



Master of Engineering in Oil and Gas



The Master of Engineering in Oil and Gas provides a comprehensive skill set for engineering graduates seeking employment in the global oil and gas industry.

About the course

Designed in collaboration with UWA's industry partners to match current energy trends, the course is in sync with the rapidly expanding natural gas and Liquefied Natural Gas (LNG) industries in Western Australia and is unique in its focus on downstream oil and gas processing.

The course will equip students with industry-relevant, advanced knowledge about technical implementation and leadership in the oil and gas industry. A particular focus is placed on natural gas, both its extraction and subsequent conversion to LNG.

Students will develop skills at a professional level in a range of key areas including petroleum engineering, gas economics, investment strategies and liabilities, work-flow concepts, and

current production and processing technologies. Students will also gain an in-depth understanding of the challenges and processes used to deliver these energy streams in a multi-disciplinary marketplace, as well as an awareness of the future direction in which the oil and gas industry is heading.

Business leadership

Business-orientated units will cover the principles of project planning and project management within the context of the oil and gas industry. Students will get to explore and review a wide selection of case studies taken from real-world oil and gas projects. Additional technical units will have an emphasis on teamwork to solve multi-disciplinary problems in an efficient, timely manner.

Field work

Students will produce a variety of written technical reports and business proposals, and will take part in various group projects, including a unique hydrocarbon field development project.

Fast facts

UWA is ranked among the top 1% of universities in the world in the Academic Ranking of World Universities

UWA is the only Western Australian member of the Group of Eight – a coalition of prestigious, research-intensive Australian universities

The average starting salary for UWA engineering and technology graduates is \$69,126 considerably higher than the national average of \$64,202 (Good Universities Guide)

Perth is a global minerals and energy resources hub



Oil and Gas Networks

Aman Chauhan is now working for Shell on one of the largest oilfields in Sub-Saharan Africa.

“If you want to study in energy then Perth is the best place in Australasia. UWA is very affiliated with industry and studying there sets you up well for when you start working. During my studies I was introduced to people from Shell – you cannot underestimate the power of networking in the oil and gas industry. I’ve had the chance to work all over Southeast Asia, in Bangalore, in Perth and now Africa. “

Aman Chauhan

Principal Reservoir Engineer at Shell

Benefits of UWA

As Perth is a regionally strategic area for oil and gas, UWA is ideally positioned to be able to provide an industry-relevant course with excellent graduate outcomes.

Australia is projected to become the world’s largest exporter of LNG by 2020. Western Australia is at the heart of Australia’s LNG export industry and our importance to global energy markets has attracted world-renowned expertise to UWA.

Chevron, one of the world’s leading integrated energy companies, has made a multi-million dollar investment in gas processing research at UWA, providing an endowment to UWA capable of supporting a Professorial Chair in Gas Process Engineering in perpetuity. During your studies, you will benefit from close interaction with our leading academics and their links to industry.

Course structure

Core units

- Advanced Thermodynamics
- Gas Processing 1 – Flow Assurance and Gathering
- Gas Processing 2 – Treating and LNG Production
- Field Development Project

Electives

Students choose four units from the list below:

- Introduction to Design of Offshore Systems
- Petroleum Engineering

- Project Management and Engineering Practice
- Risk, Reliability and Safety
- Investment Management for Field Development
- Introduction to Oil and Gas Engineering
- Reservoir Engineering
- Drilling Engineering
- The Hydrocarbon Economy

Conversion units¹

- Reaction Engineering
- Transport Phenomena
- Advanced Reaction Engineering and Catalysts
- Combustion Science and Technology
- Fluid Mechanics
- Solid mechanics
- Chemical Process Thermodynamics and Kinetics
- Heat and Mass Transfer
- Process Synthesis and Design
- Unit Operations and Unit Processes

¹: Students who have completed undergraduate studies in engineering may be eligible to receive credit towards conversion units.

Delivery

Course duration is 1-2 years of full-time study or the equivalent in part-time study. The Master of Engineering in Oil and Gas is delivered in coursework mode, comprising 16 units. The course has intake periods in February and July.

Admission requirements

To be considered for admission to this course an applicant must have:

- An engineering degree, or an equivalent qualification, as

recognised by UWA; and the equivalent of a UWA weighted average mark of at least 65 per cent; and

- Be able to meet the University’s required level of English Language Competency (visit studyat.uwa.edu.au/elc).

How to apply

For information about the application process, both domestic and international applicants should refer to the Future Students Website at studyat.uwa.edu.au/m/oil-gas.

International students should also visit international.uwa.edu.au/students/esos for more information about the study environment, course fees and refund policy, and support services.

Course enquiries

EMS Student Office
Faculty of Engineering and Mathematical Sciences
The University of Western Australia
M054, 35 Stirling Highway
Crawley WA 6009
Tel: +61 8 6488 3061
Email: enquiries-ems@uwa.edu.au
Online enquiries: ask.uwa.edu.au
ems.uwa.edu.au

This publication should be treated as a general guide only. For further information, contact the UWA Faculty of Engineering and Mathematical Sciences.