

411-202 Process Engineering 1

Credit Points:	12.500
Level:	Undergraduate
Dates & Locations:	2008, This subject commences in the following study period/s: Semester 1, - Taught on campus.
Time Commitment:	Contact Hours: Twelve hours of lectures and 36 hours of problem-solving classes. Total Time Commitment: Not available
Prerequisites:	411-102 Chemical Process Analysis
Corequisites:	411-201 Introduction to Transport Processes
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	<p><p>For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.</p> <p>It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability</p></p>
Coordinator:	Assoc Prof G Qiao
Subject Overview:	<p>The objectives of this subject are to introduce the design of chemical processes including the different types of flowsheets used to represent process plants, measurements and instrumentation used in process plants; and to provide training in process optimisation and solution of ill-defined process problems.</p> <p>This subject will comprise lectures and problem-solving classes, covering the following areas: methods of design of chemical processes; types of flowsheets used to represent chemical process plants and their generation using HYSYS or equivalent software; process control methods; and types of measurement and instrumentation used for measurement of temperature, pressure, flow and level in the chemical process industries. Assignments will draw on material from other chemical engineering subjects and utilise computer software packages as required. Typical topics include material and energy balance calculations, optimal solution of process equations and simple economic analysis of a process plant.</p>
Assessment:	Ten assignments (eight worth 8% each and two worth 18% each) spread across the semester. Nine assignments involve written reports of up to 1500 words, mostly prepared during weekly problem classes; one assignment involves a 5-minute oral multimedia presentation delivered during the second half of the semester.
Prescribed Texts:	None
Recommended Texts:	Information Not Available
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	# ability to apply knowledge of basic science and engineering fundamentals

	<ul style="list-style-type: none"># ability to communicate effectively, not only with engineers but also with the community at large# ability to undertake problem identification, formulation and solution# ability to utilise a systems approach to design and operational performance# capacity for independent critical thought, rational inquiry and self-directed learning
Related Course(s):	Bachelor of Engineering (Chemical Engineering)