

FOOD30010 Functional Foods & Nutrition

Credit Points:	12.50								
Level:	3 (Undergraduate)								
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.								
Time Commitment:	Contact Hours: 36 hours lectures and 12 hours tutorials Total Time Commitment: 120 hours								
Prerequisites:	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>FOOD20003 Food Chemistry, Biology and Nutrition</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	FOOD20003 Food Chemistry, Biology and Nutrition	Semester 1	12.50
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FOOD20003 Food Chemistry, Biology and Nutrition	Semester 1	12.50							
Corequisites:	None								
Recommended Background Knowledge:	Sciences and other cognate majors.								
Non Allowed Subjects:	Students who have completed Food Structure and Function (208-226) will not be eligible for credit in this subject.								
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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:	Dr Ken Ng								
Contact:	Melbourne School of Land & Environment Student Centre Ground Floor, Land & Food Resources (building 142) <i>Enquiries</i> Phone: 13 MELB (13 6352) Email: 13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au)								
Subject Overview:	<p>The basic macrochemicals and biochemical components that form the structure of food products consist of the natural materials assembled in relationships that can be altered by the presence of additives, ingredients and processing or handling. This subject examines the macro structure of food, and the relationships between the basic structure and the additives (emulsifiers, flavours and other components in the environment of the total matrix), plus the physical chemistry of the components as part of a food matrix, including the influence of processing on these structures. This will include the interactions between emulsifiers and flavours within a food matrix, and interactions between water-proteins, water, lipids, protein-proteins, protein-lipids, protein-carbohydrates, and carbohydrate-lipids. This subject will describe the influence of processing on these interactions among food components using examples from research projects in related areas.</p> <p>Specialised topics will provide students with a greater understanding of nutritional, allergic and sensory characteristics of foods, particularly where new product development involves novel functionality (such as conferring health benefits or new physical traits) or the interaction between food and packaging materials.</p>								

Objectives:	<p>On completion of this subject students should be able to:</p> <ul style="list-style-type: none"> # recognise the importance of interactions of ingredients in food systems; # describe the interaction of water with food components; # explain the interactions of emulsifiers with other food components; # describe the significance of flavour interactions with food matrix and their effects on perception; # describe the role of interactions among food components on microstructure, texture and rheology of food products; and # display an understanding of the impact of food processing on the interactions between macro-components of food components, the structure of the macro-components and the consequences of these interactions. # Understand the impact of food processing and development on the nutritional, allergic and sensory characteristics of foods.
Assessment:	One 2-hour final examination (45%), one 1-hour mid-semester examination (25%) and one assignment of 2000 words (30%) due after the mid semester break.
Prescribed Texts:	G G Anilkumar (ed.), Ingredient Interactions (Effect on Food Quality). Marcel Dekker, Inc., 1995.
Breadth Options:	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> # Bachelor of Arts (https://handbook.unimelb.edu.au/view/2012/B-ARTS) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2012/B-ENVS) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2012/B-MUS) <p>You should visit learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p>
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<p>On completion of this subject students should be able to:</p> <ul style="list-style-type: none"> # be able to establish a supporting network of peers, and have developed regular and effective study techniques involving those peers. # be able to established effective problem solving techniques involving food product formulation # be prepared for participation in team work and submission of individual assignments. # be able to communicate formal arguments about the nutritional value of foods. # be able to perform a literature search and present information with appropriate citations
Related Majors/Minors/Specialisations:	<p>Agri-food Biotechnology (specialisation of Biotechnology major) Food Science Science-credited subjects - new generation B-SCI and B-ENG. Core selective subjects for B-BMED.</p>