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# Cochlear Autumn School of Engineering

Inspiring Engineering Futures  
20–24 April 2020



# Welcome

The Cochlear Autumn School of Engineering (CASE) is an initiative sponsored by Cochlear; Engineers Australia - Sydney; Office of the NSW Chief Scientist & Engineer; NSW universities; engineering companies and participating Rotary clubs. CASE is in its sixth year and aims to give 100 Year 11 & Year 12 students a better understanding of what engineering is and how it works in every day life.

CASE 2020 will run from Monday 20 to Friday 24 April.

CASE Students will learn about the role of professional engineers in society and different disciplines. They will meet and interact with professional engineers employed by government, private companies, researchers and academics in a wide range of engineering disciplines. They will gain valuable insight into career opportunities available to men and women in engineering. Visits to industry will provide a valuable opportunity to gain first hand experience in the role of professional engineers in a wide range of activities, including the management of major projects.

## Daily Program

CASE will convene at 8am on Monday 20 April 2020 at UTS Broadway. Students are required to make their own travel arrangements to and from UTS Broadway each day. The group will be picked up from UTS each morning by coach and will visit one University and one Engineering site per day. Tuesday or Wednesday night (tbc) Careers Night: Young Engineers from leading engineering companies will host informal discussion with CASE students - about studying at University; their journeys so far; and their day to day lives as engineers.

## What is engineering?

This diverse list of options is not the full story, it represents a number of the major Colleges - there is also Materials, Quantum, Digital, IOT and the list goes on...

### Aeronautical/Aerospace

**Engineering:** Design, construction and operation of aircraft, aerospace vehicles and propulsion systems.

### Biomedical Engineering:

Application of engineering methods to find solutions to problems in the area of medicine and other life sciences.

**Chemical Engineering:** Design, development and management of chemical processes in such industries as petrochemical, plastics, oil refining, food processing, industrial chemicals, water treatment and waste treatment.

### Computer Engineering:

Application, design and construction of computerbased systems for information processing, communications or control.

**Electrical Engineering:** Design, development and management of systems and devices in the fields of communications, computing and electric power.

### Environmental Engineering:

Assessment of the impact of society's activities on the environment and determination of strategies which safeguard the integrity of the environment.

### Mechanical Engineering:

Design, operation and maintenance of machines, manufacturing processes, heating and air conditioning and bulk materials handling.

### Mechatronic Engineering:

Create products such as robotic lawn mowers and robot floor cleaners. Mechatronic engineers must be familiar with mechanical engineering, computing, electronics.

### Mining/Geotechnical

**Engineering:** Application of engineering principles to underground and above ground mining including materials handling and treatment.

**Software Engineering:** Prepares and installs solutions by determining and designing system specifications, standards, and programming. Improves operations by conducting systems analysis; recommending changes in policies and procedures.



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## Requirements

You are in Year 11 or Year 12 this year, 2020. You need to be studying 2 units Advanced Math (or more) and 2 units of science (Physics, Chemistry or Biology). Engineering Studies is desirable but not compulsory as this subject is not offered at all NSW schools.

## Cost

The cost to attend CASE2020 will be priced at \$300 (inc. GST) for metropolitan students\* and \$700 (inc. GST) for regional students requiring accommodation.\*\* If selected to attend, this amount will need to be paid prior to the commencement of the school. This cost covers daily lunches, snacks, secure coach transfers to the tours & workshops, and dinner as part of the Careers Night. Travel expenses from home to UTS and return each day are the responsibility of the student.

\*If you are from Regional NSW and have friends/family in Sydney you may select the \$300 registration.

\*\*The \$700 package is limited to 20 places. Price includes CASE + 5 nights subsidised accommodation from Sunday 19 - Friday 24 April. Regional students are recognised as those travelling more than 1.5 hours from Sydney Metropolitan.

## Restrictions

Due to demand:

**Registrations are limited to 4 Students per school.**

## Rules

Students' health and safety is EA's priority. It is therefore a requirement that students agree to stay with the group from arrival at UTS each morning to drop off at Central Station each afternoon. Respectful behaviour is expected at all times – to your fellow students, Engineers Australia's project team, University teams, and Industry support personnel.

## Recognition of attendance

Student involvement in CASE is recognised by the participating universities and the broader tertiary world. Participation in CASE serves to assist students' application to engineering degrees & technical courses.

## Enquiries:

[stemnsw@engineersaustralia.org.au](mailto:stemnsw@engineersaustralia.org.au)

Engineers Australia's Autumn School of Engineering is proudly sponsored by Cochlear Cochlear is the global leader in implantable hearing solutions. Around the world, Cochlear helps hundreds of thousands of customers to connect to family, friends and the world of sound. Cochlear is recognised in industry as an innovative company and a unique employer.

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