

## 411-337 Practical and Computer Laboratory

<b>Credit Points:</b>	12.50
<b>Level:</b>	3 (Undergraduate)
<b>Dates &amp; Locations:</b>	2009, This subject commences in the following study period/s: Semester 2, - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: Twenty four hours of practical work and 16 hours of lectures/tutorials. Total Time Commitment: Not available
<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>	<p>&lt;p&gt;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.&lt;/p&gt;         &lt;p&gt;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: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>
<b>Coordinator:</b>	Dr Viyada Tirtaatmadja
<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 computer-aided design packages such as <i>HYSYS</i> for flow sheet development, material and energy balance calculations, unit operations, engineering drawings, equipment design and process design and optimisation. Use of computer-based physical property data and estimation packages
<b>Objectives:</b>	- Students successfully completing the course should have acquired skills in the methods of experimental investigation, including the operation of a range of scientific apparatus and engineering equipment, as well as in the analysis of data and the reporting of findings. They will also have acquired basic skills in computer-aided design (CAD).
<b>Assessment:</b>	8 short reports/assignments (of up to 1000 words each) and 3 long reports (of up to 4000 words each, not including diagrams, graphs and raw data) (based on laboratory work) (85%) and 2 short reports (of up to 1500 words each) (based on computing work) (15%); submission dates are spread across the semester. Students must submit all 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>	# ability to apply knowledge of basic science and engineering fundamentals

	<ul style="list-style-type: none"><li># ability to communicate effectively, not only with engineers but also with the community at large</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 or manager as well as an effective team member</li></ul>
<b>Related Course(s):</b>	Bachelor of Engineering (Chemical Engineering) Bachelor of Engineering (Chemical and Biomolecular Engineering) 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 Bachelor of Engineering (EngineeringManagement) Chemical