

351AA Ph.D.- Engineering

Year and Campus:	2014 - Parkville
CRICOS Code:	056957F
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Research Higher Degree
Duration & Credit Points:	Students are expected to complete this research in 3.00 years full time, or equivalent part time. Credit Points: 300
Coordinator:	..
Contact:	<p>Melbourne School of Engineering Ground Floor, Old Engineering (Building 173)</p> <p>Current Students: Email: 13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au) Phone: 13 MELB (13 6352) +61 3 9035 551</p> <p>Prospective students: Visit http://www.eng.unimelb.edu.au/study/research/ (http://www.eng.unimelb.edu.au/study/research/)</p> <p>Melbourne School of Graduate Research: Visit http://www.gradresearch.unimelb.edu.au/ (Melbourne%20School%20of%20Graduate%20Research:%20Visit%20%20http://www.gradresearch.unimelb.edu.au/)</p>
Course Overview:	<p>The degree of Doctor of Philosophy signifies that the holder has undertaken a substantial piece of original research, which has been conducted and reported by the holder under proper academic supervision and in a research environment for a prescribed period.</p> <p>The PhD thesis demonstrates authority in the candidate's field and shows evidence of command of knowledge in relevant fields. It shows that the candidate has a thorough grasp of the appropriate methodological techniques and an awareness of their limitations. The thesis also makes a distinct contribution to knowledge. Its contribution to knowledge rests on originality of approach and / or interpretation of the findings and, in some cases, the discovery of new facts. The thesis demonstrates an ability to communicate research findings effectively in the professional arena and in an international context. It is a careful, rigorous and sustained piece of work demonstrating that a research 'apprenticeship' is complete and the holder is admitted to the community of scholars in the discipline.</p> <p>In scope, the PhD thesis differs from a research Masters thesis chiefly by its deeper and more comprehensive treatment of the chosen subject. It is written succinctly, in English, unless approval has been given for the thesis to be written in a language other than English. The normal length of a PhD thesis is 80,000 words, exclusive of words in tables, maps, bibliographies and appendices. Footnotes are included as part of the word limit. The thesis should not exceed 100,000 words (or equivalent) without special approval from the Research Higher Degrees Committee.</p> <p>A candidate will have appropriately experienced supervisor/s and an Advisory Committee who in consultation with the candidate, arranges a course of supervised research designed to suit the individual requirements and interests of the candidate. A candidate may be required to supplement their research program by attendance at, or enrolment in, additional subjects if considered necessary by the supervisor(s). All students are required to attend departmental seminars over the period of their candidature.</p> <p>Duration</p> <p>The normal period of candidature is three years for full-time candidates with the possibility of two, six month extensions. All PhD candidates are required to complete a minimum of 12 months full-time research at the University in order to benefit from planning, conducting and writing up their research within a University community and environment. Normally the entire PhD is undertaken at the University.</p>

