Engineering



Civil engineering Electrical and renewable energy engineering Environmental and sustainability engineering Mechanical engineering Mechatronics engineering



Acknowledgement of Country

Deakin University acknowledges the Traditional Custodians of all the unceded lands, skies and waterways on which Deakin students, staff and communities come together. As we learn and teach through virtually and physically constructed places across time, we pay our deep respect to the Ancestors and Elders of Wadawurrung Country, Eastern Maar Country and Wurundjeri Country, where our physical campuses are located. We also acknowledge the many First Nations from where students join us online and make vital contributions to our learning communities.

Artwork: Learning Together, Growing Together by Nathan Patterson.

Your future in engineering

Why study engineering?

Design and innovation are at the heart of engineering at Deakin. Our future-focused courses go beyond theory to provide you with the skills and experience you need to create innovative engineering solutions to the challenges of tomorrow. Choose your area of expertise from our major sequences:

- Civil engineering
- Electrical and renewable energy engineering
- Environmental and sustainability engineering
- Mechanical engineering
- Mechatronics engineering

You will combine contemporary theory with industry-led projects and benefit from Deakin's unique industry partnerships to develop the skills needed to confidently pursue a career as a professional engineer.

Study at Burwood, Geelong Waurn Ponds or online

You can choose to complete your full undergraduate engineering degree in any engineering major at our Melbourne Burwood or Geelong Waurn Ponds Campus, or online.

Industry-informed teaching

Our connection to industry extends beyond curriculum and course design to include student placements, real-world projects, research collaborations, and our industry advisory group. Some of our current industry connections include:

- Acciona
- Air Radiators
- AusNet Services
- Barwon Water
- Downer
- Ford
- ISCAR
- Norman Disney & YoungSEW-EURODRIVE
- Thales.

State-of-the-art facilities

Deakin's engineering precinct houses some of the most advanced and future-focused systems, laboratories and learning spaces in Australia. Throughout your course, you will have access to our state-of-the-art facilities, including those at our Geelong Waurn Ponds Campus. With over \$8 million in high-end teaching equipment and cutting-edge technologies, including expansive 3D printing labs and specialist aids, you'll be equipped to design, visualise and create innovative engineering solutions. Whether you choose to study on campus or online, you'll experience these state-of-the-art facilities firsthand.

deakin.edu.au/eng-facilities

Your future in engineering

Succeed in a booming industry

With an international skills shortage in the engineering industry, and approximately 100,000 more engineers required by 2030¹, Deakin graduates are in demand both in Australia and abroad. In fact, over 93% of our recent graduates found full time employment within four months of completing their course.²

- 1 Australian Council of Engineering Deans: Shortages of Engineers and Supply Projections. December 2021.
- 2 93.4% of our engineering graduates found full-time employment within four months of graduation according to the Graduate Outcomes Survey 2021–2023.

A hands-on approach

Gain practical learning experiences throughout your engineering course with our innovative and student-centred teaching method: Project-Oriented Design-Based Learning (PODBL). In collaboration with industry, PODBL is a key feature of our engineering degrees and will help you graduate ready to excel in your career.

As well as theory-based classes, you'll spend 50% of every trimester learning via team-based projects. You'll tackle real-world industry problems and design, research, test and evaluate solutions, all with the support of academic teaching staff. Work-integrated learning (WIL) gives you the chance to undertake a full-time or part-time industry placement as part of your studies.

Gain professional accreditation

Deakin's Bachelor of Engineering degrees have been designed in accordance with Engineers Australia's accreditation requirements. This gives your degree international recognition, allowing you to practise as a professional engineer in many countries around the world.

What sort of engineer do you want to be?

The work of engineers spans far and wide, from building tunnels and creating sustainable energy systems right through to constructing machinery and designing automated systems. Find out more about the diverse and rapidly evolving engineering sector – and which engineering major will be the best match for you and your future career.

this.deakin.edu.au/career/what-do-engineers-do-explorethe-different-types-of-jobs



'I chose Deakin mainly due to the projectorientated learning, which is basically learning through real-life examples. I did my placement in my second year of uni. My end goal was always to get into my industry and the job placement gives you a good sense of direction.'

