Physics

Year and Campus:	2016
Coordinator:	Assoc Prof Jeffrey McCallum
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Overview:	The Graduate Diploma allows students who have completed an undergraduate degree to re-focus or expand their body of knowledge by completing the requirement of one of the undergraduate majors (or equivalent) in the Bachelor of Science not already completed. The Graduate Certificate provides a pathway to the Master of Science Streams.
Learning Outcomes:	Students who complete the Graduate Diploma should: # Demonstrate an independent approach to knowledge that uses rigorous methods of inquiry and appropriate theories and methodologies that are applied with intellectual honesty and a respect for ethical values; # Apply critical and analytical skills and methods to the identification and resolution of problems; # Act as informed and critically discriminating participants within the community of scholars, as citizens and in the work force; # Communicate effectively; # Commit to continuous learning; # Be proficient in the use of appropriate modern technologies, such as the computer and other information technology systems, for the acquisition, processing and interpretation of data.
Structure & Available Subjects:	Completion of 100 points: # 50 points of study at level 3; # 50 points of study at level 2 or above.
Subject Options:	***Subject prerequisites:*** *25 points of level 1 or above Physics and 25 points of level 1 or above Mathematics, or equivalents plus two of PHYC20005 Quantum Mechanics & Thermal Physics, PHYC20009 Thermal and Classical Physics, PHYC20010 Quantum Mechanics and Special Relativity, PHYC20011 Electromagnetism and Optics, MAST20009 Vector Calculus or MAST20026 Real Analysis with Applications, or equivalents.*

Level 2

Because of the nature of the pre-requisite structure for the level three subjects, students need to complete six level 2 subjects thus they will need to have completed at least two of the level 2 subjects listed below prior to admission.

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Four of:

Subject	Study Period Commencement:	Credit Points:
PHYC20005 Quantum Mechanics & Thermal Physics	Not offered 2016	12.50
PHYC20008 Laboratory Work	Not offered 2016	12.50
PHYC20009 Thermal and Classical Physics	Semester 1	12.50
PHYC20010 Quantum Mechanics and Special Relativity	Semester 1	12.50
PHYC20011 Electromagnetism and Optics	Semester 2	12.50
MAST20009 Vector Calculus	Semester 1, Semester 2	12.50
MAST20026 Real Analysis	Semester 1, Semester 2	12.50

Level 3

Students must complete:

Subject	Study Period Commencement:	Credit Points:
PHYC30018 Quantum Physics	Semester 1	12.50

Plus at least one of:

Subject	Study Period Commencement:	Credit Points:
PHYC30016 Electrodynamics	Semester 1	12.50
PHYC30017 Statistical Physics	Semester 2	12.50

Plus at least one of:

Subject	Study Period Commencement:	Credit Points:
PHYC30012 Computational Physics	Semester 2	12.50
PHYC30014 Laboratory Work A	Semester 1, Semester 2	12.50
PHYC30015 Laboratory Work B	Semester 1, Semester 2	12.50

Plus (if required as a fourth subject) one elective selected from:

Subject	Study Period Commencement:	Credit Points:
PHYC30019 Astrophysics	Semester 1	12.50
PHYC30011 Sub-atomic Physics	Semester 2	12.50
PHYC30020 Quantum Systems	Semester 2	12.50

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