UNSW AUSTRALIA

Chemical Process Engineering
Postgraduate coursework programs

Never Stand Still | Engineering | Chemical Engineering

YOUR FUTURE. YOUR CHOICE.

The Master of Engineering Science in Chemical Process Engineering is a program of advanced study especially for chemical engineers , allowing them to expand their knowledge and skills and increase career prospects.

The program is also suited to other technical professionals who wish to redirect their engineering careers into this area. It teaches advanced technical and management skills and provides essential specialist knowledge in chemical engineering that is suitable across a wide range of areas including the fuel and energy sector, mineral processing, fine chemicals, pharmaceuticals, petrochemicals, consumer products, the food industry and more.

SCHOOL OF CHEMICAL ENGINEERING

The School of Chemical Engineering at UNSW Australia has been providing quality education for 65 years and is well known in the industry for its cutting-edge research.

Our content-rich postgraduate courses are taught by outstanding academics and industry leaders and are highly relevant due to our firm connection to industry. We are at the forefront of exciting innovations and emerging technologies through a number of international research groups and centres, and our state-of-the-art facilities provide the perfect support for our students.

The School consistently ranks highly, both nationally and internationally. UNSW Australia is a QS 5-star university and Chemical Engineering is ranked no.1 in New South Wales. According to the 2014 National Taiwan University Ranking we are the top university for chemical engineering in Australia and no. 6 in the world.

COURSEWORK PROGRAMS

- Master of Engineering Science (Chemical Process Engineering)
- Graduate Diploma of Engineering Science (Chemical Process Engineering).

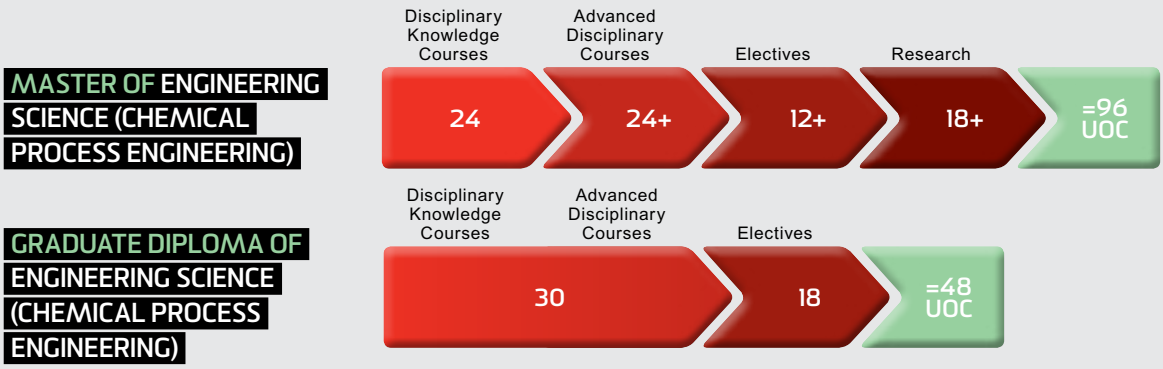
MASTER OF ENGINEERING SCIENCE

The **Master of Engineering Science program** looks at the efficient design, robust and objective analysis, and monitoring of chemical plants, processes and operations including extensive coverage of current business and environmental issues in the chemical and food industries. Qualified students can choose to enter at Masters level, but those who have less time (or who would like just a taste of postgraduate study) can begin with the Graduate Diploma.

PROGRAM OPTIONS	PROGRAM CODE	UNITS OF CREDIT	DURATION*	COMMENCE
Master of Engineering Science (Chemical Process Engineering)	CEICJS8338	96	2 years	Feb, Jul
Graduate Diploma of Engineering Science (Chemical Process Engineering)	CEICMS5341	48	1 year	Feb, Jul

* Eligible students may apply for credit for up to eight courses (48 UOC) of the Master of Engineering Science or four courses (24 UOC) of Graduate Diploma programs depending on previous study and professional experience. This can reduce the time taken by up to a year.

TYPICAL PROGRAM STRUCTURE



DISCIPLINARY KNOWLEDGE COURSES

Students must take:

- CEIC8104 Topics in Polymer Technology.

The remainder of courses can be selected from:

- CEIC8341 Membrane Processes
- CEIC8311 Instrumental Analysis
- CEIC8204 Topics in Business Management
- CEIC8330 Process Engineering in Petroleum Industry
- CHEN6701 Advanced Reaction Engineering
- CHEN6703 Advanced Particle Engineering
- CHEN6710 Plant Operations
- CEIC8205 Fuel and Energy
- CEIC8336 Environmental Chemistry
- CHEN6706 Advanced Transport Phenomena.

