Chemical Systems

Year and Campus:	2014
Coordinator:	Professor George Franks Department of Chemical and Biomolecular Engineering
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Overview:	Students who have undertaken the Chemical Systems major will be able to rigorously integrate fundamental science in chemical engineering to provide accurate information and optimum solutions to practical problems involving basic chemical processing systems. More specifically, core skills and knowledge that will be developed include: fundamental scientific comprehension that will lead to accurate computer modelling of process systems, analytical and abstract thinking, problem-solving and design skills, ability to carry out laboratory experiments to eliminate or confirm possible solutions to complex problems. In all levels of this major, we will ensure the development of excellent communication skills that will enable our graduates to deliver complex scientific information in a clear and concise fashion. The Chemical Systems major provides a direct pathway for admission to Masters in Engineering programs in chemical and biochemical engineering. These Masters programs will be accredited and recognized internationally as professional engineering degrees. Students graduating from these programs will be ready to work in a range of chemical and biochemical engineering industries anywhere in the world.
Learning Outcomes:	The objective of the chemical systems major is to contribute to the academic preparation of graduates who embody the University of Melbourne graduate attributes, as well as additional attributes more specific to the Bachelor of Science.
Structure & Available Subjects:	Completion of 50 points of study at Level 3.
Subject Options:	All four of

Subject	Study Period Commencement:	Credit Points:
CHEN30001 Reactor Engineering	Semester 1	12.50
CHEN30005 Heat and Mass Transport Processes	Semester 1	12.50
CHEN30015 Process Engineering Case Studies	Semester 2	12.50
ENGR30002 Fluid Mechanics	Semester 1, Semester 2	12.50

Notes:	In addition to these four core subjects, students must complete either MAST20029 Engineering Mathematics OR both of MAST20009 Vector Calculus AND MAST20030 Differential Equations at Level 2.
Related Course(s):	Bachelor of Science