

439FS Master of Food Science

Year and Campus:	2015 - Parkville
CRICOS Code:	061970M
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.
Coordinator:	Ken Ng
Contact:	<p>Coordinator ngkf@unimelb.edu.au (mailto:ngkf@unimelb.edu.au)</p> <p>Faculty of Veterinary and Agricultural Sciences The University of Melbourne Victoria 3010 Australia http://fvas.unimelb.edu.au/about/contact (http://fvas.unimelb.edu.au/about/contact)</p>
Course Overview:	<p>The Faculty of Veterinary and Agricultural Sciences at the University of Melbourne is proud to introduce you to its Master of Food Science.</p> <p>The Master of Food Science has been developed for graduates holding a science or engineering degree seeking specialist training for a career in the food and associated industries. Each student completes a tailored program of coursework subjects incorporating core study areas and electives in addition to a research project in an approved area of food science.</p> <p>As a graduate you will be well prepared to play a key role in research and technical divisions within food companies and associated organisations, as well as in managing food production across the entire food supply chain.</p>
Learning Outcomes:	<p><i>In this course, students will</i></p> <ul style="list-style-type: none"> # be able to demonstrate advanced knowledge and skills in the interdisciplinary field of food science. # develop the cognitive, technical and creative skills necessary to underpin understanding of recent innovations in food science # be exposed to advanced research topics and practical applications within the disciplines of food science, and develop the skills necessary to plan and execute an independent piece of research and communicate the impact of this work # develop an understanding of problem solving and research methodologies and demonstrate personal accountability by applying solutions to diverse challenges facing food production, supply and security # interpret, critically analyse and evaluate data generated through research activities in order to effectively understand and implement improved systems within food science # investigate and apply innovative approaches to the contemporary, interdisciplinary management of commercial food systems # demonstrate a comprehensive understanding of the specialised disciplines of food science, emerging technologies and the relevance of these to the future food industry # demonstrate a critical understanding of environmental, economic, social and ethical factors related to food production in Australia and globally, with the cognitive, technical and creative skills necessary to communicate the information to a specialist and non-specialist audience
Course Structure & Available Subjects:	A diverse range of elective subjects is offered enabling students to develop sufficient familiarity with knowledge areas relevant to their research thesis, supplementing existing academic qualifications and industrial experience.

	The program comprises of 75 credit points of Core subjects, 25 credit points of Professional Toolbox subjects, a minimum of 25 credit points of Research Project and a minimum of 25 credit points of discipline electives.																																																												
Majors/Minors/ Specialisations	Master of Food Science																																																												
Subject Options:	<p>Core Subjects</p> <p>Students must complete all of the following six subjects (75 credit points):</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>FOOD90022 Food Chemistry</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>FOOD90007 Food Processing</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>FOOD90023 Food Microbiology</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>FOOD90008 Food Safety and Quality</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>FOOD90024 Securing Sufficient and Healthy Food</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>AGRI90057 Climate Change:Agri.Impacts&Adaptation</td> <td>June, July</td> <td>12.50</td> </tr> </tbody> </table> <p>Professional Toolbox</p> <p>Students must complete two (25 points) Professional Toolbox subjects, one subject (12.5 points) from Science Tools and one subject (12.5 points) from Business Tools or Scientific Communication)</p> <p>Science Tools</p> <p>Students must complete one of the following subjects (12.5 points) within the second year of study:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>MAST90008 Research Philosophies & Statistics</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>NRMT90003 Social Research Methods</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>AGRI90075 Research Methods For Life Sciences</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <p>Business Tools/Scientific Communication</p> <p>Students must complete one of the following subjects (12.5 points):</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>NRMT90017 Leadership</td> <td>February</td> <td>12.50</td> </tr> <tr> <td>NRMT90018 Human Resource Management</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>NRMT90021 Project Management</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>AGRI90013 Financial Management for Agribusiness</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>NRMT90019 Business Strategy</td> <td>February</td> <td>12.50</td> </tr> <tr> <td>ENST90023 Managing Innovation and Change</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>SCIE90012 Science Communication</td> <td>Not offered 2015</td> <td>12.50</td> </tr> <tr> <td>AGRI90076 Industry Internship</td> <td>Summer Term, Semester 1, Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>Research Project</p>	Subject	Study Period Commencement:	Credit Points:	FOOD90022 Food Chemistry	Semester 1	12.50	FOOD90007 Food Processing	Semester 1	12.50	FOOD90023 Food Microbiology	Semester 2	12.50	FOOD90008 Food Safety and Quality	Semester 2	12.50	FOOD90024 Securing Sufficient and Healthy Food	Semester 1	12.50	AGRI90057 Climate Change:Agri.Impacts&Adaptation	June, July	12.50	Subject	Study Period Commencement:	Credit Points:	MAST90008 Research Philosophies & Statistics	Semester 1	12.50	NRMT90003 Social Research Methods	Semester 1	12.50	AGRI90075 Research Methods For Life Sciences	Semester 1	12.50	Subject	Study Period Commencement:	Credit Points:	NRMT90017 Leadership	February	12.50	NRMT90018 Human Resource Management	Semester 1	12.50	NRMT90021 Project Management	Semester 2	12.50	AGRI90013 Financial Management for Agribusiness	Semester 1	12.50	NRMT90019 Business Strategy	February	12.50	ENST90023 Managing Innovation and Change	Semester 2	12.50	SCIE90012 Science Communication	Not offered 2015	12.50	AGRI90076 Industry Internship	Summer Term, Semester 1, Semester 2	12.50
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Students must complete a minimum of 25 points of the following:

