

The Hong Kong Polytechnic University

Subject Description Form

Subject Code	FSN4422/ ABCT4422
Subject Title	Food Sanitation and Safety Management
Credit Value	3
Level	4
Pre-requisite/	FSN3418/ ABCT3418 Food Engineering and Processing I
Objectives	This subject aims to foster students' understanding and appreciation of food hygiene and safety management. Emphasis is put on food hygiene and safety practices required for licensed food premises in Hong Kong (such as cleaning, sanitation, and pest control operations) as well as an internationally recognized food safety management system based on ISO 22000, including hazard analysis and critical control points (HACCP) principles.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> identify potential hazards and trending food safety issues in specific foods; describe routes of physical, chemical, and biological contamination of foods and discuss methods for controlling the hazards; evaluate the conditions, including sanitation practices, under which relevant pathogenic microorganisms are commonly controlled in foods; design a food safety plan for the manufacture of a specific food based on internationally recognized systems; describe principles and practices of cleaning, sanitization and pest control in food processing facilities as well as define principles and methods of water and waste management; demonstrate critical thinking as well as problem solving skills.
Subject Synopsis/ Indicative Syllabus	<p><u>Role of the food industry in food hygiene and safety management</u> legal responsibility – “Food Hygiene Code”; worker safety; the importance of consumer trust and product reputation</p> <p><u>Risk-based inspection system (risk classification of food)</u> (i) ready-to-eat-food; (ii) high risk food; (iii) high risk foods that are ready-to-eat; (iv) high risk foods that are not ready-to-eat; (v) medium risk food; (vi) medium risk foods that are ready-to-eat; (vii) medium risk foods that are not ready-to-eat; (viii) low risk food</p> <p><u>General Design and Construction of Food Premises</u> licensing of food premises; kitchens and food rooms; utilities; water and waste management</p> <p><u>Cleaning and sanitization</u></p>

	<p>cleaning chemicals and detergency; cleaning equipment; CIP, COP and other cleaning technologies; sanitizing methods and agents; sanitizing equipment; environmental sanitation and maintenance</p> <p><u>Pest control</u> characteristics of pest contamination sources and pest infestation; use of chemical and mechanical techniques and pesticides; integrated pest management</p> <p><u>Safe food handling, equipment and utensils, personal health, hygiene and training of food handlers</u> food receiving and storage; food handling, displaying, serving and disposal; equipment, utensils and linens; personal health and illnesses; personal hygiene and training of food handlers</p> <p><u>Hazard analysis and critical control point (HACCP) principles and practice</u> preparation of HACCP; designing safety into products and processes; developing HACCP plan; hazard analysis chart; developing HACCP control chart; implementation of HACCP</p> <p><u>ISO 22000 standard on food safety management system</u> integrated approach in food safety management system, including pre-requisite programme, HACCP principles, system management</p>																																														
Teaching/Learning Methodology	Interactive lectures and guided readings are used to facilitate communication between lecturer and students, and also to enhance students in comprehending the taught topics. Tutorials are designed to assist students to re-think the previous learning process for consolidating the key concepts. A plant visit to a local food processing plant would be arranged in order to provide students with exposure on real-life food hygiene management. A problem-based learning in the form of a mini-project (e.g. to design a HACCP plan for a local food manufacturing plant) is used to develop students’ abilities to integrate and apply the knowledge acquired as well as to foster their skills in problem solving and critical thinking. Students’ learning outcomes are ascertained by a variety of assessment tools																																														
Assessment Methods in Alignment with Intended Learning Outcomes	<table><tr><th rowspan="2">Specific assessment methods/tasks</th><th rowspan="2">% weighting</th><th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th></tr><tr><th>a</th><th>b</th><th>c</th><th>d</th><th>e</th><th>f</th></tr><tr><td>Assignments</td><td>20</td><td>√</td><td>√</td><td></td><td></td><td>√</td><td>√</td></tr><tr><td>Mini-project</td><td>50</td><td>√</td><td>√</td><td>√</td><td>√</td><td></td><td>√</td></tr><tr><td>Written examination</td><td>30</td><td>√</td><td>√</td><td>√</td><td></td><td>√</td><td>√</td></tr><tr><td>Total</td><td>100%</td><td colspan="6"></td></tr></table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Students are assessed by both Continuous Assessment and Examination components. Continuous Assessment is based on assignments (20%), and a mini-project (50%). The mini-project is used to assess students’ abilities to integrate and apply the knowledge acquired as well as their skills in problem-solving and critical thinking. The assignments and final examination are used to assess the knowledge acquired by students from lectures and other learning outcomes expected.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e	f	Assignments	20	√	√			√	√	Mini-project	50	√	√	√	√		√	Written examination	30	√	√	√		√	√	Total	100%						
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Student Study Effort Expected	Class contact:	
	▪ Lecture/experience sharing and case study sessions	29 Hrs.
	▪ Tutorial	6 Hrs.
	▪ On-site plant visit	4 Hrs.
	Other student study effort:	
	▪ Individual project assignment	66 Hrs.
	Total student study effort	105 Hrs.
Reading List and References	<u>Essential</u> McSwane D, Rue N and Linton R. Food Safety & Sanitation; Prentice Hall 2005 <u>Supplementary</u> Codex Alimentarius. Food Hygiene: Basic Text (4 th Ed); FAO/WHO Food Standards 2009 Food and Environmental Hygiene Department. Food Hygiene Code; Hong Kong Government 2021 Longree K and Armbruster G. Quantity Food Sanitation; Wiley 1996 Mortimore, S. HACCP; Blackwell Science 2001 ISO 22000:2018 Food safety management system – Requirements for any organization in the food chain, International Organization for Standardization	