Hasan Muttakin Civil engineering graduate

Major sequences

Civil engineering

By studying civil engineering, you'll combine contemporary theory with industry-led projects to develop the skills needed to confidently design, construct and maintain the built infrastructure systems that are vital in our day-to-day lives. You'll learn how to apply scientific and engineering principles to address complex problems and develop innovative solutions that are beneficial to organisations and the community.

Electrical and renewable energy engineering

Acquire sought-after skills in power generation, distribution and control to prepare yourself for the renewable energy careers of the future. With a particular emphasis on electrical and renewable energy design and communication technologies, you'll gain the hands-on skills and experience required to tackle modern engineering challenges. You will also access the latest electrical engineering tools and application software in Deakin's world-class, multi-million-dollar facilities, including our 7.25MW industrial-scale Renewable Energy Microgrid.

Environmental and sustainability engineering

Become a highly skilled graduate ready to tackle global environmental issues such as climate change, sustainability and pollution. Gain knowledge across environmental engineering industry areas including waste management, water engineering, catchment management, and soil and water remediation. Develop solutions-led technical and professional skills to put you in high demand in this future-focused field.

Mechanical engineering

Mechanical engineers are crucial to the design and development of the complex systems, devices and machinery that will be needed to tackle global challenges of the future. These include health assistive technologies and biomedical devices, renewable energy systems, advanced manufacturing facilities and low emissions transport. You will combine contemporary theory with industry-led projects to hone the skills required to develop and run the innovative mechanical systems and technologies of tomorrow.

Mechatronics engineering

This major prepares you to be a practical and industry-ready engineer capable of designing the electronics, robots and autonomous systems of the future. You'll learn how to design, program and integrate electronic devices with mechanical designs that communicate with other computers, devices or even cloud-based systems. You'll be able to deliver innovative solutions to real-world problems and design autonomous and intelligent devices ranging from self-driving vehicles to biomedical systems.

The Deakin Guaranteed ATAR

We are providing lower guaranteed ATARs for eligible Australian Year 12 students, for most undergraduate courses. This will provide you with more certainty, reduce stress and ultimately give you a greater opportunity to get into the course you really want.

To be eligible for the program, you will need to meet at least one of the following criteria, preference Deakin, and submit a SEAS application through VTAC:

- attend a Deakin under-represented school
- live or study in a regional or remote location, or
- be of Indigenous Australian descent.

deakin.edu.au/deakin-guaranteed-atar

Courses

X123 Deakin course code Course duration in years Trimester intake

Accreditations

to employment.

Deakin's Bachelor of Engineering (Industry)

(Honours) course is accredited by Engineers

Campus and online. The course is currently

not accredited at our Melbourne Burwood

Campus. Deakin will be seeking accreditation

for the Melbourne Burwood Campus offering

Australia at our Geelong Waurn Ponds

as we prepare graduates for transition

Accreditation provides recognition against

international benchmarks, allowing graduates

to practise as professional engineers worldwide.

B Melbourne Burwood Campus
 Geelong Waurn Ponds Campus
 Geelong Waterfront Campus
 WB Warrnambool Campus
 Online

Bachelor of Engineering (Industry) (Honours)¹

CAMPUS	в	WP	0
ATAR	75.30	76.65	NP
GUARANTEED ATAR ²	70.00	65.00	65.00

Design and innovation are at the heart of engineering at Deakin. Our future-focused courses go beyond theory to provide you with the skills and experience you need to create innovative engineering solutions to the challenges of tomorrow. The Bachelor of Engineering (Industry) (Honours) extends this to equip you with technical expertise in an engineering field of your choice while also supporting you to take a compulsory year-long work-integrated industry placement as part of your studies.

Undertake core units in your first trimester, before selecting to major in either civil, electrical and renewable energy, environmental and sustainability, mechanical, or mechatronics engineering. You'll combine contemporary theory with industry-led projects and benefit from Deakin's unique industry partnerships to develop the skills needed to confidently pursue a career as a professional engineer.

Work experience

You'll gain industry experience by completing a year-long paid work placement in an engineering workplace in your fourth year. This practice-based experience is intended to exceed the standard professional practice skills

expected of graduate engineers. You'll advance your industry knowledge, which will help you stand out upon graduation.

