Physics

Year and Campus:	2012
Coordinator:	Dr. Nicole Bell
Contact:	Email: **msc@physics.unimelb.edu.au (mailto:msc@physics.unimelb.edu.au)**
Overview:	The Postgraduate Diploma program in Physics is designed to allow students to further their study of physics on a broad front, provide a pathway for entry into graduate study in Physics, and to engage students in their own research by participation in the activities of a research group in the School of Physics (coursework+research option). Prior study in Physics to at least 2nd year university level is assumed.
Objectives:	# increase students' knowledge of physics on a broad front and to a professional level; # analyse how to solve a problem by applying simple fundamental laws to more complicated situations; # develop independent and critical thinking skills.
Structure & Available Subjects:	The Physics program consists of a: # Coursework+Research Option (Coursework = 50 points, Research Project = 50 points) **OR** # Coursework (100%) Option (Coursework = 100 points).
Subject Options:	**Coursework+Research Option** **COURSEWORK** Students must select four subjects from the following list in consultation with the Program Coordinator:

Subject	Study Period Commencement:	Credit Points:
PHYC90007 Quantum Mechanics	Semester 1	12.50
PHYC90008 Quantum Field Theory	Semester 1	12.50
PHYC90012 General Relativity	Semester 1	12.50
PHYC90013 Condensed Matter Physics	Semester 2	12.50
PHYC90010 Statistical Mechanics	Semester 1	12.50
PHYC90011 Particle Physics	Semester 2	12.50
PHYC90009 Physical Cosmology	Semester 2	12.50
PHYC90006 Quantum and Advanced Optics	Semester 2	12.50

Other approved subjects at 300-level or higher.

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RESEARCH

Content: An original, supervised research project (experimental and/or theoretical) in one of the School's current fields: astrophysics, condensed matter physics, optical physics, particle physics and quantum physics.

Assessment: A written report on the research performed during the year. Preparation and delivery of a 15 minute talk to the School of Physics on the research work.

Depending on the coursework subjects taken a student would normally enrol in a combination of Research Project subjects as indicated below to ensure they have completed 50 points by the end of the course.

Subject	Study Period Commencement:	Credit Points:
PHYC40004 Physics Research Project	Semester 1, Semester 2	12.50
PHYC40002 Physics Research Project	Semester 1, Semester 2	25
PHYC40007 Physics Research Project	Semester 1, Semester 2	37.50
PHYC40008 Physics Research Project	Semester 1, Semester 2	50

Coursework (100%) Option

COURSEWORK

Students must select eight subjects from the following list in consultation with the Program Coordinator:

Subject	Study Period Commencement:	Credit Points:
PHYC90007 Quantum Mechanics	Semester 1	12.50
PHYC90008 Quantum Field Theory	Semester 1	12.50
PHYC90012 General Relativity	Semester 1	12.50
PHYC90013 Condensed Matter Physics	Semester 2	12.50
PHYC90010 Statistical Mechanics	Semester 1	12.50
PHYC90011 Particle Physics	Semester 2	12.50
PHYC90009 Physical Cosmology	Semester 2	12.50
PHYC90006 Quantum and Advanced Optics	Semester 2	12.50

Other approved subjects at 300 level or higher.

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Links to further information:	http://graduate.science.unimelb.edu.au/
Related Course(s):	Postgraduate Diploma in Science