

Satellite Systems Engineering

Postgraduate coursework programs

Never Stand Still

Engineering

Electrical Engineering and Telecommunications

YOUR FUTURE. YOUR CHOICE.

Satellite systems engineering is a multidisciplinary area involving many facets of engineering and science. The space industry in Australia is developing rapidly and has received a significant amount of support from the government through the Australian Space Research Program. Therefore, employment opportunities are increasing with satellite builders, operators and users of satellite data.

At UNSW Engineering, we have developed, in conjunction with Thales-Alenia Space, Optus, and l'Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), a postgraduate Satellite Systems Engineering program. This program, the first of its kind in Australia, allows young Australians with fresh ideas and new takes on space engineering to take advantage of this amazing learning opportunity.

SCHOOL OF ELECTRICAL ENGINEERING AND TELECOMMUNICATIONS

With a 60 year track record, the School of Electrical Engineering and Telecommunications courses are renowned for being on the very cusp of research innovation and contemporary industry practice.

Our staff interests cover an extraordinary range of theoretical, practical and management areas. Active industry involvement, state-of-the-art facilities, cutting-edge research and an ongoing course review and enhancement program ensure that our courses are at the forefront of global education in electrical engineering and telecommunications.

We offer exceptional course flexibility that allows students to consolidate a specialisation from an undergraduate degree, take advantage of professional development or refresher courses, or accelerate towards research or R&D careers.

COURSEWORK PROGRAMS

- Master of Engineering Science (Satellite Systems Engineering).



MASTER OF ENGINEERING SCIENCE

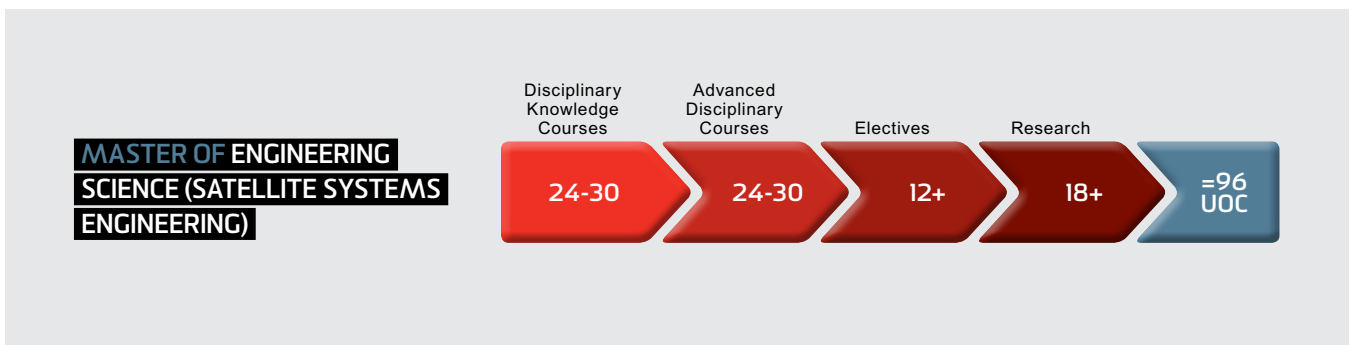
This program has been designed by the space industry and global leaders in education. The focus is on producing 'industry savvy' satellite professionals with knowledge in all areas of satellite engineering, from management and law, satellite mission development, launch, operation and maintenance, through to satellite applications.

PROGRAM OPTIONS	PROGRAM CODE	UNITS OF CREDIT	DURATION*	COMMENCE
Master of Engineering Science (Satellite Systems Engineering)	ELECOS8338	96	2 years	Feb, Jul

* Eligible students may apply for credit for up to eight courses (48 UOC) of the Master of Engineering Science depending on previous study and professional experience. This can reduce the time taken by up to a year.

TYPICAL PROGRAM STRUCTURE

This program focuses on the systems engineering aspect of satellites before delving into satellite applications. Through a complement of core and elective courses, and a year-long practical project, students will gain a comprehensive foundation in satellite systems engineering from the space segment to the ground segment and typical applications.



DISCIPLINARY KNOWLEDGE COURSES

Students need to take the following four courses:

- ZEIT8012 Space Systems Engineering
- AERO9500 Space Systems Architectures and Orbits
- ELEC9762 Space Mission Development
- ELEC9765 Space Law and Radio Regulations.

PLUS they can take one from the following list:

- AERO4410 Advanced Aerospace Structures and Vibrations
- GMAT9200 Principles of GPS Positioning
- TELE4652 Mobile and Satellite Communications Systems.

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students need to take the following four courses:

- AERO9610 The Space Segment
- ELEC9764 The Ground Segment and Space
- ZEIT8013 Space Applications 1
- GMAT9765 Satellite Applications 2.

PLUS they can take one from the following list:

- ELEC9722 Digital Image Processing
- GEOS9012 Remote Sensing Applications
- GMAT9201 GPS Receivers
- GMAT9202 Satellite Navigation
- ZEIT8230 Requirements Engineering.