Careers

At Deakin, we'll prepare to you be a well-rounded engineer that is ready to practise in Australia or abroad. With an international skills shortage in the engineering industry, and approximately 100,000 more engineers required by 2030, Deakin graduates are in demand. Depending on which field of engineering you choose during your degree, you may find work in government, across the private sector, in consulting, or in education and research.

Course structure

This 38-credit-point course consists of 11 credit points of core units, 19 credit points from a major of your choice (Civil, Electrical and renewable energy, Environmental and sustainability, Mechanical or Mechatronics engineering), 2 credit points of open elective units and 6 credit points of industry placement units.

	TRIMESTER 1	TRIMESTER 2
YEARS 1–3	See Year 1, 2 and 3 of cours Environmental and sustaina Bachelor of Engineering (Ho	e map for Civil, Electrical and renewable energy, bility, Mechanical and Mechatronics majors under the nours)
YEAR 4	Industry Placement	Industry Placement
YEAR 5	 R 5 See Year 4 of course map for Civil, Electrical and renewable energy, Environmenta and sustainability, Mechanical and Mechatronics majors under the Bachelor of Engineering (Honours) 	

Ready to find out more? Visit our course webpage for full details, including pre-course and entry requirements, unit selection options, campus and trimester availability, and more. deakin.edu.au/course/S466

Bachelor of Engineering (Honours) (5467) (-)4 (-)71, T2

CAMPUS	в	WP	0
ATAR	70.35	67.20	NP
GUARANTEED ATAR ²	65.00	60.00	60.00

Go beyond the classroom with Deakin's futurefocused Bachelor of Engineering (Honours). Get the skills and hands-on experience to create innovative solutions to real-world engineering problems. Develop the knowledge and expertise to enter professional engineering practice in civil, environmental and sustainability, electrical and renewable energy, mechanical, or mechatronics engineering. Through industryinformed projects, you'll combine theory with contemporary practice to develop the skills needed to confidently design, construct and maintain engineering systems. Whether you are building robots in our state-of-the-art lab spaces or solving complex problems on your industry placement, our flexible approach to projectbased learning will help you develop the practical skills necessary for your ultimate career.

Work experience

You'll gain industry experience by completing at least 30 to 60 days of practical work experience in an engineering workplace. Assessment tasks are designed to deepen your understanding of the engineering profession. Explore possible career outcomes while having the opportunity to establish valuable professional networks.

Careers

With an international skills shortage in the engineering industry, Deakin graduates are in demand both in Australia and abroad.

Secure your future career by learning the design, development and production skills needed to work in a diverse range of industries that contribute to developing the systems of the future. Depending on your major, you can expect to gain employment in a wide range of private and government organisations. Roles may range from construction to environmental protection, or from robotics to building the infrastructure of tomorrow.

Course structure

This 32-credit-point course consists of 11 credit points of core units, 19 credit points from a major of your choice (Civil, Electrical and renewable energy, Environmental and sustainability, Mechanical or Mechatronics engineering), and 2 credit points of elective units.

Accreditations

Deakin's Bachelor of Engineering (Honours) course is accredited by Engineers Australia at our Geelong Waurn Ponds Campus and online. Deakin will be seeking accreditation for the Melbourne Burwood Campus offering as we prepare graduates for transition to employment.

Ready to find out more? Visit our course webpage for full details, including pre-course and entry requirements, unit selection options, campus and trimester availability for domestic and international students, and more. deakin.edu.au/course/S467



'In my first year, I travelled to ANSTO to learn about nuclear energy and network with other STEM students from Australia and New Zealand. I also completed my internship through one of Deakin's industry partners, which helped me develop my industry knowledge and gave me a chance to enhance my time management and research skills in a professional setting.'

