



**Flinders**  
UNIVERSITY

# SHAPE THE THINGS TO COME



Orby

## AT FLINDERS ENGINEERING WE'RE POWERED BY CREATIVITY

We are excited by the difference we make in the world. With innovative thinking, we explore new ideas in Engineering to shape the things to come.

Fuelled by advanced technology and infinite possibilities, make your mark at the Centre of Engineering Excellence.

The future is here.

FOR ENTRY REQUIREMENTS, COURSE  
INFORMATION AND TO APPLY  
[FLINDERS.EDU.AU/  
ENGINEERING-EXCELLENCE](https://flinders.edu.au/engineering-excellence)

## ENGINEERING EXCELLENCE

From driverless vehicles to disaster relief communications, our students and researchers are working on creative solutions to the challenges in our world.

### ACCESSIBLE GAMING CONTROLLER

In a world-first study led by Flinders' lecturer, David Hobbs, Orby is an award-winning accessible gaming system and controller for people with hand impairments, including children with cerebral palsy and stroke patients.

The orb-shaped controller allows people to play games that would usually be too difficult because of the fine motor skills required to use a traditional controller.

### NEXT GENERATION ROBOTICS

Baxter is one of our demonstration and training robots who is capable of doing repetitive, precise tasks almost endlessly.

Designed by Rethink Robotics, a world leading technology company founded by Flinders graduate Professor Rodney Brooks, Baxter was designed with human characteristics so workers feel comfortable around him.

### DRIVERLESS VEHICLE TRIALS

The Flinders Autonomous Shuttle Trial is a collaboration between project partners Flinders University and RAA, together with eight industry partners.

The first stage will see driverless shuttles used on public roads within Tonsley, connecting public transport and businesses within the precinct. The second stage is focused on developing freight logistics to see cargo delivered to Tonsley freights arrivals point then delivered by autonomous vehicles to its final destination.

### AWARD-WINNING HEXAPOD ROBOT

This award-winning robot, based at the Medical Device Research Institute at Flinders, was developed to enhance understanding of 3D performance of normal and diseased joints and their artificial replacements by simulating complex joint motion.

The Hexapod team, led by Flinders engineer Dr John Costi, was a successful collaboration between biomedical and mechanical engineering researchers.

### DISASTER RELIEF COMMUNICATIONS

Serval Mesh is aimed at supporting disaster relief efforts by developing technology that creates direct connections between cellular phones through their Wi-Fi interfaces.

The Flinders-led project team has developed a secure and inexpensive post-disaster deployment for remote locations. This solution enables off-the-shelf Android phones to perform infrastructure-free, peer-to-peer voice, text and data services.

### AUTONOMOUS UNDERWATER VEHICLES (AUVS)

Associate Professor Karl Sammut's team are investigating new ways to launch and recover autonomous vessel without the need for human involvement. The new technology will help to develop a system to launch and recover unmanned rescue vessels in open seas around the world.

The development of AUVs for maritime surveying and surveillance is a growth area, particularly in the mineral exploration, fisheries, marine engineering and military defence sectors.

# THE FUTURE IS HERE



## ENGINEERING DEGREES

Our core engineering degrees are professionally accredited and recognised internationally, increasing your employment opportunities once you graduate.

The Bachelor of Engineering - flexible entry allows you to start a first year engineering degree without deciding on a specialisation until the end of your first year.

### BACHELOR OF ENGINEERING

#### Bachelor of Engineering Science

#### Bachelor of Engineering (Honours)

- Biomedical
- Civil
- Computer and Network Systems
- Electrical
- Electronics
- Mechanical
- Maritime
- Robotics
- Software

### MASTERS DEGREES

#### Master of Engineering Science

- Biomedical
- Civil
- Electrical and Electronic
- Materials
- Software

#### Master of Engineering

- Biomedical
- Civil
- Electronics
- Materials

## SPECIALISATIONS

### Biomedical

The first university in Australia to offer this accredited degree, you'll gain a strong education in both Engineering and Medical Science.

### Civil

Attracting highly creative and innovative problem solvers, our research strengths include designing future traffic systems and improved construction design.

### Computer and Network Systems

A blend of electronics, computer networks and computer science, you'll learn to design and analyse hardware systems and algorithms for products like mobile phones.

### Electrical

You can focus on niche areas including renewable technologies and electrical drive systems (like those used on submarines).

### Electronics

A high demand discipline, our research strengths include embedded systems and instrumentation.

### Materials

Materials connects you to number of research areas including nanotechnology, mechanical engineering, chemical sciences, electrical engineering and civil engineering.

### Maritime

You can specialise in naval architecture and ocean engineering, with access to state-of-the-art experimental facilities.

### Mechanical

An engineering discipline in great demand around the world, our strengths include fluid dynamics and maritime applications.

### Robotics

You can study the only robotics course in South Australia based on electronics and autonomous intelligent systems – two of the key elements of the latest robotics technologies.

### Software

This future-oriented degree enables you to choose a course of study with either an electronics or computer science focus.

EXPLORE YOUR OPTIONS  
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ENGINEERING-EXCELLENCE