ELECTIVES

At least one course (6 UOC) must be taken from the approved list of Engineering and Technical Management Courses. All other electives may be taken from Disciplinary or Advanced Disciplinary Knowledge Courses from this specialisation or another specialisation within the Master of Engineering Science program as long as the student is eligible to enrol.

A full and current list of courses is available online in the UNSW Handbook.

RESEARCH

Students must complete 24 UOC of research via Satellite Engineering Project A (12 UOC) and Satellite Engineering Project B (12 UOC).

ENTRY REQUIREMENTS

A student must hold a Bachelor of Engineering with at least Honours II/2 (or equivalent) or hold a Graduate Diploma of Engineering with at least a credit average in a relevant discipline, or an equivalent qualification from UNSW or another recognised university or tertiary institution in order to be admitted to the stream. Relevant disciplines cover most disciplines of engineering where a sufficiently strong foundation in mathematics is obtained.

EXEMPTIONS OR ADVANCED STANDING

Students may be granted credit for some courses. Those with a four year honours degree in Engineering can apply for credit for up to 48 UOC for the Masters (effectively reducing it to one year full time). Full details can be found on the program handbook page.

DELIVERY MODE

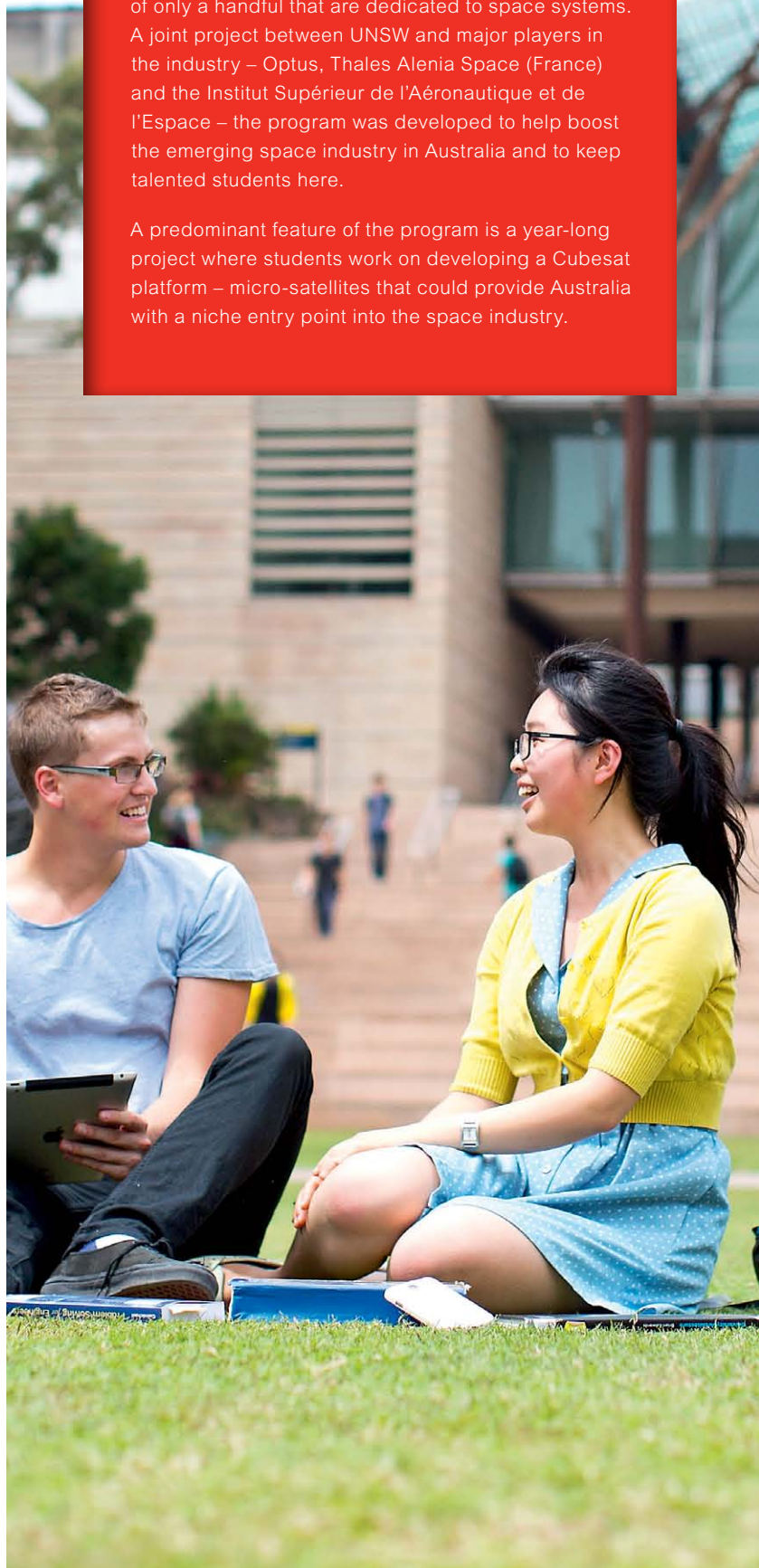
Face-to-face teaching is our strength, all part of our campus experience. Certain courses are offered in intensive mode or by distance as blended learning.