Rosemarie Henderson

Environmental engineering graduate

Civil engineering major course map³

	TRIMESTER 1	TRIMESTER 2
YEAR 1	Sustainable Design Engineering Physics ⁴ Engineering in Society ⁴ Applied Algebra and Statistics	Materials Engineering Project ⁴ (2 credit points) Introduction to Programming for Engineers Introduction to Mathematical Modelling
YEAR 2	Field Investigation ⁴ (2 credit points) Engineering Modelling Fluid Mechanics ⁴	Structural Design ⁴ (2 credit points) Stress and Failure Analysis Road and Pavement Engineering
YEAR 3	Water Engineering Design ⁴ (2 credit points) Hydrology and Hydraulics ⁴ Theory of Structures	Reinforced Concrete and Steel Structures ⁴ (2 credit points) Geotechnical Engineering Professional Practice ⁵
YEAR 4	Engineering Project A ⁴ (2 credit points) Traffic and Transport Engineering Elective	Engineering Project B ⁴ Infrastructure Engineering (2 credit points) Elective

Electrical and renewable energy engineering major course map³

	TRIMESTER 1	TRIMESTER 2
YEAR 1	Sustainable Design Engineering Physics ⁴ Engineering in Society ⁴ Applied Algebra and Statistics	Electrical Systems Engineering Project ⁴ (2 credit points) Introduction to Programming for Engineers Introduction to Mathematical Modelling
YEAR 2	Power Engineering Design ⁴ (2 credit points) Engineering Modelling Analogue and Digital Electronics ⁴	Renewable Energy Generation Systems Design ⁴ (2 credit points) Power Electronics ⁴ Elective
YEAR 3	Transmission and Distribution System Design ⁴ (2 credit points) Data Communication ⁴ Energy Efficiency, Management and Market Analysis	Control Systems Engineering ⁴ (2 credit points) Electrical Machines and Drives ⁴ Professional Practice ⁵
YEAR 4	Engineering Project A ⁴ (2 credit points) Microgrid Design, Integration and Management Elective	Engineering Project B ⁴ (2 credit points) Power System Analysis Electrical Systems Protection

- This course is not available to international students.
 2026 DGAs are indicative at time of publishing.
- 2 2026 DGAS are indicative at time of publishing. Visit individual course webpages for updated DGAs.
- 3 Course map may differ for students who have completed Mathematics: General Mathematics in Year 12.
- 4 Students enrolled online for these units are required to attend campus mode conducted activities during the corresponding intensive activities in a trimester. Attendance at campus mode activities is linked to assessment requirements within the engineering programs. Failure to attend will result in not meeting the hurdle requirement of the respective assessment. Thus, a fail grade shall be awarded for the respective affected unit(s) for that particular trimester.
- 5 Students must have successfully completed STP010 Career Tools for Employability (0-credit-point unit) before commencing SEL703 Professional Practice. Students are encouraged to complete this unit in Trimester 3 of the third year of study.

IGNITED Scholarship

If you're a female student about to start an undergraduate degree in areas including engineering, information technology or construction management, you could be eligible for an IGNITED Scholarship.

A portion of your course fees will be reimbursed and you will also be assigned an academic mentor.

deakin.edu.au/ignited-scholarship

See the full range of scholarships available at **deakin.edu.au/scholarships**.

Courses

Environmental and sustainability engineering major course map¹

	TRIMESTER 1	TRIMESTER 2	
YEAR 1	Sustainable Design Engineering Physics ² Applied Algebra and Statistics Engineering in Society	Materials Engineering Project ² (2 credit points) Introduction to Programming for Engineers Introduction to Mathematical Modelling	
YEAR 2	Field Investigation ² (2 credit points) Engineering Modelling Fluid Mechanics ²	Environmental Health Engineering ² (2 credit points) Marine Geographic Information Systems Quantitative Marine Science	
YEAR 3	Water Engineering Design ² (2 credit points) Hydrology and Hydraulics ² Air Pollution and Control ²	Waste Engineering and Transformation Systems ² (2 credit points) Enviromental Planning and Impact Assessment Elective	
YEAR 4	Engineering Project A ² (2 credit points) Integrated Catchment Systems Professional Practice ³	Engineering Project B ² (2 credit points) Infrastructure Engineering Elective	

Mechanical engineering major course map¹

	TRIMESTER 1	TRIMESTER 2
YEAR 1	Sustainable Design Engineering Physics ² Engineering in Society ² Applied Algebra and Statistics	Materials Engineering Project ² (2 credit points) Introduction to Programming for Engineers Introduction to Mathematical Modelling
YEAR 2	Machine Design ² (2 credit points) Engineering Modelling Fluid Mechanics ²	Structural Design ² (2 credit points) Stress and Failure Analysis ² Thermodynamics ²
YEAR 3	Product Modelling and Design ² (2 credit points) Advanced Stress Analysis Manufacturing ²	Control Systems Engineering ² (2 credit points) Thermo-Fluid Systems ² Dynamics of Machines ²
YEAR 4	Engineering Project A ² (2 credit points) Computational Fluid Dynamics ² Elective	Engineering Project B ² (2 credit points) Professional Practice ³ Elective

