MC-SCIVIS Master of Science (Vision Science)

Year and Campus:	2014 - Parkville
CRICOS Code:	062189B
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Graduate/Postgraduate
Duration & Credit Points:	200 credit points taken over 24 months full time. This course is available as full or part time.
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Course Overview:	The Master of Science (Vision Science) is a coursework masters degree incorporating a substantial research project. The Master of Science gives students the opportunity to undertake a substantive research project in a field of choice as well as a broad range of coursework subjects including a professional skills component, as a pathway to PhD study or to the workforce. Vision Sciences is the study of ocular, systemic and neurological disease, underpinned by foundations in biomedical, computation, statistical or societal expertise. Graduates will have an advanced knowledge and understanding of vision science, with experience investigating problems, critical thinking and analysing experimental data. This stream will provide students with a broad understanding of vision sciences and significant experience in a chosen specialisation.
Learning Outcomes:	At the completion of this course, students should have gained: # familiarity with the kinds of data generated by vision science research programs; # a detailed understanding of selected contemporary issues in the vision sciences; # skills in conducting research in the vision sciences; # skills in designing rigorous experimental programs; # skills in critical assessment of literature; and # the ability to present and interpret results of analyses.
Course Structure & Available Subjects:	All students must complete 200 pts, including: # Discipline Core subjects (25 points); # Discipline Elective subjects (25 points); # Professional Skills subjects (25 points); # Research Project (125 points).
Subject Options:	**Discipline Core** Students must take:

Subject	Study Period Commencement:	Credit Points:
OPTO90017 Graduate Seminar in Vision Science	Semester 2	12.50
OPTO90018 The Eye and Vision: A Window to Disease	Semester 1	12.50

Discipline Electives

Students must select 25 points of subjects available through the Master of Science programs. Subjects will be selected in consultation with the research supervisor. Subjects will be selected both to broaden the student's training and to enhance the skills relevant to the chosen research area. Where appropriate and with approval, a student may complete up to two 200-level or 300-level subjects.

Professional Skills

Students must select two of the following subjects:

Subject	Study Period Commencement:	Credit Points:
MAST90044 Thinking and Reasoning with Data	Semester 1	12.50
MAST90045 Systems Modelling and Simulation	Semester 1	12.50
SCIE90005 Ethics and Responsibility in Science	Semester 1	12.50
BUSA90403 Business Tools: Money People & Processes	September	12.50
SCIE90012 Science Communication	Semester 2	12.50
SCIE90013 Communication for Research Scientists	Semester 1	12.50
MAST90007 Statistics for Research Workers	June	12.50

Research Project

Students are required to complete a 125 point Research Project. Students will gain experience in conducting research in vision science by taking responsibility for a research project, including experimental design, laboratory experiments; the collection, appropriate statistical analysis, and interpretation of data; and providing an oral and written presentation of the results.
The project will be taken over four consecutive semesters and will begin on the Monday of semester of entry (semesters 1 or 2) (indicative for 2013: March 4 and July 29) and continue for up to 88 weeks until the end of the fourth semester, minus recreation leave of between 4 and 8 weeks (22 weeks per semester over the four semesters).
For how long and at what time within the enrolment the actual period of leave is to be taken needs to be negotiated with a student's supervisor.
The Research Project will be due for submission by the end of the formal examination period of the fourth semester of enrolment if an earlier date is not specified.
A literature review (up to 3000 words; pass/fail) will ensure students assimilate and critically evaluate existing knowledge within a scientific paradigm; a grant proposal/project brief and associated 10 minute oral presentation (up to 2000 words; 15%) will encourage students to consider the justification and budget of their proposed research; a final oral presentation (20 minutes; pass/fail) will combine oral and visual communication skills of their project results; a thesis (of 10,000-14,000 words, 85%) will describe the students' research and enhance their capacity to express persuasive intellectual, scientific arguments.
Students may enrol in a combination of research project subjects and coursework subjects over their two years of full-time study or over their four years of part-time study as long as once the Research Project is commenced (which may not be the first semester in the case of part-time course enrolments), the consecutive enrolment requirement is met and to ensure they have completed a total of 125 points for the research project by the end of their course.

Subject	Study Period Commencement:	Credit Points:
OPTO90019 Vision Science Project A	Semester 1, Semester 2	12.50
OPTO90020 Vision Science Project B	Semester 1, Semester 2	25
OPTO90021 Vision Science Project C	Semester 1, Semester 2	37.50
OPTO90022 Vision Science Project D	Semester 1, Semester 2	50

Entry Requirements:

An undergraduate degree with a major in Anatomy, Cell Biology, Immunology, Neuroscience, Ophthalmology, Pharmacology, Psychology, Zoology, Biochemistry & Molecular Biology, Computer Science, Mathematics & Statistics, Optics, Orthoptics, Physics, Veterinary Science,

	Biotechnology, Genetics, Microbiology, Optometry, Pathology, Physiology, or Vision Science, with at least an H3 (65%) in the major, or equivalent. Quotas may be applied and preference may be given to applicants with evidence of appropriate preparation or potential to undertake research. Entry is subject to the capacity of the department to provide adequate supervision in, and resources for, a research project appropriate to the interests and preparation of the individual student and may be subject to the agreement of a member of academic staff to supervise the project module. Selection is not automatic and, in particular, is subject to competition.
Core Participation Requirements:	The Master of Science (Vision Sciences) welcomes applications from students with disabilities. It is University and degree 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 degree. The Master of Science (Vision Sciences) requires all students to enrol in subjects where they will require: the ability to comprehend complex science and technology related information; the ability to clearly and independently communicate a knowledge and application of science, and technology principles and practices during assessment tasks; the ability to actively and safely contribute in clinical, laboratory, and fieldwork/excursion activities. Students must possess behavioural and social attributes that enable them to participate in a complex learning environment. Students are required to take responsibility for their own participation and learning. They also contribute to the learning of other students in collaborative learning environments, demonstrating interpersonal skills and an understanding of the needs of other students. Assessment may include the outcomes of tasks completed in collaboration with other students. There may be additional inherent academic requirements for some subjects, and these requirements are listed within the description of the requirements for each of these subjects. Students who feel their disability will impact on meeting this requirement are encouraged to discuss this matter with the relevant Subject Coordinator and the Disability Liaison Unit: http://www.services.unimelb.edu.au/disability/
Further Study:	The Master of Science offers a pathway to a PhD.
Graduate Attributes:	The Melbourne Experience enables our graduates to become: Academically excellent Knowledgeable across disciplines Leaders in communities Attuned to cultural diversity Active global citizens