PROGRAM SNAPSHOT

AUSTRALIA'S NICHE SPACE ENGINEERING PROGRAM

The Masters in Satellite Systems Engineering is Australia's only comprehensive postgraduate program in space systems. It is a world class program and one of only a handful that are dedicated to space systems. A joint project between UNSW and major players in the industry – Optus, Thales Alenia Space (France) and the Institut Supérieur de l'Aéronautique et de l'Espace – the program was developed to help boost the emerging space industry in Australia and to keep talented students here.

A predominant feature of the program is a year-long project where students work on developing a Cubesat platform – micro-satellites that could provide Australia with a niche entry point into the space industry.



WHY UNSW ENGINEERING?

UNSW Engineering is the largest Engineering Faculty in Australia. We continue to foster and develop elite-level engineers across a broad range of disciplines exposing them to world-class innovation, cutting-edge research and dedicated teaching staff. As such, we are recognised as Australia's top Engineering university.*

WHY NOT JOIN US?

- **Cutting-edge programs** – be inspired by our research-led, industry-relevant curriculum.
- **Real-world focus** – continually updated programs ensure graduates are armed with the very latest knowledge and techniques to be able to stand at the top of their field.
- **Flexibility** – programs can be tailored to suit your interests, entry points twice a year, out-of-hours classes and distance learning options.

TAKING THE NEXT STEP

HOW TO APPLY

To gain entry to UNSW you'll need to successfully meet both the academic entry requirements and the English language requirements. For assistance with the application process, contact a UNSW official representative at international.unsw.edu.au/contact-us

Apply online at apply.unsw.edu.au

The UNSW Apply Online service has quick links to key information for applicants, including the application tracking service which allows you to check the progress of your application.

Closing Dates

Semester One (February): Applications must be lodged by 30 November.

Semester Two (July): Applications must be lodged by 30 May.

Not all programs have a Semester Two start date.

Late applications

Late applications will be accepted after the closing dates subject to the availability of places. Please note that whilst UNSW endeavour to process applications as quickly as possible, due to time constraints it cannot be guaranteed that a late application will be processed in time for semester commencement.

International Students

Applications are made directly to UNSW Australia, via our Apply Online portal at apply.unsw.edu.au For more information on what you need and how to apply go to international.unsw.edu.au

Most international students will require a student visa to study in Australia (application and processing of this visa may take some time). More information can be found at international.unsw.edu.au/living-sydney/visas/

SCHOLARSHIPS

There are a number of scholarships available for eligible students. To find out more about available postgraduate scholarships, eligibility and application process go to scholarships.unsw.edu.au

FEES

A postgraduate coursework fee calculator for both domestic and international students can be found at apply.unsw.edu.au

ACCOMMODATION

UNSW offers a range of accommodation options, visit housing.unsw.edu.au for full details.

STUDENT LIFE

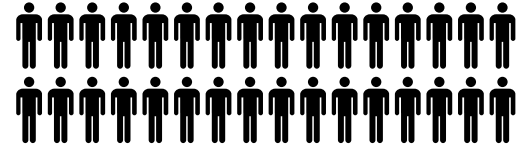
At UNSW there is an abundance of support available to students. To find out more about studying at UNSW, visit unsw.edu.au and search for Student Life.

* Shanghai Jiao Tong University's Academic Ranking of World Universities in Engineering/Technology and Computer Sciences 2014.

CRICOS Provider Code: NSW 00098G



in Australia according to Shanghai Jiao Tong University's Academic Ranking of World Universities in Engineering/Technology and Computer Sciences 2014.



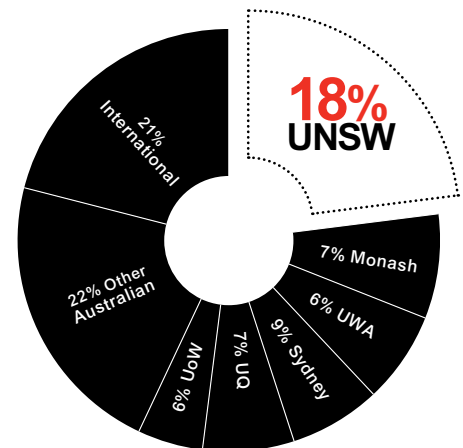
More technology entrepreneurs

than any other university in Australia.
(Crunchbase Report 2013)



QS World University Rankings by Subjects 2014

18th in Civil, 29th in Computing, 33rd in Electrical, 37th in Mechanical and 46th in Chemical.



18% of the **top 100** most influential engineers in Australia are UNSW Graduates*

*Engineers Australia Top 100 list in 2014

CONTACT US

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