Study engineering online

Accessing an engineering degree is easier than ever, with all our engineering degrees offered online.⁴ With the same leading academic staff and collaborative approach as on-campus study, our online learning experience is enhanced by Deakin's digital tools. These allow you to watch content and learn in your own time, contribute to seminar discussions in online forums with peers, and attend drop-in sessions with lecturers. You can also access software or lab facilities online from anywhere in the world.

Award-winning university career service⁵

DeakinTALENT will prepare you to secure the jobs of tomorrow. Our award-winning service is available to you from day one and will support you for the rest of your career. You'll have lifetime access to career coaching, industry networking opportunities, and a comprehensive suite of digital resources helping you develop the most employable version of yourself.

deakintalent.deakin.edu.au

Skills to get you a job

At Deakin, every course is shaped by industry experts, ensuring you graduate with real-world expertise and practical skills for a competitive edge in the workplace. Secure your future today at Victoria's #1 university for graduate employment⁶ and course satisfaction.⁷

Passionate about making a positive impact on the world?

Studying a sustainability degree at university could be the perfect next step. While several Deakin degrees share a commitment to environmental sustainability, their focus and job outcomes vary. Find out how studying engineering at Deakin could be the perfect choice for aspiring change-makers like you.

deakin.au/studyenviroeng



Mechatronics engineering major course map¹

	TRIMESTER 1	TRIMESTER 2
YEAR 1	Sustainable Design Engineering Physics ²	Electrical Systems Engineering Project ² (2 credit points)
	Engineering in Society ²	Introduction to Programing for Engineers
	Applied Algebra and Statistics	Introduction to Mathematical Modelling
YEAR 2	Machine Design ² (2 credit points) Engineering Modelling Analogue and Digital Electronics ²	Embedded Systems Design ² (2 credit points) Power Electronics ² Electromechanical Systems
YEAR 3	Mechatronic Design ² (2 credit points) Data Communication ² Systems and Signals	Control Systems Engineering ² (2 credit points) Dynamics of Machines ² Virtual and Augmented Interfaces ²
YEAR 4	Engineering Project A ² (2 credit points) Intelligent Autonomous Robots Elective	Engineering Project B ² (2 credit points) Professional Practice ³ Elective

Award recipients for the promotion of gender equity in STEMM

Deakin has received the prestigious Athena SWAN Bronze Institution Award for its programs that encourage more women to study, research and work in Science, Technology, Engineering, Mathematics and Medicine (STEMM).

The Athena SWAN program is run by Science in Australia Gender Equity (SAGE), and the Bronze award recognises Deakin's extensive work in promoting gender equity, inclusivity and diversity.

- 1 Course map may differ for students who have completed Mathematics: General Mathematics in Year 12.
- 2 Students enrolled online for these units are required to attend campus mode conducted activities during the corresponding intensive activities in a trimester. Attendance at campus mode activities is linked to assessment requirements within the engineering programs. Failure to attend will result in not meeting the hurdle requirement of the respective assessment. Thus, a fail grade shall be awarded for the respective affected unit(s) for that particular trimester.
- the respective affected unit(s) for that particular trimester.
 Students must have successfully completed STP010 Career Tools for Employability (0-credit-point unit) before commencing SEL703 Professional Practice. Students are encouraged to complete this unit in Trimester 3 of the third year of study.
- 4 Some campus attendance is required to participate in engineering intensives.
- 5 Australian Graduate Recruitment Industry Awards, 2017, 2018, 2019, 2020 winner for the most popular career service in Australia; Employability award, 2021 Australian Financial Review Higher Education Awards.
- 6 Graduate Outcomes Survey 2023, Quality Indicators for Learning and Teaching (QILT), based on overall employment for domestic undergraduates, 4–6 months after course completion, equal overall employment rate with Monash University.
- 7 Australian Graduate Survey 2010–2015, Graduate Outcomes Survey 2016–2023, Quality Indicators for Learning and Teaching (QILT).

