ELEN90042 Analogue Electronics

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 1 two hour lecture per week Total Time Commitment: 120 hours
Prerequisites:	None
Corequisites:	Corequisites for this subject are

Subject	Study Period Commencement:	Credit Points:
ELEN90043 Device Models	Semester 1	12.50
ELEN90048 Passive Component Design & Simulation	Semester 1	12.50

Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	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: http://www.services.unimelb.edu.au/disability/
Coordinator:	Prof Stan Skafidas
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Subject Overview:	Current sources, temperature and voltage independent references are critical components in the design of real systems. This subject will teach students how to build reference circuits and how to analyse noise, distortion, offsets and estimate circuit performance. Students will be introduced to the concept of process and temperature variation and methods to simulate circuit performance taking into account process and temperature variation. Students will also be introduced to circuit design techniques to contend with these real world issues in circuit and system design.
Objectives:	Upon successful completion of this subject students should be able to: # Explain the sources of noise in circuits; # Design amplifiers, current sources, temperature and voltage independent references; # Build circuits to counteract process and component mismatch with nano-electronic components and devices.
Assessment:	One, written examination (not exceeding three hours) at the end of semester, worth 70%; Continuous assessment of submitted project work (not exceeding 30 pages in total over the semester), worth 30%.
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.

Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	# Ability to apply knowledge of science and engineering fundamentals; # Ability to undertake problem identification, formulation, and solution; # Ability to utilise a systems approach to complex problems and to design andoperationalperformance; # Ability to build and test real world systems that meet industry specialisation and manufacturing standards; # Capacity for lifelong learning and professional development.
Related Course(s):	Master of Nanoelectronic Engineering