

800-001 Engineering Systems Design 1

Credit Points:	12.500
Level:	Undergraduate
Dates & Locations:	2008, This subject commences in the following study period/s: Semester 1, - Taught on campus. Semester 2, - Taught on campus.
Time Commitment:	Contact Hours: Thirty-six hours of lectures and 36 hours of workshops. Total Time Commitment: Not available
Prerequisites:	A mark of at least 25 in VCE Math Methods or equivalent.
Corequisites:	None
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>
Subject Overview:	<p>Engineering Systems Design 1 introduces students to the world of engineering through a mix of design projects, interactive workshops and lectures. This subject centres on the engineering method, the approach to problem solving and engineering design that makes engineers unique. The subject will prepare students for an exciting and rigorous engineering education that will allow them to serve and increasingly complex society.</p> <p>At the completion of this subject students should be able to;</p> <ul style="list-style-type: none"> # Explain the importance of engineers and engineering in society; # Discuss the differences between the key engineering disciplines; # Explain the importance and principles of sustainable development and safety; # Identify problems and formulation solution strategies; # Describe how engineers use mathematical models to approximate behaviour of a design; # Use models to evaluate trade offs between alternative designs; and # Write MATLAB programs to perform a variety of simple tasks.
Assessment:	Subject journal (10%), 3 team-based team projects due in weeks 4,8 and 12 of the semester (30% in total), and 1 written 3-hour end of semester examination (60%).
Prescribed Texts:	Engineering Systems: An Introduction, Jay Brockman, Thomas Fuja and Stephan Batill, Wiley, August 2007.
Breadth Options:	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> # Bachelor of Arts # Bachelor of Commerce # Bachelor of Music

	You should visit learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	At the completion of this subject students should have developed their; <ul style="list-style-type: none"> # Problem solving and analytical skills; # Capacity to tackle unfamiliar problems; # Communication skills through written and oral presentations; # Ability to plan work and be efficient in time management; # Hands-on skills through practical projects; # Sense of intellectual curiosity; # Appreciation of different learning styles; and # Ability to work effectively in a team environment.
Notes:	Students enrolled in the BSc (new degree only) will receive science credit for the completion of this subject.
Related Course(s):	Bachelor of Engineering (Chemical Engineering) Bachelor of Engineering (Chemical and Biomolecular Engineering) Bachelor of Engineering (Civil Engineering) Bachelor of Engineering (Electrical Engineering) Bachelor of Engineering (Mechanical and Manufacturing Engineering) Bachelor of Engineering (Software Engineering)