Subject	Study Period Commencement:	Credit Points:
AGRI90064 Minor Research Project	Semester 1, Semester 2	12.50
AGRI90070 Minor Research Project	Semester 1, Semester 2	25
AGRI90065 Major Research Project	Semester 1, Semester 2	25
AGRI90072 Major Research Project	Semester 1, Semester 2	50

Discipline Electives

Students must complete a minimum of two subjects (25 points) from the following:

Subject	Study Period Commencement:	Credit Points:
FOOD90011 Food Biotechnology	Semester 1	12.50
FOOD90009 Cereal, Legume and Oilseed Technology	Semester 1	12.50
AGRI90019 Fruit and Vegetable Technology	Semester 2	12.50
FOOD90010 Meat and Meat Products	Semester 2	12.50
FOOD90012 Current Issues in Dairy Science	Semester 1	12.50
AGRI90030 Concepts in Viticulture and Wine Science	February	12.50
AGRI90041 Advanced Oenology	Not offered 2015	12.50
AGRI90042 Wine Science	Not offered 2015	12.50
AGRI90039 Australian Wine - A World Perspective	July	12.50
FOOD90025 Health Aspects in Functional Foods	Semester 2	12.50
FOOD90026 The Politics of Food	Semester 1	12.50
FOOD90027 Nutrition Politics and Policy	Semester 2	12.50
FOOD90028 Sensory Analysis and Practice	February	12.50
FOOD90031 Food Packaging Materials and Processes	July	12.5
FOOD90032 Food Packaging Design	Not offered 2015	12.5

Other Electives

You should choose the remainder of your subjects from the following list of electives:

Subject	Study Period Commencement:	Credit Points:
EVSC90001 Global Environment and Sustainability	February	12.50
AGRI90014 Managing Markets	Semester 2	12.50
AGRI90012 Agribusiness Management Economics	Semester 2	12.50
NRMT90018 Human Resource Management	Semester 1	12.50
FOOD90011 Food Biotechnology	Semester 1	12.50
AGRI90019 Fruit and Vegetable Technology	Semester 2	12.50

	AGRI90030 Concepts in Viticulture and Wine Science	February	12.50
	AGRI90041 Advanced Oenology	Not offered 2015	12.50
	FOOD90009 Cereal, Legume and Oilseed Technology	Semester 1	12.50
	FOOD90010 Meat and Meat Products	Semester 2	12.50
	FOOD90012 Current Issues in Dairy Science	Semester 1	12.50
	AGRI90042 Wine Science	Not offered 2015	12.50
	AGRI90039 Australian Wine - A World Perspective	July	12.50
	ENST90032 Sustainability and Behavioural Change	Semester 1	12.50
	FOOD90033 Sustainable Food: Policy and Practice	Semester 2	12.5
	FOOD90034 Sustainable Food Production	Semester 2	12.50
	AGRI90077 Value Chain Analysis	Semester 1	12.50
Entry Requirements:	<p>1. In order to be considered for entry, applicants must have completed:</p> <ul style="list-style-type: none"> • an undergraduate degree with at least H3 (65%) weighted average, or equivalent; or • a graduate or postgraduate certificate in any discipline with at least an H3 (65%) weighted average, or equivalent; or • a graduate or postgraduate diploma in any discipline with at least an H3 (65%) weighted average, or equivalent; or • an honours degree in any discipline, or equivalent; <p>Meeting these requirements does not guarantee entry.</p> <p>2. In ranking applications, the Selection Committee will consider:</p> <ul style="list-style-type: none"> • prior academic performance; <p>3. The Selection Committee may seek further information to clarify any aspect of an application in accordance with the Academic Board Rules (http://about.unimelb.edu.au/_data/assets/pdf_file/0007/1413727/Use-of-Selection-Instruments-Rules-of-the-Academic-Board-23-March-2015.pdf) on the use of selection instruments.</p> <p>4. The minimum English language requirements for this course are Band 6.5. http://futurestudents.unimelb.edu.au/admissions/entry-requirements/language-requirements (http://futurestudents.unimelb.edu.au/admissions/entry-requirements/language-requirements)</p> <p>Note:</p> <p>Up to 100 points of advanced standing in Master of Food Science may be awarded for the completion of a relevant honours degree or a Postgraduate Diploma in Food Science or equivalent.</p> <p>Students Completing the Graduate Certificate in Food Science will be eligible for 50 points of credit into the Graduate Diploma of Food Science or the Master of Food Science.</p> <p>Students completing the Graduate Diploma in Food Science will be eligible for 100 points of credit into the Master of Food Science.</p>		
Core Participation Requirements:	<p>The Faculty of Veterinary and Agricultural Sciences (FVAS) welcomes applications from students with disabilities. It is University and Faculty policy to take reasonable steps to make reasonable adjustments so as to enable the student's participation in the Faculty's programs. FVAS contributes to the New Generation degrees and offers a broad range of programs across undergraduate and post-graduate levels many of which adopt a multi-disciplinary approach. Students of the Faculty's courses must possess intellectual, ethical, and emotional capabilities required to participate in the full curriculum and to achieve the levels of competence required by the Faculty. Candidates must have abilities and skills in observation; motor in relevant areas; communication; in conceptual, integrative, and quantitative dimensions; and in behavioural and social dimensions. Adjustments can be provided to minimise the impact of a disability, however students need to be able to participate in the program in an independent manner and with regard to their safety and the safety of others. I. Observation: In some contexts, the student must be able to observe demonstrations and experiments in the basic and applied</p>		

