

## FOOD90009 Cereal, Legume and Oilseed Technology

<b>Credit Points:</b>	12.5
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	2015, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: 48 hours of lectures and practical activities. Total Time Commitment: Estimated total time commitment (including non-contact time): 170 hours.
<b>Prerequisites:</b>	Eligibility for honours or postgraduate coursework program.
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	Chemistry and/or biology or equivalent background
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	<p>&lt;p&gt;For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.&lt;/p&gt;         &lt;p&gt;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 may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>
<b>Coordinator:</b>	Dr Dorin Gupta
<b>Contact:</b>	<a href="mailto:dorin.gupta@unimelb.edu.au">dorin.gupta@unimelb.edu.au</a> (mailto:dorin.gupta@unimelb.edu.au)
<b>Subject Overview:</b>	<p>Growing human population, changing food preferences and climate change would affect the food availability and utilization patterns. It is important to understand the technology of cereals, legumes and oilseeds; their processed products and associated nutritional values. Students will learn vast diversity of topics including:</p> <ul style="list-style-type: none"> <li># Origin, classification and structure of cereals, legumes and oilseeds.</li> <li># Chemical and nutritional importance of proteins, carbohydrates and lipids in cereals, legumes and oilseeds.</li> <li># Harvesting, drying, storage and pre-processing; grain milling; processing and final products of cereals, legumes and oilseeds.</li> <li># Cereals: flour quality; baking technology</li> <li># Legumes: nutritionally beneficial components as well as antinutritional factors; processing; specialty products.</li> <li># Oilseeds: extraction and refining of oils; oil specialty products.</li> <li># Climate change and effect on the quality of food grains and end products.</li> <li># Waste management issues; future developments in products and processes.</li> </ul>
<b>Learning Outcomes:</b>	<p>Objective of this subject is to introduce students to the science and technology associated with the transformation of cereals, legumes and oilseeds to food products and ingredients.</p> <p>On completion of this subject, students should be able to demonstrate a knowledge and understanding of:</p> <ul style="list-style-type: none"> <li># The chemistry and nutritional composition of grains and grain products and the functional role of grain and other food components during processing.</li> </ul>

	<ul style="list-style-type: none"> <li># The structure of grains and the impact of grain characteristics on milling and grain utilisation.</li> <li># The concept of quality in relation to grains and grain based products.</li> <li># The importance of quality control in grain storage, handling and processing.</li> <li># Milling of grains and the factors influencing flour quality.</li> <li># Production of food products and ingredients from grains and legumes around the world, covering traditional and recent processing technologies.</li> <li># Effect of climate change on grain quality.</li> <li># Sustainable ways of production and processing and future developments.</li> </ul>
<b>Assessment:</b>	One assignment of 1,500 words (30%), due approximately in week 7. 1,500 words report on practical activities (20%), due approximately two weeks after the completion of all practical activities. Two hour written examination (50%).
<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<p>On completion of this subject students should have developed the following generic skills:</p> <ul style="list-style-type: none"> <li># A greater in-depth understanding of the science and technology associated with grain processing.</li> <li># Skills in observation, critical analysis and report writing.</li> <li># An ability to derive, interpret and evaluate social, technical and economic information from a wide variety of sources.</li> <li># A capacity for independent critical thought, rational inquiry and self-directed learning and research.</li> <li># An ability to communicate effectively in both written and verbal forms.</li> </ul>
<b>Related Course(s):</b>	Graduate Certificate in Agricultural Sciences Graduate Certificate in Food Science Graduate Diploma in Agricultural Sciences Graduate Diploma in Food Science Master of Agricultural Science Master of Food Science Postgraduate Diploma in Agricultural Science Postgraduate Diploma in Food Science
<b>Related Majors/Minors/Specialisations:</b>	100 Point (A) Master of Agricultural Sciences 100 Point (B) Master of Agricultural Sciences 150 Point Master of Agricultural Sciences 200 Point Master of Agricultural Sciences