	<p>Intake</p> <p>Students may commence a PhD at any time during the year subject to prior arrangement with their nominated supervisor. Where a student is enrolling in a PhD with a coursework component, intake may be restricted by the timetabling of subjects. Please check with the relevant department prior to making any arrangements for enrolment or travel.</p>																		
<p>Learning Outcomes:</p>	<p>See 'Graduate Attributes'</p>																		
<p>Course Structure & Available Subjects:</p>	<p>Coursework Component</p> <p>Students in the Department of Electrical and Electronic Engineering are required to successfully complete a minimum of four coursework subjects throughout their 351AA PhD Engineering candidature. All other students are required to successfully complete a minimum of two and a maximum of four coursework subjects throughout their candidature.</p> <p>Awarding of Final Mark & Grade</p> <p>Students must successfully complete the required coursework component in order to be awarded the PhD-Engineering. Where there is a coursework component the final mark and grade for the degree is the mark and grade awarded for the PhD thesis.</p> <p>Conversion and Confirmation</p> <p>All students are required to successfully complete a minimum of two and maximum of four coursework subjects before they are eligible to apply to convert from MR-PHILENG Master of Philosophy to 351AA PhD Engineering or prior to confirmation in the 351AA PhD Engineering.</p>																		
<p>Subject Options:</p>	<p>Students in the Department of Electrical and Electronic Engineering are required to complete a minimum of four subjects chosen from the Electrical and Electronic Engineering list of approved electives with approval from their supervisor.</p> <p>All other students are required to complete a minimum of two subjects and a maximum of four chosen from the list below with the approval of the student's supervisor.</p> <p>Graduate/Postgraduate subjects NOT listed below may be selected in consultation with the student's supervisor and are subject to the endorsement of the subject coordinator and Head of Department.</p> <p>If a student does not have sufficient background in the subjects they may be required by the supervisory panel to take preliminary undergraduate subjects. Undergraduate preliminary subjects will not count towards the postgraduate level coursework requirement. Other subjects may be selected in consultation with the supervisor and the department, and are subject to the written approval of the Head of Department.</p> <p>Students in the following Departments may select subjects from the list below;</p> <ul style="list-style-type: none"> # Chemical and Biomolecular Engineering # Computing and Information Systems # Infrastructure Engineering # Mechanical Engineering <p>Subjects Available:</p> <p>Biomedical Engineering</p> <table border="1" data-bbox="389 1697 1485 2067"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>BMEN90002 Neural Information Processing</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>BMEN90004 Advanced Neural Information Processing</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>BMEN90011 Tissue Engineering & Stem Cells</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>BMEN90012 Soft Matter Engineering</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>BMEN90021 Medical Imaging</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	BMEN90002 Neural Information Processing	Semester 2	12.50	BMEN90004 Advanced Neural Information Processing	Semester 1	12.50	BMEN90011 Tissue Engineering & Stem Cells	Semester 2	12.50	BMEN90012 Soft Matter Engineering	Semester 1	12.50	BMEN90021 Medical Imaging	Semester 1	12.50
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BMEN90002 Neural Information Processing	Semester 2	12.50																	
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BMEN90011 Tissue Engineering & Stem Cells	Semester 2	12.50																	
BMEN90012 Soft Matter Engineering	Semester 1	12.50																	
BMEN90021 Medical Imaging	Semester 1	12.50																	

BMEN90022 Computational Biomechanics	Semester 2	12.50
BMEN90024 Human Impact & Forensic Biomechanics	Semester 1	12.50
ELEN90071 Auditory and Visual Processing	Not offered 2014	12.50

Chemical and Biomolecular Engineering

Subject	Study Period Commencement:	Credit Points:
CHEN90007 Advanced Thermo & Reactor Engineering	Semester 2	12.50
CHEN90010 Minerals, Materials and Recycling	Semester 2	12.50
CHEN90011 Bioenvironmental Engineering	Semester 2	12.50
CHEN90019 Advanced Heat & Mass Transport Processes	Semester 1	12.50
CHEN90027 Carbon Capture and Storage	Semester 1	12.50
ENGR90024 Computational Fluid Dynamics	Semester 1	12.50
CHEN90034 Research Methods	Semester 1	12.50

Computing and Information Systems Engineering

Subject	Study Period Commencement:	Credit Points:
BINF90002 Elements of Bioinformatics	Semester 1	12.50
COMP90007 Internet Technologies	Semester 1, Semester 2	12.50
COMP90014 Algorithms for Functional Genomics	Semester 2	12.50
COMP90015 Distributed Systems	Semester 1, Semester 2	12.50
COMP90016 Computational Genomics	Semester 1	12.50
COMP90017 Sensor Networks and Applications	Not offered 2014	12.50
COMP90018 Mobile Computing Systems Programming	Semester 2	12.50
COMP90019 Distributed Computing Project	Semester 1, Semester 2	25
COMP90020 Distributed Algorithms	Semester 1	12.50
COMP90024 Cluster and Cloud Computing	Semester 1	12.50
COMP90025 Parallel and Multicore Computing	Semester 2	12.50
COMP90038 Algorithms and Complexity	Semester 1, Semester 2	12.50
COMP90041 Programming and Software Development	Semester 1, Semester 2	12.50
COMP90042 Web Search and Text Analysis	Semester 1	12.50
COMP90043 Cryptography and Security	Semester 2	12.50
COMP90044 Research Methods	Semester 2	12.50
COMP90045 Programming Language Implementation	Semester 1	12.50
COMP90046 Constraint Programming	Semester 2	12.50
COMP90048 Declarative Programming	Semester 2	12.50
COMP90049 Knowledge Technologies	Semester 1, Semester 2	12.50

