

# THE CENTRE OF ENGINEERING EXCELLENCE

Tonsley campus

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# **FLINDERS ENGINEERING**

# **CONNECT WITH INDUSTRY**

#### Longest industry placement in Australia

Undergraduates are offered 20-week industry placement in their third year.

Postgraduates have opportunity to undertake 12-week industry placement.

We have developed close relationships with more than 200 local, national and international organisations including:

- SAGE Automation
- KPMG
- BAE Systems

#### Professional accreditation

All core UG and PG programs accredited by Engineers Australia at level of professional engineer.

Recognised internationally by Washington Accord.

#### Industry-led curriculum

Strong connections with industry informing course content, research areas and industry placements.

#### Interact with industry

Opportunity to collaborate with industry during degree, including:

- Cisco Network Academy
- Flinders Medical Device Research Instititute
- Centre for Nanoscale Science and Technology
- New Venture Institute
- Flinders Autonomous Shuttle Trial

# **POWERED BY CREATIVITY**

#### Orby

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

#### Baxter

Baxter is one of our demonstration and training robots designed by Rethink Robotics, a world leading technology company founded by Flinders graduate Professor Rodney Brooks.

#### **Driverless vehicles**

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

#### Hexapod robot

This award-winning robot, led by Flinders' Dr John Costi, was developed to enhance understanding of 3D performance of normal and diseased joints and their artificial replacements by simulating complex joint motion.

#### Serval mesh

The Flinders-led project team has developed a secure and inexpensive postdisaster deployment for remote locations.

#### Autonomous underwater vehicles

Associate Professor Karl Sammut's team are developing a system to launch and recover unmanned rescue vessels in open seas around the world.

## **CULTURE OF COLLABORATION**

#### **Innovation district**

Flinders is the first university to establish a campus at Tonsley, Australia's first innovation district.

Industries located at Tonsley include:

- **Tesla Service Hub:** local technicians will monitor and service the world's largest lithium ion battery, along with the superchargers installed across SA
- **Siemens Service Centre:** Ranked 63 on Fortune Global 500, this facility maintains turbomachinery equipment across Australasia
- Aurrigo Driverless Technology: a division of RDM Group, Aurrigo design, manufacture and deploy autonomous vehicles globally

#### **Flinders at Tonsley**

World-class \$120 million teaching and research facility.

Home to over 150 staff and 2,000 students across engineering, computer science, and mathematics programs.

# Specialised labs

Tonsley has 28 specialist laboratories including:

- Biomechanics and Implants Lab
- Al and Robotics Research Lab
- Advanced Control Systems Lab
- Large Scale Materials Testing Lab
- Serious Gaming and Haptics Lab

# **COURSE AND ENTRY REQUIREMENTS**

	(an	COURSE DURATION	INTAKE - SEMESTER	ENGLISH REQUIREMENTS IELTS (ACADEMIC)			ACADEMIC REQUIREMENTS				
	2018 FEE (AUD)			OVERALL	SPEAKING	WRITING	A LEVELS	ATAR	IB (BEST 6)	HKDSE	CRICOS
BACHELOR DEGREES											
Bachelor of Engineering (Biomedical) (Honours)	32,200	4	S1/S2	6	6	6	8	75	26	18	083439D
Bachelor of Engineering (Civil) (Honours)	32,200	4	S1/S2	6	6	6	8	75	26	18	083441K
Bachelor of Engineering (Computer and Network Systems) (Honours)	32,200	4	S1/S2	6	6	6	8	75	26	18	058294B
Bachelor of Engineering (Electrical) (Honours)	32,200	4	S1/S2	6	6	6	8	75	26	18	083443G
Bachelor of Engineering (Electronics) (Honours)	32,200	4	S1/S2	6	6	6	8	75	26	18	083444G
Bachelor of Engineering (Mechanical) (Honours)	32,200	4	S1/S2	6	6	6	8	75	26	18	083446E
Bachelor of Engineering (Maritime) (Honours)	32,200	4	S1/S2	6	6	6	8	75	26	18	093433B
Bachelor of Engineering (Robotics) (Honours)	32,200	4	S1/S2	6	6	6	8	75	26	18	083449B
Bachelor of Engineering (Software) (Honours)	32,200	4	S1/S2	6	6	6	8	75	26	18	083450J
Bachelor of Engineering Science	32,200	3	S1/S2	6	6	6	6	75	26	18	063694B
MASTERS DEGREES											
Master of Engineering (Biomedical)	33,600	2	S1/S2	6	6	6		055942K			
Master of Engineering (Civil)	33,600	2	S1/S2	6	6	6	С				091861A
Master of Engineering (Electronics)	33,600	2	S1/S2	6	6	6					061252G
Master of Engineering (Materials)	33,600	2	S1/S2	6	6	6					088514B
Master of Engineering Science (Biomedical)	33,600	2	S1/S2	6	6	6	Ар	094010J			
Master of Engineering Science (Civil)	33,600	2	S1/S2	6	6	6		094010J			
Master of Engineering Science (Electrical and Electronic)	33,600	2	S1/S2	6	6	6		094010J			
Master of Engineering Science (Materials)	33,600	2	S1/S2	6	6	6					094010J
Master of Engineering Science (Software)	33,600	2	S1/S2	6	6	6					094010J

# **SPECIALISATIONS**

Bachelor of Engineering - flexible entry allows students to start their engineering degree but defer making decision about a specialist area until the end of their first year.

We also offer a Bachelor of Engineering Science as a pathway to full, accredited engineering degrees.

# Biomedical

Flinders was the first university in Australia to offer this accredited degree.

#### Civil

Research strengths include future traffic systems and construction design.

#### **Computer and Network Systems**

Blend of electronics, computer networks and computer science to design and analyze hardware systems and algorithms.

#### Electrical

Niche areas include renewable technologies and electrical drive systems.

## Electronics

Strengths include embedded systems and instrumentation.

## Maritime

Specialise in naval architecture, ocean engineering, marine and offshore sytems.

#### Materials

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

#### Mechanical

Niche areas include fluid dynamics and maritime applications.

## Robotics

Only SA robotics course based on electronics and autonomous intelligent systems.

## Software

Students can focus on either electronics or computer science.



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