FOOD90009 Cereal, Legume and Oilseed Technology

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 48 hours of lectures and practical classes Total Time Commitment: Estimated total time commitment (including non-contact time): 120 hours.
Prerequisites:	Eligibility for honours or postgraduate coursework program.
Corequisites:	none
Recommended Background Knowledge:	Chemistry and/or biology or equivalent background
Non Allowed Subjects:	none
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
Coordinator:	Assoc Prof Phillip Salisbury
Contact:	Postgraduate Office, Melbourne School of Land and Environment, The University of Melbourne, Phone: +61 3 8344 7834, Email: **msle-pgcoursework@unimelb.edu.au (mailto:msle-pgcoursework@unimelb.edu.au)**
Subject Overview:	Origin, classification and structure of cereals, legumes and oilseeds; chemistry and nutritional importance of proteins, carbohydrates and lipids in cereals; harvesting, drying, storage and pre-processing; grain milling: dry and wet; cereal flour quality; baking technology: principles, ingredients, product types, processes, storage and preservation; pasta and breakfast cereals: raw materials, products and processing; food legumes: pulses as sources of proteins, carbohydrates, fibre and other nutritionally beneficial components as well as antinutritional factors; processing; specialty products: snacks, milk imitations and other dairy substitutes, protein isolates and concentrates; oilseeds: source of oil and proteins, extraction and refining of oils, oil specialty products: margarine, mayonnaise, salad dressing, fat substitutes etc; waste management issues; future developments in products and processes.
Objectives:	The 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. On completion of this subject, students should be able to demonstrate a knowledge and understanding of: # The chemistry and biochemistry of grains and grain products and the functional role of grain and other food components during processing # The structure of grains and the impact of grain characteristics on milling and grain utilisation # The concept of quality in relation to grains and grain based products # The importance of quality control in grain storage, handling and processing # Milling of grains and the factors influencing flour quality # Mixing of doughs and batters for different end use purposes # Production of food products and ingredients from grains and legumes around the world, covering traditional and recent processing technologies

Assessment:	An assignment of 2000 words on a particular aspect of cereal processing (40%), due at the end of the second month of semesterreports on practical classes (20%), due one week after each classtwo hour examination (40%).
Prescribed Texts:	none
Recommended Texts:	none
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	On completion of this subject students should have developed the following generic skills: # A greater in-depth understanding of the science and technology associated with grain processing # Skills in observation, critical analysis and report writing # An ability to derive, interpret and evaluate social, technical and economic information from a wide variety of sources # A capacity for independent critical thought, rational inquiry and self-directed learning and research # An ability to communicate effectively in both written and verbal forms
Related Course(s):	Master of Agricultural Science Postgraduate Certificate in Food Science Postgraduate Diploma in Food Science