



UNSW Engineering

Bachelor of Engineering (Honours) (Aerospace Engineering)

What do aerospace engineers do?

Aerospace engineers use their expertise to design, manufacture and operate flight vehicles but their careers are far more diverse than this sounds. The Aerospace industry is one of Australia's major exporters of high value-added manufactured goods. You can specialise in specific areas such as materials and structures, aerodynamics, avionics, navigation and control, propulsion or production methods. This opens up a vast array of potential careers, some of which may surprise you.

What will your study involve?

Our Aerospace Engineering degree focuses on airborne vehicles to meet future employment prospects in Australia (like aerodynamics, flight mechanics, propulsion and structures). You'll learn about designing, testing, developing and producing aerospace vehicles. In our program you'll learn to a professional standard that

is recognised worldwide so your skills are transferable across the international aerospace industry. In your final year you'll take part in a team project that integrates all aspects of aircraft design to meet a defined mission specification

UNSW Mechanical & Manufacturing Engineering

- 1st in Australia and 49th globally for Mechanical, Aeronautical & Manufacturing Engineering (QS Subject Rankings 2023)
- Learn and explore in best-in-class teaching labs and cutting-edge facilities which include a flight simulator, mechatronics research space, a refrigeration and energy storage lab, laser labs, machines for tensile and compression testing, an aerodynamics laboratory with four wind tunnels and mechanical workshop
- UNSW has partnerships with industry leaders such as Australia Advanced Aerospace Technology, Hyundai NGV, The Boeing Company and Xinjiang Goldwind Science & Technology

Program details

Lowest Selection Rank (2023): 90

Duration: four-year embedded honours degree

Study areas: Aerodynamics, Flight Mechanics, Propulsion, Systems, Space Craft, Structures

Assumed knowledge: HSC level Mathematics Extension 1, Physics

Portfolio Entry: UNSW offers the Faculty of Engineering Admission Scheme (FEAS) which is a pathway for students interested in studying undergraduate engineering to support their academic results, find out more at unsw.to/feas

Accreditation

Your Bachelor of Engineering (Honours) degree is recognised globally, accredited with Engineers Australia, and acknowledged by the Washington Accord which lets you work in over 20 countries across the globe upon graduation.

Career options

Graduates can work on the design, manufacture and operation of flight vehicles. You could work with aircraft and spacecraft manufacturers, and major satellite companies or airlines. Graduates are equipped for

research in civil and military aerospace organisations, or work in the space, defence, automotive and power industries.

Student Testimonials

"I'm fascinated with aircraft, and I wanted to understand how they operate and how they're manufactured. I chose UNSW due to its reputation, strong ties with the industry, support system and range of societies. My career dream is to become a successful manager of the engineering operations at Qantas."

Renee Wootton, Aerospace Engineering



Example study plan

	TERM 1			TERM 2			TERM 3		
YEAR 1	Engineering Design and Innovation	Physics 1A	Mathematics 1A	Mathematics 1B	Design and Manufacturing	Programming Fundamentals	Engineering Mechanics	Elective	
YEAR 2	Mathematics 2D (2E)	Electrical Circuit Fundamentals	Thermodynamics	Engineering Mechanics 2	Mechanics of Solids 1		Engineering Design and Professional Practice	Fluid Mechanics for Engineers	Numerical Methods and Statistics
YEAR 3	Aerospace Structures	Aerodynamics	Flight Performance and Propulsion	Aerospace Design 1	Strategic Design Innovation	Linear Systems and Control	General Education Course		Elective
YEAR 4	Dynamics of Aerospace Vehicles, Systems & Avionics	Elective	Research Thesis A	Elective	Research Thesis B	Elective	Aerospace Design 2	General Education Course	Research Thesis C

You'll be required to complete 60 days of Industrial Training throughout your degree.

This is a sample degree outline only and may be subject to change. Please refer to the UNSW Handbook for further information and relevant course codes.