

R05 PN Master of Science (Nanotechnology)

Year and Campus:	2009
Overview:	<p>This course will not be available in 2009.</p> <p>Students undertaking the Master of Science (Nanotechnology) must complete 200 points comprising:</p> <ul style="list-style-type: none"> # 100 points of discipline subjects including 62.5 points of discipline core subjects; # a 12.5 point Industry Project; and # 87.5 points of Professional Tools core subjects. <p><i>Discipline core (62.5 points)</i></p> <p>Students must take:</p> <ul style="list-style-type: none"> o 600-658 Fundamentals of Nanotechnology o 640-616 Imaging Nanostructures o Nanosynthesis and Fabrication (available semester 1, 2010) o Nanomechanics and Machines (available semester 2, 2010) o From Lab to Life (available semester 1, 2010) <p><i>Discipline Elective (37.5 points)</i></p> <p>Students must take 3 of the following subjects:</p> <ul style="list-style-type: none"> o 600-610 Quantum and Electronic Materials o 411-391 Bionanoengineering o 600-612 Synchrotron Science (available semester 1, 2010) o 600-657 Computational Nanotechnology <p><i>Project Module (12.5 points)</i></p> <ul style="list-style-type: none"> o 600-611 Industry Project <p><i>Professional Tools core (87.5 points)</i></p> <p>Students must take:</p> <p><i>2 Business Tools Units</i></p> <ul style="list-style-type: none"> o 600-614 Business Tools: Money, People and Projects o Business Tools: The Market Environment (available semester 1, 2010) <p><i>3 Science Tools Units</i></p> <ul style="list-style-type: none"> o 600-615 Thinking and Reasoning with Data o 600-617 Systems Modelling and Simulation o 600-618 Ethics and Responsibility in Science <p><i>2 Communication Tools Units</i></p> <ul style="list-style-type: none"> o 600-619 Science and Communication, o 600-616 Science in Context
Objectives:	<p>The objectives of this course are to:</p> <ul style="list-style-type: none"> # provide students with a broad understanding of the multidisciplinary nature of Nanotechnology; # gain the ability to quantitatively describe how the properties of matter differ at the nano-scale; # standardise skills set from Chemistry and Physics backgrounds; # obtain knowledge of both chemical and physical synthesis routes for fabrication of nanomaterials; # increase knowledge and understanding of the imaging techniques used in Nanotechnology; # increase knowledge and understanding of mechanical behaviour at the nanoscale; # expose students to specific applications of nanomechanical devices and nanomachines;

	<ul style="list-style-type: none"># draw together discipline specific knowledge with business, communication and science to solve a complex industry based challenge;# gain experience in interacting with industry partners; and# encourage the development of individual investigative skills, critical thought and the ability to evaluate information and to analyse experimental data.		
Subject Options:	Subject	Study Period Commencement:	Credit Points:
	600-658 Fundamentals of Nanotechnology	Not offered 2009	12.50
	600-615 Thinking and Reasoning with Data	Semester 1	12.50
	600-619 Science and Communication	Semester 1	12.50
	600-616 Science in Context	Semester 2	12.50
	640-616 Imaging Nanostructures	Not offered 2009	12.50
	600-610 Quantum and Electronic Materials	Not offered 2009	12.50
	411-391 Bionanoengineering	Semester 2	12.50
	600-657 Computational Nanotechnology	Not offered 2009	12.50
	600-614 Business Tools:Money, People & Projects	Semester 2	12.50
	600-618 Ethics and Responsibility in Science	Semester 2	12.50
	600-617 Systems Modelling and Simulation	Semester 1	12.50
Links to further information:	http://graduate.science.unimelb.edu.au/		
Related Course(s):	Master of Science		