

FOOD30008 Advanced Food Analysis

Credit Points:	12.50									
Level:	3 (Undergraduate)									
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.									
Time Commitment:	Contact Hours: 36 hours of practicals and demonstration and 24 hours of lectures Total Time Commitment: 120 hours									
Prerequisites:	One of: <table border="1" data-bbox="387 573 1485 779"> <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> <tr> <td>CHEM10003 Chemistry 1</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	FOOD20003 Food Chemistry, Biology and Nutrition	Semester 1	12.50	CHEM10003 Chemistry 1	Semester 1, Semester 2	12.50
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FOOD20003 Food Chemistry, Biology and Nutrition	Semester 1	12.50								
CHEM10003 Chemistry 1	Semester 1, Semester 2	12.50								
Corequisites:	None									
Recommended Background Knowledge:	Basic knowledge in chemistry, biology and nutrition									
Non Allowed Subjects:	<table border="1" data-bbox="387 947 1485 1095"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>208-310 Analytical Techniques</td> <td>Not offered 2010</td> <td></td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	208-310 Analytical Techniques	Not offered 2010				
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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 Said Ajlouni									
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:	Advanced food analysis will teach students most rapid and standard conventional methods commonly used in food analysis. These analytical techniques will include: <ul style="list-style-type: none"> # the selection of appropriate scientific methods for a specific food analysis, physical and chemical parameters; # principles of instrumentation and/or methodology and applications of these principles to the technologies employed in analytical techniques; # comparison of instrumental and/or rapid methods to conventional techniques of analysis; # operation, calibration and standardisation procedures as applicable to particular techniques; # troubleshooting techniques in conventional and rapid analyses; # assessment and evaluation of data derived from researches and product development. 									

	Methods to be examined are titration, rheology, chromatography (HPLC, GLC, ion exchange separations, spectrophotometry, UV, visible, infrared); AA; mass spectrometry; ELISA, fluorescence spectrometry, and sensory.
Objectives:	<p>On the completion of this subject students should be able to:</p> <ul style="list-style-type: none"> # describe the physical and chemical principles which underlie rapid and instrumental techniques for testing and analysing raw materials and finished products; # evaluate innovative instrumental methods for specific purposes and materials against criteria of reliability and validity of results, and of cost and efficiency of monetary and labour resources; and # select rapid or instrumental methods for appropriate types of analyses, in order to reduce using chemicals and to protect the environment.
Assessment:	Two Laboratory reports equivalent to 2500 words each (40%); one 1-hour examination (mid-semester) (20%); one 2-hour final examination (40%).
Prescribed Texts:	N/A
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 have developed the following generic skills:</p> <ul style="list-style-type: none"> # Be able to argue formally about the best method of food analysis for a specific purpose # Evaluate standard methods of analysis to determine accuracy and precision of measurements # Analyse data and integrate it with critical thinking. # Improve interpretation of data in a written format # Be prepared for participation in team work
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>