COMP90050 Advanced Database Systems	Semester 1	12.50
COMP90051 Statistical and Evolutionary Learning	Semester 2	12.50
COMP90053 Program Analysis and Transformation	Not offered 2014	12.50
COMP90054 Software Agents	Semester 2	12.50
GEOM90018 Spatial Databases	Semester 1	12.50
GEOM90042 Spatial Information Programming	Semester 1	12.50
ISYS90026 Fundamentals of Information Systems	Semester 1	12.50
ISYS90031 Research Methods in Information Systems	Semester 2	12.50
ISYS90032 Emerging Technologies and Issues	Semester 2	12.50
ISYS90034 B2B Electronic Commerce	Semester 2	12.50
ISYS90035 Knowledge Management Systems	Semester 1	12.50
ISYS90036 Enterprise Systems	Semester 1	12.50
ISYS90037 Managing IS Projects: People & Politics	Semester 1	12.50
ISYS90038 IS Strategy and Governance	Semester 1, Semester 2	12.50
ISYS90039 Innovation & Entrepreneurship in IT	Not offered 2014	12.50
ISYS90040 Managing Change for IS Professionals	Semester 2	12.50
ISYS90043 Enterprise Applications & Architectures	Semester 1, Semester 2	12.50
ISYS90045 Professional IS Consulting	Semester 1, Semester 2	12.50
ISYS90048 Information Technology Infrastructure	Semester 1, Semester 2	12.50
ISYS90049 Process Analysis Modelling and Design	Semester 1, Semester 2	12.50
ISYS90050 IT Project and Change Management	Semester 1, Semester 2	12.50
ISYS90051 Impact of Digitisation	Semester 2	12.50
ISYS90052 Managing Large Projects	Semester 2	12.50
ISYS90055 Managing IT Outsourcing	Semester 2	12.50
ISYS90068 Service Science	Not offered 2014	12.50
ISYS90069 eHealth & Biomedical Informatics Systems	June	12.50
ISYS90070 Information Security Consulting	June	12.50
SCIE90004 Science in Context	Not offered 2014	12.50
SCIE90007 E-Science	Not offered 2014	12.50
SINF90001 Database Systems & Information Modelling	Semester 1	12.50
SINF90002 Interaction Design and Usability	Semester 2	12.50
SINF90004 Data Warehousing	Semester 1	12.50
SINF90007 Pervasive Computing	Not offered 2014	12.50
SKIL90004 Project Management in Science	Semester 1	12.50

SWEN90002 Engineering for Internet Applications	Not offered 2014	12.50
SWEN90006 Software Engineering Methods	Semester 2	12.50
SWEN90007 Software Design and Architecture	Semester 2	12.50
SWEN90008 Software Processes and Management	Not offered 2014	12.50
SWEN90009 Software Requirements Analysis	Semester 1	12.50
SWEN90010 High Integrity Systems Engineering	Semester 1	12.50

