Study Online

Chemical Engineering

Postgraduate Study  Online Learning

Master of Chemical Engineering
Graduate Diploma in Chemical Engineering
Graduate Certificate in Chemical Engineering

Make tomorrow better.
ONLINE STUDY: CHEMICAL ENGINEERING

Combining postgraduate studies with your busy life is easier than ever with Curtin’s flexible online learning courses. If you have an undergraduate degree in another engineering or applied science discipline, or you are already working in the industry, these online postgraduate courses can help you fast-track your chemical engineering career.

GRADUATE CERTIFICATE >> GRADUATE DIPLOMA >> MASTER

Operating within any type of chemical or processing plant is an important responsibility – and one fraught with potential problems. For engineering or applied science graduates, this certificate answers the fundamental questions about processes such as corrosion, heat transfer, mineral processing, wastewater treatments and thermodynamics.

You may choose four units from 20 options covering such aspects as risk management, oilfield processing, reaction engineering, and process design and control. The skills and knowledge you acquire with this certificate will make any employment you undertake in the chemicals processing industry upon graduation easier and safer. Graduate chemical engineers, who already have completed studies in this field, should consider enrolling in the Master of Engineering (Chemical Engineering) by research instead.

COURSE ENTRY REQUIREMENTS
You should have a recognised degree in engineering or applied science either at honours level or with relevant experience. Candidates without honours but with relevant experience may be accepted at the discretion of the Head of Department. With an appropriate pass degree, you may be accepted but you will be required to complete up to eight full units by full-time study or the part-time equivalent.

DURATION AND AVAILABILITY
This fee-paying course is one semester of full-time or equivalent part-time study. If you choose part-time study, you must complete the course within two calendar years of your enrolment. Each student will be advised of their individual study plan, which will be subject to the availability and sequence of units within the program. There are two intakes a year. You can start your studies in February or July.

The chemical industry is central to the modern world economy. The industry converts raw materials (oil, natural gas, air, water, metals and minerals) into finished products by the use of chemicals as well as (or instead of) the physical conversions common to industry in general.

If you are a graduate in engineering or applied science (not usually chemical engineering), the graduate diploma will enhance your opportunities in the traditional chemical, petroleum and petrochemical industries.

In your first semester, you may choose four units from 23 options, ranging from fluid mechanics and petroleum processing to air pollution control and risk management. Your second semester also offers a design project. Graduate chemical engineers, who already have completed studies in this field, should consider enrolling in the Master of Engineering (Chemical Engineering) by research instead.

COURSE ENTRY REQUIREMENTS
You should have a recognised degree in engineering or applied science either at honours level or with relevant experience. Candidates without honours but with relevant experience may be accepted at the discretion of the Head of Department. With an appropriate pass degree, you may be accepted but you will be required to complete up to 12 full units over 18 months of full-time study or the part-time equivalent. With the approval of the Head of Department, you may also be able to transfer from the Graduate Certificate to this course.

DURATION AND AVAILABILITY
This fee-paying course is one year of full-time (or part-time equivalent) study. There are two intakes a year. You can start your studies in February or July.

With a Master of Chemical Engineering you could study topics related to oil and gas processing, construct dynamic models for physical—chemical—biological processes or specialise in thermodynamics or process plant engineering.

This program promotes development of practical, laboratory-based skills, combined with expertise in computing and simulation. You will develop your expertise under the guidance of staff known internationally for their research in areas such as nanotechnology, bioremediation and solvent extraction.

Education and research are closely integrated within this master degree, which helps you stay abreast of the latest developments within the discipline. In your first semester, you may choose four units from 26 options, followed by two further units and a design project in second semester. Your final semester consists of a research project of your choice.

This course provides an advanced professional qualification for engineering or applied science graduates (not usually chemical engineering). Chemical engineering graduates, especially those with honours, should consider enrolling in the Master of Engineering (Chemical Engineering) by research instead.

COURSE ENTRY REQUIREMENTS
You should have a recognised degree in engineering or applied science either at honours level or with relevant experience.

DURATION AND AVAILABILITY
This fee-paying course is three semesters of full-time study. Each student will be advised of their individual study plan, which will be subject to the availability and sequence of units within the program and also subject to approval by the Head of Department. Your research project may be studied in the summer break and could reduce the length of the course to one year. There are two intakes a year. You can start your studies in February or July. Please note that this course is not available to international onshore students.

STUDENT PROFILE

CHRIS McROBERT
Master of Chemical Engineering

My career goal is to have an offshore oil and gas job with a lot of responsibility. Since I don’t have direct experience in engineering, my postgraduate studies have allowed me to progress more quickly than I normally would have. It’s given me the option to go into the oil and gas industry, which would have been more difficult with only my Bachelor of Science degree. Because I work away, it would be difficult to go to lectures. With the online learning option I enjoy being able to study in the comfort of my own home. Curtin has been really supportive.
WHO ARE THE PROGRAMS SUITED TO?
The courses are aimed at achieving employment or advancing careers relevant to chemical and mineral processing industries, including:
- chemists involved in product analysis/production
- metallurgists
- process and plant supervisors
- chemical process consultants
- process engineers
- quality control engineers
- trouble-shooting teams
- people already working in the industry, in Australia or internationally, who want to update their technical knowledge and qualifications
- engineers seeking a better understanding of the process and practice in a broad spectrum of chemical engineering industries.

WHY STUDY ONLINE?
Curtin offers an engaging, interactive and convenient learning experience for online students:
- you’ll get the same degree you’d get if you studied on campus
- you can organise your studies around your busy life with 24/7 access to interactive online learning
- you can collaborate with other students via handy social networking tools
- a user-friendly learning system, including a mobile app, makes classroom interaction easy
- your tutors will be experienced in the delivery of online education.

INTERNATIONAL STUDENTS
International students must undertake the program from outside Australia. Top students may be invited to undertake PhD studies with the potential for an associated scholarship.

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COURSE STRUCTURES

GRADUATE DIPLOMA, POSTGRADUATE CERTIFICATE, MASTER

YEAR 1 SEMESTER 1
Select optional units to the value of: 100

YEAR 1 SEMESTER 2
Process Design Project 599 50
Select optional units to the value of: 50

YEAR 1 OPTIONAL UNITS

Process Heat Transfer 511 25
Fluid Mechanics 512 25
Fluid and Particle Processes 513 25
Process Control 514 25
Reaction Engineering 515 25
ChE 516 Mass Transfer Operations 25
Risk Management 541 25
ChE 542 Advanced Separation Processes 25
Mineral Processing 552 12.5
Petroleum Processing 553 12.5
ChE 558 Advanced Process Control 12.5
Special Topics Bioprocessing 571 12.5
Mass and Energy Balances 521 25
Wastewater Treatment 502 12.5
Thermodynamics 520 25
Corrosion and Corrosion Prevention in Liquids 500 25
Corrosion Chemistry 500 24

YEAR 2 SEMESTER 1
Select units to the value of: 100

YEAR 2 UNITS
Research Project 591 100
Research Project 592 25
Research Project 593 25
Research Project 594 25
Research Project 595 25

INTERNATIONAL STUDENTS
International students must undertake the program from outside Australia. Top students may be invited to undertake PhD studies with the potential for an associated scholarship.

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