



Minerals & Energy Resources Engineering

Elevate your career with postgraduate education in
Mining and Geoenery & Geostorage Engineering
at UNSW



The School of Minerals and Energy Resources Engineering at UNSW is ranked 1st in Australia and 2nd in the world in Mineral and Mining subject*.

*2025 QS rankings by subject



We're at the leading edge of teaching and research, our academic staff and guest lectures come from industry. You'll learn from their practical, educational and research experience that's integrated into our programs.



Our graduates are sought after both in Australia and abroad*.

*Most employable graduates 2025 – Australian Financial Review



UNSW
SYDNEY

Geoenery & Geostorage Engineering

Master of Engineering Science (Geoenery and Geostorage Engineering)

Program code 8338
Duration(UoC) 2 years full-time (96 UoC)
Commencement T1 (Feb), T2 (June), T3 (Sept)
Specialisations Geoenery and Geostorage Engineering

The Master of Engineering Science in Geoenery and Geostorage Engineering builds on the foundations of Petroleum Engineering by integrating principles of reservoir engineering, geomechanics, and environmental science, reflecting the evolving needs of modern society and the energy sector. It emphasises the sustainable exploitation of earth resources, including the permanent storage of carbon dioxide, seasonal storage of hydrogen or energy, as well as the extraction of heat, energy or saline brines from the earth.

Graduate Diploma in Engineering Science (Geoenery and Geostorage Engineering)

Program code 5373
Duration(UoC) 1.7 years full-time (72 UoC)
Commencement T1 (Feb), T2 (June), T3 (Sept)
Specialisations Geoenery and Geostorage Engineering

Designed for engineers and graduates wishing to develop and expand their knowledge and skills in geoenery and geostorage engineering, enabling students to meet or maintain professional accreditation standards and to provide opportunities for continuing professional development.

This program articulates to the Master of Engineering Science program with full credit for courses completed in the Graduate Diploma program.

Graduate Certificate in Engineering Science (Geoenery and Geostorage Engineering)

Program code 7373
Duration(UoC) 1 year full-time (48 UoC)
Commencement T1 (Feb), T2 (June), T3 (Sept)
Specialisations Geoenery and Geostorage Engineering

Designed to cater for engineering and science graduates and industry personnel who are interested in expanding their knowledge base and improving their technical understanding. It covers both the fundamentals and applications of drilling engineering, reservoir engineering, geoenery and geostorage technology, business principles and business management.

This program articulates to the Graduate Diploma in Engineering Science program (and subsequently into the Master of Engineering Science program) with full credit for courses completed in the Graduate Certificate program.



“UNSW had provided courses covering both fundamental and advanced knowledge of Petroleum Engineering. On top of that, abundant hands-on opportunities to engage in practical academic research for coursework students.”

—
Hongyi Sun
Master of Engineering Science
(Petroleum Engineering)

Mining Engineering

Master of Mining Engineering

Program code 8335
Duration(UoC) 1.7 years full-time (72 UoC)
Commencement T1 (Feb) & T3 (Sept)

Designed for those with tertiary qualifications in mining engineering or related degrees in Geotechnical Engineering or for candidates who have successfully completed the Graduate Diploma program. This program equips graduates with versatile skills in both management and geomechanics, enabling them to work across a wide range of mining roles and adapt to the sector’s evolving landscape.

Graduate Diploma in Mining Engineering

Program code 5335
Duration(UoC) 1 year full-time (48 UoC)
Commencement T1 (Feb) & T3 (Sept)

Designed for those already working in the industry, or for people planning a career change. This program provides fundamental study in Mining engineering and the opportunity for Mining engineering graduates and minerals industry professionals to continue their professional development.

This program articulates to the Master of Mining Engineering program with full credit for courses completed in the Graduate Diploma program.

Graduate Certificate in Mining Engineering

Program code 7335
Duration(UoC) 0.7 years full-time (24 UoC)
Commencement T1 (Feb) & T3 (Sept)

Suitable for individuals working in the mining or quarrying industry and who wish to obtain an internationally recognised mining qualification.

This program articulates to the Graduate Diploma in Mining Engineering program (and subsequently into the Master of Mining Engineering program) with full credit for courses completed in the Graduate Certificate program.