Infrastructure Engineering

Subject	Study Period Commencement:	Credit Points:
CVEN90016 Concrete Design and Technology	Semester 2	12.50
CVEN90017 Earthquake Resistant Design of Buildings	Semester 1	12.50
CVEN90018 Structural Dynamics and Modelling	Semester 2	12.50
CVEN90019 Sustainable Water Resources Systems	Semester 2	12.50
CVEN90024 High Rise Structures	Semester 1	12.50
CVEN90026 Extreme Loading of Structures	Semester 1	12.50
CVEN90027 Geotechnical Applications	Semester 2	12.50
CVEN90035 Structural Theory and Design 3	Semester 2	12.50
CVEN90043 Sustainable Infrastructure Engineering	Semester 1	12.50
CVEN90044 Engineering Site Characterisation	Semester 1	12.50
CVEN90048 Transport Systems	Semester 2	12.50
CVEN90050 Geotechnical Engineering	Semester 1	12.50
ENEN90005 Environmental Management ISO 14000	Semester 2	12.50
ENEN90006 Solid Wastes to Sustainable Resources	Semester 1	12.50
ENEN90011 Energy Efficiency Technology	Semester 2	12.50
ENEN90014 Sustainable Buildings	September	12.50
ENEN90027 Energy for Sustainable Development	Not offered 2014	12.50
ENEN90028 Monitoring Environmental Impacts	Semester 2	12.50
ENEN90029 Water and Waste Water Management	Semester 1	12.50
ENEN90030 Groundwater Hydrology	Semester 2	12.50
ENEN90031 Quantitative Environmental Modelling	Semester 1	12.50
ENEN90032 Environmental Analysis Tools	Semester 2	12.50
ENEN90033 Solar Energy	Semester 1	12.50
ENEN90034 Environmental Applied Hydrology	Semester 1	12.50
ENGM90006 Engineering Contracts and Procurement	Semester 2	12.50
ENGM90007 Project Management Practices	Semester 1	12.50

ENGR90026 Engineering Entrepreneurship	Semester 2	12.50
GEOM90005 Remote Sensing	Semester 2	12.50
GEOM90006 Spatial Analysis	Semester 2	12.50
GEOM90007 Spatial Visualisation	July	12.50
GEOM90008 Foundations of Spatial Information	Semester 1	12.50
GEOM90015 Spatial Data Infrastructure	Semester 2	12.50
GEOM90016 Advanced Topics in GIScience	Semester 1	12.50
GEOM90018 Spatial Databases	Semester 1	12.50
GEOM90033 Satellite Positioning Systems	Semester 2	12.50
GEOM90035 Residential Land Development	Semester 1	12.50
GEOM90038 Advanced Imaging	Semester 1	12.50
GEOM90039 Advanced Surveying and Mapping	February	12.50
GEOM90040 Geomatics Problem Solving and Analysis	Semester 1	12.50
GEOM90041 Cadastral Surveying	Semester 2	12.50
GEOM90042 Spatial Information Programming	Semester 1	12.50

Mechanical Engineering

Subject	Study Period Commencement:	Credit Points:
ELEN90064 Advanced Control Systems	Semester 2	12.50
ENGR90019 Adv Topics in Fluid Mechanics	Not offered 2014	12.50
ENGR90020 Adv Topics in Biomechanics	Not offered 2014	12.50
ENGR90026 Engineering Entrepreneurship	Semester 2	12.50
MCEN90010 Finance & Human Resources for Engineers	Not offered 2014	12.50
MCEN90017 Advanced Motion Control	Semester 2	12.50
MCEN90018 Advanced Fluid Dynamics	Semester 1	12.50
MCEN90019 Advanced Thermodynamics	Semester 2	12.50
MCEN90020 Advanced Materials	Semester 1	12.50
MCEN90023 Quality and Reliability	Semester 2	12.50
MCEN90027 Simulation Of Mechatronic Systems	Not offered 2014	12.50
MCEN90028 Robotics and Automation Systems	Semester 2	12.50
MCEN90029 Advanced Solid Mechanics	Semester 2	12.50
MCEN90031 Applied High Performance Computing	Semester 2	12.50
MCEN90032 Sensor Systems	Semester 1	12.50

