Master of Engineering (Chemical with Business)

Year and Campus:	2016
Coordinator:	Professor George Franks Email: gvfranks@unimelb.edu.au
Contact:	**Melbourne School of Engineering** Current students: # General information: **https://ask.unimelb.edu.au (https://ask.unimelb.edu.au/)** # **Contact Stop 1 (http://students.unimelb.edu.au/stop1)** Future students: # Further information: **Degree Structure (http://www.eng.unimelb.edu.au/study/degrees/master-engineering-chemical-business/overview)** # Email: **Enquiry Form**
Overview:	Chemical engineers develop, design and implement processes through which raw materials are converted by physical, chemical or biological processes into more valuable products such as petrochemicals, fertilisers, paints and detergents. Chemical engineers also work to process waste products to safer, more environmentally-friendly materials. Career opportunities are extensive and include the fields of environmental consulting, minerals processing, materials, and food, pharmaceutical and chemical manufacture. Business skills open up additional opportunities in management, finance, marketing and government.
Learning Outcomes:	To produce graduates who are both skilled in chemical engineering principles as well as fundamental business skills and have the ability to apply these skills to complex, open-ended engineering tasks and problems in order to create profit.
Structure & Available Subjects:	The Master of Engineering (Chemical with Business) consists of 300 credit points of study Advanced standing will be awarded for equivalent subjects taken in prior study to applicants on the following basis: # A maximum of 100 points for applicants with a 4 year Bachelor of Engineering or equivalent # A maximum of 100 points for applicants with a 3 year undergraduate degree. Students entering with a three year bachelor degree must complete at least 200 points of study within the Masters of Engineering. In cases where applicants have completed the equivalent of more than 100 points of core masters subjects, discipline specific electives must be taken to fulfil the 200 minimum masters study requirement Note: applicants from the University of Melbourne with: # An appropriate “Engineering System” major will receive 100 points of advanced standing. Applicants from the Bachelor of Science with a "Chemical Systems" major will receive 100 points of advanced standing and be exempt from 25 points of completed core subjects but will need to take an additional 25 points in of Chemical Engineering electives # Engineering breadth sequences (including those in the Bachelor of Commerce) will receive advanced standing to a maximum of 100 points
Subject Options:	Total 300 points - 300 points core (compulsory). Students must complete all 300 points of subjects, including all core subjects, or have advanced standing or exemption. The core and elective subjects are those listed below. The order of subjects below is one way of progressing through the course - students who meet subject requisites may tailor their individual study plan to take into account advanced standing and their study load. Students plan their study online, however Melbourne School of Engineering course advisors are available to assist students with individual study plans. **Suggested first 100 points:** Suggested study plan for first 100 points: # 100 points core subjects from the list below:

Subject	Study Period Commencement:	Credit Points:
MAST20029 Engineering Mathematics	Summer Term, Semester 1, Semester 2	12.50
ENGR90021 Engineering Practice and Communication	Semester 1, Semester 2	12.50
CHEN20010 Material and Energy Balances	Semester 1, Semester 2	12.50
CHEM20018 Chemistry: Reactions and Synthesis	Semester 1	12.50
CHEN20011 Chemical Process Analysis	Semester 2	12.50
CHEN20009 Transport Processes	Semester 2	12.50
CHEN90032 Process Dynamics And Control	Semester 2	12.50
ENGR30002 Fluid Mechanics	Semester 1, Semester 2	12.50

Suggested second 100 points:

Suggested study plan for the second 100 points:

100 points core subjects from the list below:

Subject	Study Period Commencement:	Credit Points:
CHEN30001 Reactor Engineering	Semester 1	12.50
CHEN30005 Heat and Mass Transport Processes	Semester 1, Semester 2	12.50
CHEN90031 Bioprocess Engineering	Semester 1	12.50
CHEN90037 Safety, Environment and Design	Semester 2	12.5
ENGM90011 Economic Analysis for Engineers	Semester 1	12.50
ENGM90012 Marketing Management for Engineers	Semester 2	12.50
CHEN90023 Chemical Engineering Research Project	Summer Term, Semester 1, Semester 2	25

Note:

With coordinator approval, students may take the below subject in place of CHEN90023 Chemical Engineering Research Project

Subject	Study Period Commencement:	Credit Points:
CHEN90028 Industry Project	Summer Term, Semester 1, Semester 2	25

Suggested third 100 points:

Suggested study plan for third 100 points:

100 points core subjects from the list below:

Subject	Study Period Commencement:	Credit Points:
CHEN90012 Process Equipment Design	Semester 1	12.50
CHEN90018 Particle Mechanics and Processing	Semester 1	12.50
CHEN90022 Chemical Engineering Design Project	Semester 2	25
CHEN90013 Process Engineering	Semester 1	12.50

ENGM90013 Strategy Execution for Engineers	Semester 1, Semester 2	12.50
ENGM90006 Engineering Contracts and Procurement	Semester 2	12.50
ENGM90014 The World of Engineering Management	Semester 1, Semester 2	12.50

Note:

ME (Chemical with Business) students that graduated from the B-SCI Bachelor of Science at the University of Melbourne with a Chemical Systems major will receive 100 points of advanced standing and will also be exempt from 25 points of completed core subjects. These students will need to take an additional 25 points of Chemical Engineering electives. These students are strongly recommended to complete the below subjects:

Subject	Study Period Commencement:	Credit Points:
CHEN90007 Advanced Thermo & Reactor Engineering	Semester 2	12.50
CHEN90019 Advanced Heat & Mass Transport Processes	Semester 1	12.50

Note:

Students who have completed subject ENGR30001 Fluid Mechanics & Thermodynamics prior to 2013 do not need to complete ENGR30002 Fluid Mechanics. Credit cannot be obtained for both subjects
From 2015 CHEN20010 Materials and Energy Balances and CHEN20011 Chemical Process Analysis will replace CHEN20007 Chemical Process Analysis 1 and CHEN20008 Chemical Process Analysis 2.

Links to further information:	http://www.eng.unimelb.edu.au/Postgrad/MEng/me_chemical.html
Related Course(s):	Master of Engineering