Master of Engineering (Mining Engineering)

Program Code 8621
Duration (UoC) 2 years full-time (96 UoC)
Commencement T1 (Feb), T2 (June), T3 (Sept)
Specialisations Mining Engineering

This program is accredited by Engineers Australia

The Master of Engineering is a flexible postgraduate degree designed for students who don’t have an accredited engineering qualification but have studied engineering previously. This program is ideal for students who want to progress their career in Mining Engineering.

Find out more about your program of choice by searching the relevant program code at handbook.unsw.edu.au

Mine Geotechnical Engineering

Master of Mine Geotechnical Engineering

Program code 8059
Duration(UoC) 1.7 years full-time (72 UoC)
Commencement T1 (Feb) & T3 (Sept)

This program offers a strong foundation in geotechnical principles for both underground and open pit operation. Graduates gain the practical knowledge and adaptability needed to address complex geotechnical challenges across a variety of mining environments. This program is a continuation from the Graduate Diploma in Mine Geotechnical Engineering.

Graduate Diploma in Mine Geotechnical Engineering

Program code 5059
Duration(UoC) 1 year full-time (48 UoC)
Commencement T1 (Feb) & T3 (Sept)

This specialist postgraduate coursework qualification is designed for people who currently, or plan in the future to, work within the mining industry with particular responsibilities in the field of ground / strata control.

This program articulates to the Master of Mine Geotechnical Engineering program with full credit for courses completed in the Graduate Diploma program.



Why study a postgraduate qualification in Mining and Geoenergy & Geostorage Engineering

Arm yourself with the latest skills and knowledge to advance your career in the mining and energy industries. The School of Minerals and Energy Resources Engineering offers postgraduate qualifications in Mining and Geoenergy & Geostorage Engineering that can provide you entry into the mining and energy industries, make a career change, or progress further in your current field.

Our postgraduate coursework programs are designed to position you for success.

With flexible study options, including face-to-face delivery, intensive block mode, and distance education (online), you can tailor your learning experience to suit your schedule and professional commitments.



“Our academic staff have undertaken a comprehensive review of the curriculum to ensure alignment with the skills and attributes required of engineers in the near- and medium-term future across the mining sector and both traditional and emerging sub-surface energy industries. While a solid foundation in technical engineering knowledge and skills remains essential, today’s mining and geoenergy and geostorage engineers must also cultivate a deeper understanding of economic factors and other key drivers influencing the evolution of the industry.”

—
Ismet Canbulat, FIEAust, FAusIMM, RPEQ
Professor and Head of School | Kenneth Finlay Chair of Rock Mechanics
UNSW Minerals and Energy Resources Engineering

Mine Ventilation

Statutory Coal Mine Ventilation Officers (Non-Award) Course

Duration(UoC) 1 year full-time
(24 UoC)

Commencement T2 (May)

This non-award course prepares and accredits you for the appointment of Statutory Coal Mine Ventilation Officer in NSW and QLD. This is the only qualification of its kind which is recognised in both NSW and QLD, it offers an industry-required qualification without the need to enrol into an award (formal) degree/program.

Students who successfully complete this program with an average grade of 70% and no fails may be eligible to articulate into the Graduate Diploma in Mine Ventilation with full credit for courses completed in this program.

Graduate Diploma in Mine Ventilation

Program Code 5046

Duration (UoC) 1 year full-time
(48 UoC)

Commencement T2 (May)

This program provides professional development in mine ventilation and environment for mining engineers and other mining personnel. The Diploma is structured so that it can be tailored to the needs of either the metalliferous or coal mining sectors.

The accredited programs offered by UNSW for the appointment of **Statutory Coal Mine Ventilation Officer Course** in both NSW and QLD can be taken as options in the Graduate Diploma.

Find out more about your program of choice by searching the relevant program code at handbook.unsw.edu.au



"The relevant industry experience that lecturers have and are able to share through the duration of the course. Also, studying closely with other industry professionals and learning from their experiences. I have had the privilege of meeting other professionals within the Australian mining sector and have been able to learn so much from them."

—
Samantha Watson
Master of Mine Geotechnical Engineering

Contact us

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Future Students Office

Ask a question unsw.edu.au/ask

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