Courses



B Melbourne Burwood Campus WP Geelong Waurn Ponds Campus WF Geelong Waterfront Campus WB Warrnambool Campus \bigcirc Online

Bachelor of Engineering (Honours) §467				🗄 T1, T2
	CAMPUS	В	WP	0
(Y12) VCE units 3 and 4:	ATAR	70.35	67.20	NP
 English – study score of at least 25 (EAL) or 20 (not EAL) Maths – study score of at least 20 in one of Maths: Mathematical Methods or Maths: Specialist Mathematics or Maths: General Mathematics. 	GUARANTEED ATAR ³	65.00	60.00	60.00
(NY12) See webpage for further information.				
deakin.edu.au/course/S467 ²				
Bachelor of Engineering (Industry) (Honours) ⁴ 📢			⊕5 f	
ENTRY REQUIREMENTS	CAMPUS	B	WP	0
Y12 VCE units 3 and 4:	ΔΤΔΡ	75 30	76.65	NP
 English – study score of at least 25 (EAL) or 20 (not EAL) Maths – study score of at least 20 in one of Maths: Mathematical Methods or Maths: Specialist Mathematics or Maths: General Mathematics. 	GUARANTEED ATAR ³	70.00	65.00	65.00
(NY12) See webpage for further information.				
deakin.edu.au/course/S466 ²				
RELATED COURSE				
Bachelor of Software Engineering (Honours) (\$464)			(]4 [

ENTRY REQUIREMENTS¹ CAMPUS **B** 0 (Y12) VCE units 3 and 4: ATAR 67.15 NP • English – study score of at least 25 (EAL) or 20 (not EAL) **GUARANTEED ATAR³** 63.00 63.00 • Maths - study score of at least 20 in one of Maths: Mathematical Methods or Maths: Specialist Mathematics or Maths: General Mathematics. (NY12) See webpage for further information.

deakin.edu.au/course/S464²

- 1 International student entry requirements can be found at: deakin.edu.au/ international-students.
- 2 Visit our course webpage for full details, including pre-course and entry requirements, non-Year 12 applicant categories and associated admission requirements, unit selection options, campus and trimester availability for domestic and international students, and more.
- 2026 DGAs are indicative at time of publishing. Visit individual course webpages 3 for updated DGAs.
- 4 This course is not available to international students.

Benefit from our industry-connected degrees

The skills, experience and industry connections you gain while studying an industry-led engineering degree at Deakin could ultimately set you apart when applying for your dream role. Hear some of our industry partners talk about their connections to Deakin and what they value most about Deakin engineering graduates.

deakin.yt/30-years-eng-links

Eaa	Inonch	20
EIIU	uleeli	IIU

8

Contact us

We're here to help

We have staff at each of our campuses who are more than happy to answer your general queries.

Prospective student enquiries Domestic students 1800 693 888 deakin.edu.au/help-hub

International students +61 3 9627 4877 study@deakin.edu.au

Social media at Deakin

facebook.com/DeakinUniversity
 instagram.com/DeakinUniversity
 tiktok.com/@deakinuni
 linkedin.com/school/deakin-university

Other useful websites

vtac.edu.au studyassist.gov.au myfuture.edu.au youthcentral.vic.gov.au

Your pathway to a PhD or research degree

For over 50 years, Deakin research has been shaping the world. Did you know that studying at the honours level gives you valuable research experience and opens doors to a future PhD or masters by research? To find out more, visit: **deakin.edu.au/research**.

Find an honours degree

Want to know more about studying at the honours level? To get more information visit: **deakin.edu.au/study/ how-to-apply/honours-degree-applications**.

Published by Deakin University in February 2025. While the information published in this guide was accurate at the time of publication, Deakin University reserves the right to alter, amend or delete details of course offerings and other information published here. For the most up-to-date course information, please view our website at **deakin.edu.au**.

Deakin University CRICOS Provider Code: 00113B TEQSA Provider ID: PRV12124



DEAKIN OPENDAY

Warrnambool **SUNDAY 3 AUGUST**

Geelong Waterfront and Waurn Ponds **SUNDAY 17 AUGUST**

Melbourne Burwood **SUNDAY 24 AUGUST**



Deakin University CRICOS Provider Code: 00113B