

Petroleum Engineering Postgraduate coursework programs

Never Stand Still

Engineering

Petroleum Engineering

YOUR FUTURE. YOUR CHOICE.

Petroleum engineering very specifically involves the development and integration of new technology for the oil and gas industry. Engineers who wish to forge a career in the industry need a deeper knowledge of the discipline and particular skills, as well as an understanding of the socio-political context of the industry.

The Petroleum Engineering specialisation provides advanced study in a range of courses to fully prepare an engineer from a nonpetroleum background to become competent working in a role that requires the direct application of petroleum engineering knowledge. It also enables students from a petroleum engineering background to extend and broaden their knowledge of the discipline's context.

SCHOOL OF PETROLEUM ENGINEERING

The School of Petroleum Engineering offers an exciting range of world-class programs leading to the award of Bachelor of Engineering (Honours), Master of Engineering and Doctoral degrees, and maintains relationships with Australia's oil and gas industry through sponsored scholarships and work experience programs.

Our degrees were introduced in 1985 and include comprehensive studies in geology and geophysics, as well as specialised petroleum and chemical engineering subjects. We are at the forefront of teaching and research in areas such as offshore gas, coal-seam gas production, geothermal energy and carbon dioxide storage. Our graduates are keenly sought both in Australia and worldwide.

COURSEWORK PROGRAMS

- Master of Engineering Science (Petroleum Engineering)
- Master of Engineering Science (Petroleum Engineering)
 by Open Learning
- Graduate Diploma of Engineering Science (Petroleum Engineering)
- Graduate Certificate of Engineering Science (Petroleum Engineering).

MASTER OF ENGINEERING SCIENCE

PROGRAM OPTIONS	PROGRAM CODE	UNITS OF CREDIT	DURATION*	COMMENCE
Master of Engineering Science (Petroleum Engineering)	PTRLBS8338	96	2 years	Feb, Jul
Master of Engineering Science (Petroleum Engineering) by Open Learning	PTRLAS8538	72	1.5 years**	Feb, Jul
Graduate Diploma of Engineering Science (Petroleum Engineering)	PTRLAS5338	60	1.5 years	Feb, Jul
Graduate Certificate of Engineering Science (Petroleum Engineering)	PTRLAS7338	48	1 year	Feb, Jul

* Eligible students may apply for credit for up to eight courses (48 UOC) of the PTRLAS5338 program, up to four courses (24 UOC) of the PTRLAS8538 program and up to 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. Full details can be found on the program handbook page.

** Equivalent to full-time, most students take this program part-time which takes a minimum of three years.

TYPICAL PROGRAM STRUCTURE

The **Master of Engineering Science** in Petroleum Engineering is specifically designed to cater for those working in the industry who are interested in expanding their knowledge base and improving their technical understanding. We also offer a number of shorter graduate courses and some short courses which can be completed online.



DISCIPLINARY KNOWLEDGE COURSES

Students can choose from:

- PTRL5015 Overview of the Petroleum Industry
- PTRL2018 Introduction to Petrophysics
- PTRL2019 Reservoir Engineering A
- PTRL5013 Petroleum Geology
- PTRL5014 Petroleum Geophysics.

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students can choose from:

- PTRL5003 Well Pressure Testing
- PTRL5004 Numerical Reservoir Simulation
- PTRL5006 Field Development Geology
- PTRL5009 Well Drilling Equipment and Operations
- PTRL5010 Natural Gas Engineering
- PTRL5011 Petroleum Production Engineering
- PTRL5024 Drilling Fluids and Cementing Techniques
- PTRL5016 Well Completions and Stimulation
- PTRL5021 Reservoir Characterisation
- PTRL5022 Drilling Systems Design
- PTRL5012 Enhanced Oil Recovery
- PTRL6025 Blow Out Control and Prevention
- PTRL6032 Coal Seam Gas Engineering.

ELECTIVES

Students need to take 12 UOC of Technical Management Electives, including PTRL5008 Petroleum Production Economics, and Engineering and Technical Management Courses and can take a further 12 UOC electives from the following:

- CEIC8330 Process Engineering in the Petroleum Industry
- CEIC8331 Process Engineering: Natural Gas and Light Hydrocarbons to Petrochemicals
- MATH5305 Computational Mathematics
- CVEN9512 Geomechanics
- CVEN9525 Fundamentals of Geomechanics
- PTRL5007 Reservoir Engineering B
- PTRL5107 Formation Evaluation.

or, with approval from the Stream Authority, courses from 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

Central to this program is a compulsory research component of 18 UOC that gives students 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.

ENTRY REQUIREMENTS

Masters: Students need a recognised four year Bachelor degree in an appropriate area of engineering with at least Honours II/2 or equivalent. Entry into the Open Learning Program further requires the student to demonstrate at least two years of work experience in the Upstream Petroleum Industry.

Graduate Diploma: Students need a three or four year degree in a relevant discipline of engineering or science plus relevant professional experience. The Graduate Diploma is a common pathway to the Masters.

Graduate Certificate: Students need a three or four year degree in a relevant discipline of engineering or science plus relevant professional experience. The Graduate Certificate is a pathway to the Graduate Diploma and then to the Masters.

PETROLEUM OPEN LEARNING PROGRAM

Our Petroleum Open Learning Program is designed to provide students with the skills and knowledge they need to meet the demands of working in the oil and gas industry today and into the future.

Professionals in the oil and gas industry often work in remote locations and struggle to attend traditional university programs. At UNSW School of Petroleum Engineering, we have worked together with industry to structure the following programs so they can be delivered online.

- Master of Engineering Science
- Graduate Diploma of Engineering Science
- · Graduate Certificate of Engineering Science.

Contact the School directly for further details about the Open Learning Program.

Our current online learning students are working all over the world including Australia, New Zealand, Indonesia, Malaysia, Brunei, Singapore, Taiwan, Thailand, Vietnam, China, India, Oman, Yemen, South Africa, Holland, Spain, England, Scotland, Canada and USA.



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** 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.aullivingsydney/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.

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





18% of the **top 100** most influential engineers in Australia are UNSW Graduates* *Engineers Australia Top 100 list in 2014

CONTACT US

School of Petroleum Engineering Faculty of Engineering, UNSW Australia

- T: +61 2 9385 5189
- E: peteng@unsw.edu.au
- W: petrol.unsw.edu.au