Graduate School of Science
School of Botany

Subject	Study Period Commencement:	Credit Points:
BIOL90001 Microscopy for Biological Sciences	Semester 1	12.50

School of Chemistry

Subject	Study Period Commencement:	Credit Points:
CHEM90009 Chemical Synthesis & Characterisation 1	Semester 1	12.50
CHEM90010 Advanced Chemical Applications 1	July	12.50
CHEM90017 Chemical Synthesis & Characterisation 2	Semester 1	12.50
CHEM90018 Advanced Chemical Applications 2	July	12.50

Department of Mathematics and Statistics

Students are permitted to undertake the Department of Mathematics and Statistics, Masters level Mathematics and Statistics subjects, listed below excluding MAST90007: Statistics for Research Workers.

Subject	Study Period Commencement:	Credit Points:
MAST90009 Business Forecasting	Not offered 2014	12.50
MAST90011 Modelling: Mathematical Biology	Semester 2	12.50
MAST90012 Measure Theory	Not offered 2014	12.50
MAST90013 Network Optimisation	Not offered 2014	12.50
MAST90014 Optimisation for Industry	Semester 1	12.50
MAST90017 Representation Theory	Not offered 2014	12.50
MAST90019 Random Processes	Semester 1	12.50
MAST90020 Functional Analysis	Semester 2	12.50
MAST90023 Algebraic Topology	Semester 1	12.50
MAST90025 Commutative and Multilinear Algebra	Semester 1	12.50
MAST90026 Computational Differential Equations	Semester 1	12.50
MAST90027 The Practice of Statistics	Semester 2	12.50
MAST90029 Differential Topology and Geometry	Not offered 2014	12.50
MAST90030 Advanced Discrete Mathematics	Semester 2	12.50
MAST90031 Enumerative Combinatorics	Not offered 2014	12.50
MAST90045 Systems Modelling and Simulation	Semester 1	12.50
MAST90050 Scheduling and Optimisation	Semester 2	12.50
MAST90051 Mathematics of Risk	Semester 2	12.50
MAST90053 Experimental Mathematics	Semester 1	12.50
MAST90056 Riemann Surfaces and Complex Analysis	Not offered 2014	12.50
MAST90057 Elements of Probability	Semester 1	12.50

MAST90058 Elements of Statistics	Semester 2	12.50
MAST90059 Stochastic Calculus with Applications	Not offered 2014	12.50
MAST90060 Mathematical Statistical Mechanics	Not offered 2014	12.50
MAST90061 Modern Statistical Methods	Not offered 2014	12.50
MAST90062 Probability & Mathematical Statistics I	Semester 1	12.50
MAST90063 Probability & Mathematical Statistics II	Semester 2	12.50
MAST90064 Advanced Methods: Differential Equations	Not offered 2014	12.50
MAST90065 Exactly Solvable Models	Not offered 2014	12.50
MAST90066 Continuum Mechanics and Applications	Not offered 2014	12.50
MAST90067 Advanced Methods: Transforms	Semester 1	12.50
MAST90068 Groups, Categories & Homological Algebra	Semester 2	12.50
MAST90069 Introduction to String Theory	Semester 2	12.50

School of Physics

Subject	Study Period Commencement:	Credit Points:
PHYC90006 Quantum and Advanced Optics	Semester 2	12.50
PHYC90007 Quantum Mechanics	Semester 1	12.50

Electrical and Electronic Engineering

Electrical and Electronic Engineering students may select subjects from the list below;

Subjects Available:

