

# Chemical Systems

<b>Year and Campus:</b>	2010															
<b>Coordinator:</b>	Associate Professor David Shallcross Department of Chemical and Biomolecular Engineering Associate Professor Sandra Kentish Department of Chemical and Biomolecular Engineering															
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<b>Overview:</b>	<p>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.</p> <p>The Chemical Systems major provides a direct pathway for admission to Masters in Engineering programs in chemical and biomolecular 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 biomolecular engineering industries anywhere in the world.</p>															
<b>Objectives:</b>	.															
<b>Structure &amp; Available Subjects:</b>	Completion of 50 points of study at third year level															
<b>Subject Options:</b>	<p>All four of</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>CHEN30001 Reactor Engineering</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>CHEN30005 Heat and Mass Transport Processes</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>ENGR30001 Fluid Mechanics</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>CHEN30009 Process Dynamics and Control</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	CHEN30001 Reactor Engineering	Semester 1	12.50	CHEN30005 Heat and Mass Transport Processes	Semester 1	12.50	ENGR30001 Fluid Mechanics	Semester 1, Semester 2	12.50	CHEN30009 Process Dynamics and Control	Semester 2	12.50
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<b>Notes:</b>	In addition to these four core subjects, the third year level subject, Differential Equations in Engineering, will also be required in this major for students who have taken Vector Calculus instead of Engineering Mathematics at second year level.															
<b>Related Course(s):</b>	Bachelor of Science															