Bachelor of Mechatronics Engineering (Honours)

Undergraduate

Gain the skills to become an industry-ready professional engineer and apply mechatronics engineering principles to challenging real-world problems such as the automation of industrial processes using robotics and other cutting-edge technologies, flying drones, 3D printers, robotics and self-driving cars.

Course overview

The course offers studies in electronics, mechanical design and autonomous systems. Through Project-Oriented Design-Based Learning (PODBL), you’ll learn fundamental theory and apply it to industry-relevant projects to develop innovative solutions to real-world problems.

The course is tailored to industry needs and job readiness, and gives you access to cutting-edge technology and facilities, including state-of-the-art mechatronic systems and industrial robots. Through final-year projects, you will gain an introduction to advanced research areas such as mobile robotics and 3D printing, and have the opportunity to design an autonomous robot.

You will also be provided with transferable skills in entrepreneurship, innovation, project management, technical report writing and more. You’ll develop an understanding of ethics within the engineering profession, and of technical and professional issues within the industry while gaining an insight into the social, cultural, global and environmental responsibilities of the modern engineer.

Industry informed teaching

Project-Oriented Design-Based Learning (PODBL) in collaboration with industry is a key feature of our engineering courses. Beginning in the first trimester of study and continuing throughout your degree, you will have opportunities to work independently and in groups, to actively develop ideas and design products that satisfy industry client needs.

Course structure

Bachelor of Mechatronics Engineering (Honours)

Location: Melbourne Burwood Campus\(^1\), Geelong Waurn Ponds Campus\(^2\) and Cloud Campus\(^3\)

Duration: 4 years full-time study (or part-time equivalent)

Intake: March (Trimester 1), July (Trimester 2)\(^3\)

Deakin code: S463

ATAR score\(^4\): 70.55 \(\text{C N/A}^5\) 65.15

VTAC code: Melbourne Burwood Campus (1400514791), Geelong Waurn Ponds Campus (1400314791), Cloud Campus (1400614791)

The Bachelor of Mechatronics Engineering (Honours) consists of 32 credit points of study, including 25 core units (totalling 30 credit points) and 2 elective units (totalling 2 credit points).

Professional industry experience

Professional Engineering Practice is a compulsory unit in all Deakin engineering degrees. This means you will have a minimum of 60 days work experience in one or more organisations, giving you insight into your future career options.

You will also study a range of project-oriented design-based learning and project-based learning units, bringing together theory, site studies and laboratory investigations, including Design Fundamentals, Electrical Systems Engineering Project and Embedded System Design, for example.

Career opportunities

Graduates can expect to gain employment in areas including factory control, automation and control system design, as electronic control systems engineers or robotics engineers.

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1. The first year is available at all three campuses. Students undertaking first year at the Melbourne Burwood Campus can choose to complete their course requirements either at the Geelong Waurn Ponds Campus or via the Cloud Campus.
2. Cloud Campus students are required to participate in campus-based intensive activities each trimester at the Geelong Waurn Ponds Campus.
3. Trimester 2 intake only available at Waurn Ponds (Geelong) and Cloud Campus.
4. Lowest selection rank of an applicant to which an offer was made in 2019.
5. The ATAR is ‘unpublished’. ‘Unpublished’ means the course is available at this campus, but the lowest selection rank of an applicant to which an offer was made in isn’t available.

deeke.edu.au/course/S463

Deakin University CRICOS Provider Code: 00113B
World-class facilities

Engineering students at Deakin will have access to world-class facilities located within the Centre for Advanced Design in Engineering Training (CADET) building at the Geelong Waurn Ponds Campus. CADET features over $8 million worth of teaching equipment.

The cutting-edge technologies, including one of the two largest 3D printers in the southern hemisphere, specialist aids and high-end equipment, enable yourself and researchers to be creative and come up with innovative solutions. Having access to some of the best facilities in the Australian sector allows students to realise and validate their designs through combinations of computer simulation, prototyping, testing and manufacturing.

Key facilities/laboratories

- Virtual reality (VR) lab
- 3D printers - one of the two largest 3D printing labs in the southern hemisphere
- Design and realisation studios
- Deakin AusNet Services electrical engineering lab
- Materials science corrosion and polymer lab
- Concrete and structural testing facilities
- CNC machining centres
- Mechatronics and electronics lab
- High voltage lab - capable of reaching voltages up to 500kV
- Digital manufacturing lab
- Network sensing control lab.

Find out more at deakin.edu.au/engineering/cadet

Interested in applying?

Entry requirements

Entry for applicants with recent secondary education (previous three years) will be based on their performance in Senior Secondary Certificate of Education, with pre-requisite units 3 and 4; a study score of at least 25 in English EAL (English as an additional language) or 20 in English other than EAL and a study score of at least 20 in mathematical methods (any) or specialist mathematics (or equivalent).

Entry for applicants with previous Tertiary, VET, life or work experience: Prerequisites of English and mathematics as for year 12 school leavers (or equivalent). Entry will be based on their performance in:

- Senior Secondary Certificate of Education with ATAR of at least 50 or equivalent OR
- Certificate IV in a related discipline OR
- Diploma in any discipline or 50% completion of Diploma in a related discipline OR
- Successful completion of relevant study – equivalent to at least two Deakin University units – at an accredited higher education institution OR
- Evidence of academic capability judged to be equivalent, including Foundation program approved by Faculty Board, or relevant work or life experience.

How to apply

Depending on your course, our flexible trimester system means you may be able to start in Trimester 1 (March), 2 (July) or 3 (November).

If you’re currently enrolled in Year 12 (in 2019), applications for Trimester 1 must be made through VTAC, www.vtac.edu.au. Note that when you apply via VTAC, you can’t also apply directly to Deakin.

Conversely, you can apply directly to Deakin for Trimester 1 if you’re not currently enrolled in Year 12 and you haven’t submitted a VTAC application (so long as you’re just applying for one course).

Applications for Trimester 2 or 3 should be made directly to Deakin via the applicant portal, deakin.edu.au/apply.

Deakin’s Bachelor of Mechatronics Engineering (Honours) course is accredited by Engineers Australia, which gives the degrees international recognition, allowing graduates to practise as professional engineers in many countries around the world.

Find out more at deakin.edu.au/engineering/cadet

Professional recognition

Deakin University reserves the right to alter, amend or delete details of the course and unit offerings. Printed June 2019.