Subject	Study Period Commencement:	Credit Points:
BMEN90004 Advanced Neural Information Processing	Semester 1	12.50
ELEN90017 Topics in Instrumentation	Not offered 2014	12.50
ELEN90018 Adv Topics in Engineering Mathematics	Semester 2	12.50
ELEN90022 Quantum Opto-electronics	Not offered 2014	12.50
ELEN90023 Lightwave Devices and Systems	Not offered 2014	12.50
ELEN90024 Wireless Systems	Not offered 2014	12.50
ELEN90025 Communication Network Standards/Protocol	Not offered 2014	12.50
ELEN90026 Introduction to Optimisation	Semester 2	12.50
ELEN90027 Linear Systems Theory	Semester 1	12.50
ELEN90028 Nonlinear Systems Theory	Not offered 2014	12.50
ELEN90030 Information Theory	Semester 2	12.50
ELEN90031 Advanced Topics in Communications	Semester 1	12.50
ELEN90032 Advanced Topics in Signals and Systems	Semester 2	12.50
ELEN90033 Advanced Topics in Photonics	Semester 1	12.50

ELEN90071 Auditory and Visual Processing	Not offered 2014	12.50
ELEN90073 Advanced Topics in Control	Semester 1	12.50
ELEN90072 Energy Efficient Networking	Semester 2	12.50

Computing and Information Systems Engineering

Subject	Study Period Commencement:	Credit Points:
COMP90044 Research Methods	Semester 2	12.50

Graduate School of Science

Department of Mathematics and Statistics

Students are permitted to undertake the Department of Mathematics and Statistics, Masters level Mathematics and Statistics subjects, listed above excluding MAST90007: Statistics for Research Workers.

School of Physics

Subject	Study Period Commencement:	Credit Points:
PHYC90006 Quantum and Advanced Optics	Semester 2	12.50
PHYC90007 Quantum Mechanics	Semester 1	12.50

Entry Requirements:

The criteria for assessing applicants' eligibility for PhD candidature are:

1. Minimum qualifications

Applicants are normally required to have completed at least a four-year honours degree at H2A standard from an Australian university, or a qualification or combination of qualifications considered by the RHD Committee to be equivalent. For particular disciplines applicants are also required to complete, at an appropriate level, a Graduate Management Admissions Test (GMAT) or a Graduate Record Entry (GRE) test.

2. Minimum level of academic achievement

Applicants should have achieved an overall H1 (80-100%) or H2A (75-79%) grade in the relevant honours or Masters degree.

3. Relevance of the degree

The completed degree must be in an area that is relevant to the intended PhD, including sufficient specialisation such that the applicant will have already developed an understanding and appreciation of a body of knowledge relevant to the intended PhD.

4. Evidence of research ability

Applicants are normally required to have completed a research project, component, subject or group of subjects that accounts for at least 25% of their work (i.e. Honours year), or 25% of one year accumulated over the length of a Masters course, and which has, or have, been conducted, and assessed, individually. Research carried out in groups should at least have been graded individually. This project, component, or subject(s) may include:

(a) any obviously research oriented project, subject or sustained piece of scholarly writing conducted for assessment, such as small theses, research essays, long essays, or studios; AND/OR

(b) any less-obviously research subjects, including practice-based subjects such as performance or fieldwork, where there is also scholastic rigor as documented in a sustained piece of writing analogous to (a); AND/OR

(c) any subjects directed at the formation of research skills, such as methodology and reasoning, such as scientific reasoning, or legal reasoning, where a sustained piece of writing has also been produced.

5. Currency of applicant's knowledge of the discipline

The applicant's degree/s and/or professional experience must demonstrate that their knowledge of the discipline in which they plan to undertake their research higher degree is current.

6. Assessment of level of suitability

Based on interview or other verbal communication, an assessment should be made of the level of understanding, motivation and time commitment of the student for the proposed program of

