

## AGRI90019 Fruit and Vegetable Technology

<b>Credit Points:</b>	12.50
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	This subject is not offered in 2014.
<b>Time Commitment:</b>	Contact Hours: 48 hours of lectures and practical activities Total Time Commitment: Estimated total time commitment (including non-contact time): 120 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>	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: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>
<b>Contact:</b>	<p><b>Melbourne School of Land &amp; Environment Student Centre</b> Ground Floor, Melbourne School of Land &amp; Environment (building 142)</p> <p><i>Enquiries</i> Phone: 13 MELB (13 6352) Email: <a href="mailto:13MELB@unimelb.edu.au">13MELB@unimelb.edu.au</a> (<a href="mailto:13MELB@unimelb.edu.au">mailto:13MELB@unimelb.edu.au</a>)</p>
<b>Subject Overview:</b>	Characteristics, composition and nutritional importance of fruit and vegetables; classification; desirable and undesirable constituents; post-harvest handling: physiological and biochemical changes; stages of physiological development; respiration, generation of ethylene and genetic control of fruit ripening process; physical and chemical changes during maturation; principles of heat, moisture and environment management; quality: criteria, factors affecting, evaluation and management; pathological and physiological deterioration and their control; preservation and processing: basic principles of preservation; shelf life extension by scientific storage; use of sugar, chemicals, fermentation, irradiation in fruit preservation; processing methods: minimal processing, thermal processing, freezing, dehydration, combination technology; production of fermented and non-fermented beverages; by-products of fruit and vegetables processing: nature and characteristics; utilisation; waste management: characterisation, planning, treatment of effluent; environmental auditing.
<b>Learning Outcomes:</b>	<p>The objective of this subject is to introduce students to the science and technology associated with fruits and vegetables and their transformation into food products and ingredients.</p> <p>On completion of this subject, students should have an understanding of:</p> <ul style="list-style-type: none"> <li># The structure and composition of fruits and vegetables and their role in nutrition</li> <li># The biochemistry and physiology of fruits and vegetables and their role in pre- and post-harvest changes and in product quality</li> <li># The concept of quality in relation to fruit and vegetable based products</li> <li># Pathological and physiological deterioration and their control</li> <li># Preservation and processing technologies applied to fruits and vegetables</li> <li># Production of fresh and manufactured food products and ingredients from fruits and vegetables</li> </ul>
<b>Assessment:</b>	Two assignments of 1000 words each on: Processing of fruits and vegetables (20%), due mid-way through semester; Waste characteristics (20%), due one week prior to the end of semester.

	Report on practical activities (20%), due two weeks after the conclusion of all practical classes. Two hour written examination (40%).
<b>Prescribed Texts:</b>	None
<b>Recommended 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>	On completion of this subject students should have developed the following generic skills: <ul style="list-style-type: none"> <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>	Master of Agricultural Science Master of Food Science Postgraduate Certificate in Food Science Postgraduate Diploma in Agricultural Science Postgraduate Diploma in Food Science