Bachelor of Engineering Honours (Mechanical)

Year 1
- Integrated Engineering 1
- Intro to Mechanical Engineering
- Materials 1
- Engineering Computing & Mechanics
- Mechanical Construction
- Maths

Year 2
- Integrated Engineering 2
- Engineering Analysis, Dynamics & Management
- Mechanics of Solids 1
- Thermal Engineering 1
- Mechanics Design 1
- Instrumentation
- Fluid Mechanics 1

Year 3
- Integrated Engineering 3
- Manufacturing Engineering
- System Dynamics & Control
- Mechanical Design 2
- Engineering Methods
- Thermal Engineering 2
- Mechanics of Solids 2
- Fluid Mechanics 2
- Materials 2

Year 4
- Integrated Engineering 4
- Practical Experience
- Mechanical Specialist Electives
- Thesis A & B
- General Elective

Sample course table only. Refer to sydney.edu.au/courses for full information.

Mechanical engineering is a broad branch of professional engineering, and mechanical engineers are found in almost every type of engineering activity. They design and develop everything you think of as a machine - from supersonic fighter jets to bicycles and toasters.

Your studies
This degree will teach you how to design a mechanical component, a whole machine, a mechanical system and a mechanical process.

It covers all aspects of mechanical engineering including power generation, transport, building services, machinery, manufacturing, computer-aided design, advanced materials and environmental studies.

You will learn how to analyse mechanical design using the principles of motion, energy and force to ensure the safety and reliability of products, and you will understand how efficient systems and processes support the manufacture of products at a competitive cost.

Your career
As a mechanical engineer you’ll be involved in the design, management and maintenance of a diverse range of mechanical processes, including:
- energy systems
- logistics and transport
- environmental systems
- computing
- biomedical systems
- advanced materials
- management
- manufacturing
- oil and gas exploration
- vehicle and engine design.

Majors
There are over 15 engineering majors to choose from. Majors that best align with this stream are:
- Environmental Engineering
- Materials
- Space Engineering.
**Engineering at Sydney**

As one of the top 30 engineering and technology universities in the world*, we will provide you with the leadership skills to develop innovative, creative and sustainable solutions that promote positive change.

**Clear pathways, widest choice**

Our engineering degree options cover aeronautical, mechanical, mechatronic, biomedical, chemical and biomolecular, civil, electrical, and software engineering.

With more than 15 majors, you have the option to personalise your degree:
- Chemical Engineering
- Computer Engineering
- Construction Management
- Electrical Engineering
- Environmental Engineering
- Geotechnical Engineering
- Information Technology (Engineering)
- Materials
- Mechanical Engineering
- Mechatronic Engineering
- Power Engineering
- Space Engineering
- Structures
- Telecommunications Engineering
- Transport Engineering

You can broaden your career options even further by combining your degree with studies in arts, law, architecture, science, commerce, music or medical science. Combined degrees are mostly five years in length and very popular, as they allow you to combine a range of interests.

**Flexible First Year Program**

If you’re not sure in which area of engineering you’d like to specialise, our Flexible First Year program (UAC code 511756) gives you the time and freedom to discover where your strengths and interests lie before deciding.

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*QS World University Rankings 2015/16

**Advanced Engineering program**

Our Advanced Engineering program is open to students demonstrating outstanding academic ability (indicative ATAR of 97.5 or above). You will take advanced units covering topics such as sustainability and humanitarian issues, business planning and strategy, technology and education. You will also participate in small groups working on problems relevant to the community. You may take any engineering stream within this program. Apply directly through UAC (UAC code 511700).

**Assumed knowledge**

These HSC subjects are assumed knowledge for our engineering degrees:
- Mathematics Extension 1
- Physics and/or Chemistry (depending on stream)

**The whole you, not just your ATAR**

If you would like to study engineering subjects at university but are worried about making the ATAR cut-off, don’t worry. Our Flexible Entry scheme considers your ATAR as well as your performance in maths and science subjects, and your leadership capability. Apply at:

- [sydney.edu.au/engineering/flexibleentry](http://sydney.edu.au/engineering/flexibleentry)

**Globally recognised qualifications**

Our engineering degrees are accredited by Engineers Australia, so you will graduate with a prestigious qualification that is recognised worldwide.

**Scholarships**

We offer more than 500 University-wide scholarships to undergraduates every year. The Faculty of Engineering and Information Technologies also offers a variety of entry, merit and industry scholarships.

For more information about scholarships visit:

- [sydney.edu.au/engineering/scholarships](http://sydney.edu.au/engineering/scholarships)
- [sydney.edu.au/scholarships](http://sydney.edu.au/scholarships)

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**Faculty of Engineering and Information Technologies**

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sydney.edu.au/ask-domestic
sydney.edu.au/ask-international

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