	<p>sciences. More broadly, observation requires reading text, diagrams, maps, drawings and numerical data. The candidate should be able to observe details at a number of scales and record useful observations in discipline dependant contexts. II. Communication: A candidate should be able to communicate with fellow students, professional and academic staff, members of relevant professions and the public. A candidate must be able to communicate effectively and sensitively. Communication includes not only speech but also reading and writing. III. Motor: Candidates should have sufficient motor function necessary for participation in the inherent discipline-related activities. The practical work, design work, field work, diagnostic procedures, laboratory tests, require varying motor movement abilities. Off campus investigations may include visits to construction sites, urban, rural and/or remote environments. IV. Intellectual-Conceptual, Integrative and Quantitative Abilities: These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem solving, the critical skill demanded of professionals in land and environment industries, requires all of these intellectual abilities. In addition, the candidate should be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures. V. Behavioural and Social Attributes: A candidate 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. Students who feel their disability will prevent them from meeting the above academic requirements are encouraged to contact the Disability Liaison Unit.</p>
<p>Graduate Attributes:</p>	<p>The Melbourne Experience enables our Graduates to become: Academically excellent Our Graduates will be expected to: have a strong sense of intellectual integrity and the ethics of scholarship have in-depth knowledge of their specialist discipline(s) reach a high level of achievement in writing, generic research activities, problem-solving and communication be critical and creative thinkers, with an aptitude for continued self directed learning be adept at learning in a range of ways, including through information and communication technologies Knowledgeable across disciplines Our graduates will be expected to: examine critically, synthesise and evaluate knowledge across a broad range of disciplines expand their analytical and cognitive skills through learning experiences in diverse subjects have the capacity to participate fully in collaborative learning and to confront unfamiliar problems have a set of flexible and transferable skills for different types of employment. Leaders in communities Our graduates will be expected to: initiate and implement constructive change in their communities, including professions and workplaces have excellent interpersonal and decision-making skills, including an awareness of personal strengths and limitations mentor future generations of learners engage in meaningful public discourse, with a profound awareness of community needs Attuned to cultural diversity Our graduates will be expected to : value different cultures be well-informed citizens able to contribute to their communities wherever they choose to live and work have an understanding of the social and cultural diversity in our community respect Indigenous knowledge, cultures and values Active global citizens Our graduates will be expected to: accept social and civic responsibilities be advocates for improving the sustainability of the environment have a broad global understanding, with a high regard for human rights, equality and ethics.</p>
<p>Generic Skills:</p>	<ul style="list-style-type: none"> # A profound respect for truth, intellectual and professional integrity, and the ethics of scholarship # Capacity for independent critical thought, rational inquiry and self-directed learning and research # An ability to derive, interpret and analyse social, technical or economic information from primary and other sources # Awareness of and ability to utilise appropriate communication technology and methods for the storage, management and analysis of data # Capacity for creativity and innovation, through the application of skills and knowledge # Ability to integrate information across a relevant discipline to solve problems in applied situations # Highly developed computer - based skills to allow for effective on-line learning and communication. # Highly developed written communication skills to allow informed dialogue with individuals and groups from industry, government and the community # Highly developed oral communication skills to allow informed dialogue and liaison with individuals and groups from industry, government and the community. # Appreciation of social and cultural diversity from a regional to a global context # Ability to participate effectively as a member of a team

	# Ability to plan work, use time effectively and manage small projects
Links to further information:	http://fvas.unimelb.edu.au/study/courses/master-of-food-science/overview
Notes:	In accordance with the University's Assessment Procedure (http://policy.unimelb.edu.au/MPF1026) (MPF1026), Examiners may offer reassessment (as a second attempt at passing a subject for a borderline failure in a single subject) to a student enrolled in this course. A borderline failure is defined as a mark of 45% or more.