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Masters students must take:

- CEIC8102 Advanced Process Control
- CEIC8105 Advanced Polymer Science and Research
- FOOD9101 Complex Fluid Microstructure and Rheology.

PLUS one course selected from:

- CVEN9888 Environmental Management
- CVEN9892 Sustainability Assessment
- GSOE9017 Managing Energy Efficiency
- GSOE9121 Operational Energy Efficiency
- GSOE9143 Sustainable Electrical Energy Tech Assessment
- GSOE9210 Engineering Decisions
- GSOE9340 Life Cycle Engineering
- GSOE9510 Ethics and Leadership in Engineering
- GSOE9712 Engineering Statistics
- GSOE9840 Maintenance Engineering
- CVEN9703 Quality and Quality Systems
- GSOE9810 Quality in Engineering
- CVEN9731 Project Management Framework
- GSOE9820 Project Management
- CVEN9701 Engineering Economics and Financial Management
- GSOE9830 Engineering Economics.

ELECTIVES

All students may choose electives from the list of Disciplinary or Advanced Disciplinary Knowledge Courses or other approved courses for which they are qualified to enrol.

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

RESEARCH

Students must complete a research component that gives them the opportunity to broaden their understanding of something that they are passionate about through practical application with the close support of a practicing engineering researcher.

- CEIC9002 Advanced Thesis A
  (12 UOC - prerequisite for CEIC9003)
- CEIC9003 Advanced Thesis B
  (12 UOC - this is an Advanced Research-completion course and it is required).

With the approval of the stream authority, high performing students for whom it is appropriate may substitute the undergraduate course CEIC4002 for CEIC9002.

ENTRY REQUIREMENTS

Masters: Students need a recognised four year Bachelor degree in an appropriate area of engineering with Honours II/2 or equivalent.
Graduate Diploma: Your four year degree may also be in science. The Graduate Diploma is a common pathway to the Masters.

EXEMPTIONS OR ADVANCED STANDING

Students may be granted credit for some courses. Those with a four year honours degree (for example in Chemical Engineering) can apply for credit for up to 48 UOC for the Masters (effectively reducing it to one year full time) or 24 UOC for the Graduate Diploma. Full details can be found on the program handbook page.

ACADEMIC IN FOCUS

Professor Rose Amal, leader of the Particle and Catalysis Group in the UNSW School of Chemical Engineering, was recently awarded $2.38 million to develop technology to transform carbon dioxide into sustainable fuels, a process that could revolutionise the recycling of greenhouse gas.

Amal, the former director of the ARC Centre of Excellence for Functional Nanomaterials, is recognised as a pioneer and leading authority in the fields of fine particle technology, photocatalysis and functional nanomaterials.

Rose, who received her Bachelor of Chemical Engineering and PhD in Chemical Engineering from UNSW, has won many awards, including being named in Engineers Australia's top 100 most influential engineers.

SCIENTIA PROFESSOR ROSE AMAL
SCHOOL OF CHEMICAL ENGINEERING

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.

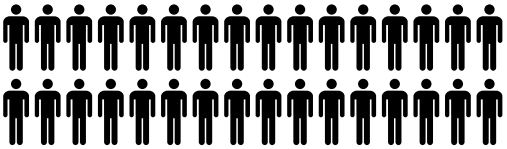
STUDENT LIFE

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.



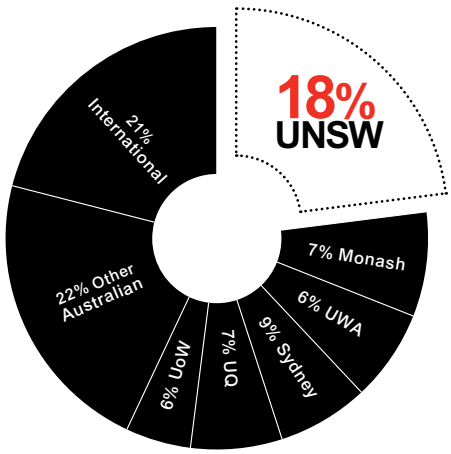
More technology entrepreneurs

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

School of Chemical Engineering
Faculty of Engineering, UNSW Australia

T: +61 (2) 9385 4319
E: che@unsw.edu.au
W: che.unsw.edu.au