	<p>study. For example, a full-time student would be expected to devote at least 40 hours a week and a part-time student about half of this.</p> <p>Applicants must also meet the University's English Language requirements http://futurestudents.unimelb.edu.au/admissions/entry-requirements/research (http://futurestudents.unimelb.edu.au/admissions/entry-requirements/research) .</p> <p>For more information on the application process see http://www.eng.unimelb.edu.au/study/research/ (http://www.eng.unimelb.edu.au/study/research/)</p>
<p>Core Participation Requirements:</p>	<p>All PhD candidates are required to complete the equivalent of at least 12 months full-time (24 months part-time) advanced study and research in the University unless studying at an outside institution approved by the Research Higher Degrees Committee (RHDC). The RHDC will not approve entirely distance supervision or entirely on-line supervision for research higher degree students. Throughout their candidature candidates are expected to attend the University in order to benefit from planning, conducting and writing up their research within a University community and environment. The residency requirement is deemed especially important during the period of probationary candidature. During probationary candidature the student is expected to interact on a regular basis with the supervisor, the department (including staff and other research students) and the University, so as: to build the skills and knowledge necessary to carry out the proposed research program to acquire an understanding of the standards and requirements for a PhD awarded by the University to make use of support programs and facilities provided by the Melbourne School of Graduate Research throughout candidature. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability will impact on meeting the requirements of this course are encouraged to discuss this matter with a Faculty Student Adviser and the Disability Liaison.</p>
<p>Graduate Attributes:</p>	<p>Doctoral degrees at the University of Melbourne seek to develop graduates who demonstrate academic leadership, increasing independence, creativity and innovation in their research work. The University expects its doctoral graduates to have the following qualities and skills: an advanced ability to initiate research and to formulate viable research questions; a demonstrated capacity to design, conduct and report sustained and original research; the capacity to contextualise research within an international corpus of specialist knowledge; an advanced ability to evaluate and synthesize research-based and scholarly literature; an advanced understanding of key disciplinary and multi-disciplinary norms and perspectives relevant to the field; highly developed problem-solving abilities and flexibility of approach; the ability to analyse critically within and across a changing disciplinary environment; the capacity to disseminate the results of research and scholarship by oral and written communication to a variety of audiences; a capacity to cooperate with and respect the contributions of fellow researchers and scholars; a profound respect for truth and intellectual integrity, and for the ethics of research and scholarship; an advanced facility in the management of information, including the application of computer systems and software where appropriate to the student's field of study; an understanding of the relevance and value of their research to national and international communities of scholars and collaborators; an awareness where appropriate of issues related to intellectual property management and the commercialisation of innovation; and an ability to formulate applications to relevant agencies, such as funding bodies and ethics committees. The University provides a variety of opportunities in addition to the supervised research program, to facilitate a students' acquisition of these attributes.</p>
<p>Links to further information:</p>	<p>http://www.gradresearch.unimelb.edu.au</p>
<p>Notes:</p>	<p>Application Procedure</p> <p>Detailed information for prospective PhD students regarding the application process, including the application form is available at http://www.futurestudents.unimelb.edu.au/grad/research (http://www.futurestudents.unimelb.edu.au/grad/research) (http://www.futurestudents.unimelb.edu.au/grad/research (http://www.futurestudents.unimelb.edu.au/grad/research)) .</p> <p>It is important to note that there is a separate application form for local and international students.</p> <p>PhD applicants should discuss their research interests with a potential supervisor at the department in which they would like to enrol prior to submitting an application. The Find an Expert (http://www.findanexpert.unimelb.edu.au/) (http://www.findanexpert.unimelb.edu.au/)</p>

www.findanexpert.unimelb.edu.au/) website may assist you to find an appropriate supervisor.

Prospective PhD candidates should also investigate department websites for information on current research and contact details. Department websites are easily accessed from **faculty homepages** (<http://www.unimelb.edu.au/az/faculties.html> (<http://www.unimelb.edu.au/az/faculties.html>)).

Applications are accepted year-round.

Which scholarship can I apply for?

Students can find information about graduate research scholarships offered by the University of Melbourne at the **Melbourne Scholarships Office** (<http://cms.services.unimelb.edu.au/scholarships/pgrad/> (<http://cms.services.unimelb.edu.au/>)).

Facilities and Supports:

The Melbourne School of Graduate Research makes available a broad range of **Programs & Services** (<http://www.gradresearch.unimelb.edu.au/programs/> (<http://www.gradresearch.unimelb.edu.au/programs/>)) available to graduate research students.