

## CHEN30010 Practical and Computer Laboratory

<b>Credit Points:</b>	12.50
<b>Level:</b>	3 (Undergraduate)
<b>Dates &amp; Locations:</b>	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: Twenty four hours of practical work and 16 hours of lectures/tutorials. Total Time Commitment: Estimated 120 hours
<b>Prerequisites:</b>	411-201 Introduction to Transport Processes 411-203 Fluid Mechanics and 411-331 Heat and Mass Transport Processes 1 431-202 Engineering Analysis B or equivalent
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>
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<b>Subject Overview:</b>	Content: Experimental work illustrating the principles of fluid mechanics, particle mechanics, heat and mass transfer, reaction kinetics, and process control and signal analysis. The use of material and energy balance calculations, unit operations, engineering drawings, equipment design and process design and optimisation. The use of computer-based physical property data and estimation packages, and simulation package for flow sheet development and heat-exchanger network design.
<b>Objectives:</b>	Students successfully completing the course should have acquired skills in: # The methods of experimental investigation, # The operation of a range of scientific apparatus and engineering equipment, # The analysis of data and the reporting of findings. # Use of simulation software, such as HYSYS and ASPEN.
<b>Assessment:</b>	6 short reports (of up to 1000 words each) and 3 long reports (of up to 4000 words each, not including diagrams, graphs and raw data, with 2 being of a group-work nature) (based on laboratory work) (85%) 2 short assignments (of up to 1500 words each) (based on computing

	work) (15%)Submission dates are spread across the semester. Students must submit all reports/assignments in order to pass the subject.
<b>Prescribed Texts:</b>	None
<b>Recommended Texts:</b>	Information Not Available
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<ul style="list-style-type: none"> <li># Ability to apply knowledge of basic science and engineering fundamentals</li> <li># Ability to utilise a systems approach to design and operational performance</li> <li># Ability to function effectively as an individual and in multi-disciplinary and multi-cultural teams, with the capacity to be a leader as well as an effective team member</li> </ul>
<b>Related Course(s):</b>	Bachelor of Engineering (Chemical) and Bachelor of Arts Bachelor of Engineering (Chemical) and Bachelor of Commerce Bachelor of Engineering (Chemical) and Bachelor of Laws Bachelor of Engineering (Chemical) and Bachelor of Science