in GCE O Level English Language – 1119 (SPM).</td>
<td></td>
</tr>
<tr>
<td>UEC, Malaysia</td>
<td>3.0 Average of best five subjects. Only grades A1, A2, B3, B4, B5 and B6 to be included in calculation. Scores graded as follows: A1 = 4; A2 = 3; B3 = 2; B4 = 1. Minimum English language requirement met by an overall average of 60% in English and overall average of 50% in English for Academic Purpose.</td>
<td></td>
</tr>
<tr>
<td>UNIST Foundation Studies</td>
<td>8.25 Final grade point average. Minimum English language requirement met by an achievement of C grade or above in Academic English.</td>
<td></td>
</tr>
<tr>
<td>University of Melbourne Trinity Foundation Studies</td>
<td>89% Overall average of the best six subjects. Minimum English language entry requirement met by an overall average of 60% in English and an overall average of 50% in English for Academic Purpose.</td>
<td></td>
</tr>
</tbody>
</table>

## How to apply

### Domestic (Australian) and onshore international students

#### Apply through VTAC

If you are an Australian or New Zealand citizen, an Australian permanent resident, or you are an international student studying an Australian Year 12 or IB in Australia or New Zealand, apply through the Victorian Tertiary Admission Centre (VTAC).

Visit [vtac.edu.au](http://vtac.edu.au)

#### Prerequisites

Please check that you meet the prerequisites for your chosen course before submitting your application. Prerequisite details for each course can be found in the admissions table beginning on page 34.

### International students

International students should apply directly to Monash University and must have completed an equivalent qualification to the Victorian Certificate of Education (VCE) and the prerequisite subjects or equivalent.

For more information visit [monash.edu/study/international](http://monash.edu/study/international)

### Fees

Fees for each course can be found at [study.monash](http://study.monash)

### Scholarships

For more information, and to apply for scholarship, visit [monash.edu/scholarships](http://monash.edu/scholarships)

### Commonwealth Supported Places

Australian citizens, New Zealand citizens, Australian permanent residents and permanent humanitarian visa holders are eligible to apply for a Commonwealth Supported Place (CSP).

Visit [monash.edu/enrolments/loans/commonwealth-supported-place.html](http://monash.edu/enrolments/loans/commonwealth-supported-place.html)

### HECS-HELP/FEES-HELP

Loan options for eligible applicants.

Visit [monash.edu/enrolments/loans/domestic-full-fee.html](http://monash.edu/enrolments/loans/domestic-full-fee.html)
Monash is proud to have the following industry partners who support our students through scholarships and prizes:

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- Aurecon
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- Bega
- Brookfield Multiplex
- BM
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- DORIC
- Energy Developments
- Engineer Australia
- Ericsson
- ExxonMobil
- Fonterra Dairy for Life
- Fulton Hogan
- GARDINER
- GHD
- GlaxoSmithKline
- HP
- Hilton
- Jacobs
- Jemena
- John Holland
- Lockheed Martin
- McCONNELL DOWELL
- MMG
- Myer
- Newcrest
- Orica
- ORORA
- QANTAS
- Rotary Club of Melbourne Park
- SDI
- Simplot
- Snowy Hydro
- Transurban
- vic roads Graduate Program
- Virgin
- Visy
- Wilson
- Woodside
- WorleyParsonsTWP
- Viridian

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- Clive Weeks AO
- Dr CM Tay
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monash.edu/scholarships

Monash on YouTube
youtube.com/monashunivideo

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Future student enquiries

Domestic students
Australian citizens, permanent residents, and New Zealand citizens

Tel: 1800 MONASH (666 274)

Email: future@monash.edu

monash.edu/study/contact

International students

Australia freecall tel: 1800 181 838

Tel: +61 3 9903 4788 (outside Australia)

Email: study@monash.edu

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The information in this brochure was correct at the time of publication (April 2017). Monash University reserves the right to alter this information should the need arise.

You should always check with the relevant faculty office when considering a course. Produced by Strategic Marketing and Communications, Monash University. Job 0417 17P-0200. CRICOS provider: Monash University 00008C Monash College 01805J