

MASTER OF SCIENCE IN
CHEMICAL ENGINEERING

SHAPING A SUSTAINABLE FUTURE

WHAT IS THE MASTER OF CHEMICAL ENGINEERING DEGREE?

This Chemical Engineering course focuses on the design, operation and optimisation of chemical and process plants. It also plays a key role in the imminent transition of energy towards a decarbonised society.

WHO IS IT FOR?

The Master of Science in Chemical Engineering is for:

- Recent graduates who are interested in pursuing a higher degree
- Professionals working in the chemical industry

WHAT'S IN IT FOR ME?



Benefit from a course aligned with emerging trends in the chemical industry



Expand your horizons with our interdisciplinary options



Carve out your niche career with our flexible course programme



Play your part in establishing a sustainable future

- PROCESS SYSTEM ENGINEERING
- PHARMACEUTICAL ENGINEERING
- CATALYSIS
- ENGINEERING MANAGEMENT
- SUSTAINABILITY
- RENEWABLE ENERGY
- CLEAN TECHNOLOGY

HOW BIG IS THE CHEMICAL ENGINEERING INDUSTRY?

Over the last six years (from 2018), the compound annual growth rate (CAGR) of the combined petroleum, chemical and pharmaceutical sectors has been 3.2% (based on the Department of Statistics of Singapore).

Correspondingly, the demand for chemical engineers continues to grow in Singapore, with emerging demands from areas such as low-carbon technologies, food and the circular economy.

In addition, Singapore's position as a regional leader in research, innovation and technological enterprise means a strong demand for high-level talents, e.g. those with postgraduate degrees.

WHAT IS THE DURATION?

- Full-time: minimum 1 year, maximum 2 years
- Part-time: minimum 2 years, maximum 4 years

WHAT QUALIFICATIONS DO I NEED TO APPLY?

- Bachelor's degree with minimum Honours (Distinction) or equivalent from a reputable university
- Minimum TOEFL score of 85 or IELTS score of 6.0 (only if your university first degree was not taught in the English language)
- Special consideration will be given on a case-by-case basis to applicants with relevant work experience and recommendation letters

WHAT ARE THE REQUIREMENTS TO GRADUATE?

- Complete a minimum of 30 AU
- A minimum CGPA of 2.5

COURSE PROGRAMME

CORE MODULES

	AUs
CH6230 Advanced Reaction Engineering	3
CH6240 Advanced Chemical Engineering Thermodynamics	3
CH6250 Advanced Mathematical Methods for Chemical Engineering	3
CH6265 Industrial Case Studies	3

ELECTIVE MODULES

CH6310 Chemical Process Simulation and Technoeconomic Analysis	3
CH6270 Sustainable Pharmaceutical Technology	3
CH6280 Pharmaceutical Formulations	3
CH6241 Catalyst Design and Development	3
CH6260 Advanced Process Control	3
CH6300 MSc. Research	6
CH6209 Decision Tools for Engineering Businesses	3
CH6202 Project Management for Engineers	3
CH6320 Industrial Safety and Operational Excellence	3
BG6011 Microfluidics and Lab-On-Chip for Chemical & Biomedical Applications	3
BG6013 Data Analytics for Biomedical Applications	3
CM6861 Advanced Topics in Environmental Sciences and Sustainable Development	3
CM6862 Advanced Analytical & Manufacturing Techniques in the Pharmaceutical Industry	3
CH6400 Electrochemistry and electrocatalysis	3
CH6410 Nanocatalysis	3

CONTACT US

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