

# ELEN90053 Electronic System Design

<b>Credit Points:</b>	12.50						
<b>Level:</b>	9 (Graduate/Postgraduate)						
<b>Dates &amp; Locations:</b>	2011, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.						
<b>Time Commitment:</b>	Contact Hours: 2 x one hour lectures and 1 X three hour workshop per week Total Time Commitment: 120 hours						
<b>Prerequisites:</b>	Prerequisite for this subject is: <b>ELEN90056 Electronic Circuit Design</b> ( <a href="http://handbook.unimelb.edu.au/view/2011/ELEN90056">../view/2011/ELEN90056</a> ) (prior to 2011, ELEN30007 Electronic Circuit Design 2)						
<b>Corequisites:</b>	None						
<b>Recommended Background Knowledge:</b>	None						
<b>Non Allowed Subjects:</b>	Anti-requisite for this subject is: <table border="1" data-bbox="389 882 1485 1028"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>ELEN40013 Electronic Circuit Design 3</td> <td>Not offered 2011</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	ELEN40013 Electronic Circuit Design 3	Not offered 2011	12.50
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ELEN40013 Electronic Circuit Design 3	Not offered 2011	12.50					
<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>						
<b>Coordinator:</b>	Assoc Prof Michael Cantoni						
<b>Contact:</b>	Email: <a href="mailto:elen-subjectenquiry@unimelb.edu.au">elen-subjectenquiry@unimelb.edu.au</a> ( <a href="mailto:elen-subjectenquiry@unimelb.edu.au">mailto:elen-subjectenquiry@unimelb.edu.au</a> )						
<b>Subject Overview:</b>	This subject will explore the design of various electrical and electronic systems. The aim is to introduce students to a range of common and practical electrical and electronic engineering design techniques and circuits. Students will apply this knowledge within the context of guided laboratory based projects. Topics covered may include: oscillators, phase-locked loops and frequency synthesis; base-band signalling schemes and clock recovery; logarithmic amplification; automatic gain control; mixers; filters; synchronous detection; high-speed analog-digital conversion; high-frequency amplification; noise in systems; low noise amplifiers; power supply design; sensors; and displays.						
<b>Objectives:</b>	On completing this subject the student should be able to: <ul style="list-style-type: none"> <li># Apply practical knowledge of a range of standard electrical and electronic subsystems;</li> <li># Quantitatively analyse and design the behaviour of standard electrical and electronic subsystems;</li> <li># Integrate standard electrical and electronic subsystems;</li> <li># Choose/design, implement and test a range of standard electrical and electronic subsystems.</li> </ul>						

<b>Assessment:</b>	One written examination, not exceeding three hours at the end of semester, worth 60%; Continuous assessment of submitted project work, not exceeding 40 pages over the semester, worth 40%.
<b>Prescribed Texts:</b>	TBA
<b>Recommended Texts:</b>	None
<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># In-depth technical competence in at least one engineering discipline</li> <li># Ability to undertake problem identification, formulation and solution</li> <li># Ability to utilise a systems approach to design and operational performance</li> <li># Capacity for independent critical thought, rational inquiry and self-directed learning</li> <li># Openness to new ideas and unconventional critiques of received wisdom</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> <li># Ability to communicate effectively, with the engineering team and with the community at large</li> </ul>
<b>Notes:</b>	Credit may not be obtained for both ELEN40013(431-481) Electronic Circuit Design 3 and ELEN90053 Electronic System Design
<b>Related Course(s):</b>	Bachelor of Engineering (Computer Engineering) Bachelor of Engineering (Electrical Engineering) Bachelor of Engineering (Electrical) and Bachelor of Arts Bachelor of Engineering (Electrical) and Bachelor of Commerce Bachelor of Engineering (EngineeringManagement) Electrical
<b>Related Majors/Minors/Specialisations:</b>	Master of Engineering (Electrical)