

ELEN90049 RF Electronics and Design

Credit Points:	12.50									
Level:	9 (Graduate/Postgraduate)									
Dates & Locations:	This subject is not offered in 2011.									
Time Commitment:	Contact Hours: 1 two hour lecture per week Total Time Commitment: 120 hours									
Prerequisites:	Prerequisites for this subject are <table border="1" data-bbox="389 434 1485 638"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>ELEN90043 Device Models</td> <td>Not offered 2011</td> <td>12.50</td> </tr> <tr> <td>ELEN90048 Passive Component Design & Simulation</td> <td>Not offered 2011</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	ELEN90043 Device Models	Not offered 2011	12.50	ELEN90048 Passive Component Design & Simulation	Not offered 2011	12.50
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Corequisites:	Corequisite for this subject is <table border="1" data-bbox="389 696 1485 842"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>ELEN90050 RF Systems and Architecture</td> <td>Not offered 2011</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	ELEN90050 RF Systems and Architecture	Not offered 2011	12.50			
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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/									
Contact:	Prof Stan Skafidas Email: sskaf@unimelb.edu.au (mailto:sskaf@unimelb.edu.au)									
Subject Overview:	This subject will introduce students to high frequency design of low noise amplifiers, mixers, voltage controlled oscillators, power amplifiers, power combining techniques, Doherty power amplifiers, stacked transistor designs, dividers and phase locked loops. After completing this subject students will be able to design, simulate (schematic and post layout simulation), extract and fabricate components operating in the 50+GHz frequency range.									
Objectives:	Upon successful completion of this subject students should be able to: <ul style="list-style-type: none"> # Design, simulate and analyse the performance of RF low noise amplifiers, on chip power amplifiers, up and down conversion mixers, Voltage Controlled Oscillators and Phase Locked Loops. 									
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:	TBA									
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:	<ul style="list-style-type: none"> # Ability to apply knowledge of science and engineering fundamentals # Ability to undertake problem identification, formulation, and solution 									

	<ul style="list-style-type: none"># Ability to utilise a systems approach to complex problems and to design and operational performance# 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