



UNIVERSITI TEKNOLOGI MARA

CBE678: INTRODUCTION TO FOOD SCIENCE AND TECHNOLOGY

Course Name (English)	INTRODUCTION TO FOOD SCIENCE AND TECHNOLOGY APPROVED
Course Code	CBE678
MQF Credit	2
Course Description	This course covers an introduction to the food processing industry, food constituents, composition and processing of different food commodities, sensory and nutritional aspects, food safety, legislation and quality, packaging of food product and product development in food industries.
Transferable Skills	System thinking, communication, teamwork, ethics and professionalism
Teaching Methodologies	Lectures, Blended Learning, Discussion
CLO	CLO1 Explain various aspects of food science and technology including nutrition, product performance, safety, packaging and product development CLO2 Distinguish the processing method of various food commodities CLO3 Evaluate engineering application in food industry
Pre-Requisite Courses	No course recommendations
Topics	
1. Overview of food chemistry and food industries 1.1) Significant of nutrients such as carbohydrate, protein, fiber, energy, lipids, vitamins, minerals and water in food component 1.2) Food guide pyramid 1.3) Food and related industries in food processing	
2. Food processing method 2.1) Overview of various processing method in food industry 2.2) Fish, meat and poultry products 2.3) Dairy products 2.4) Fruits and vegetable products 2.5) Beverages 2.6) Cereal products 2.7) Bioprocess engineering application in production of food: Latest technology and future trend 2.8) Performance parameters for food processing	
3. Sensory evaluation in food processing 3.1) Effective testing 3.2) Affective testing 3.3) Perception method 3.4) Sensory attribute with the food composition	
4. Food safety and food quality 4.1) Food microbiology and food borne pathogens 4.2) Overview of HACCP, GMP and food hygiene 4.3) Overview of FAO, WHO, CODEX, FDA and USDA 4.4) Malaysian's food safety system	
5. Preservation in food processing 5.1) Overview of food preservation 5.2) Preservation methods of different food types 5.3) Current trend in food preservation 5.4) Improvement of food preservation through engineering practice	

6. Food packaging

- 6.1) Packaging material
- 6.2) Interaction of packaging material with food
- 6.3) Packaging system
- 6.4) Environmental impacts of packaging
- 6.5) Current trend in food packaging

7. Product development

- 7.1) Introduction to the product development
- 7.2) Product development process
- 7.3) Packaging system
- 7.4) Innovation in food industry
- 7.5) Class Protocols

Assessment Breakdown	%
Continuous Assessment	40.00%
Final Assessment	60.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	n/a	20%	CLO1 , CLO2 , CLO3
	Test	Test 1	10%	CLO1 , CLO2
	Test	Test 2	10%	CLO1 , CLO3

Reading List	Recommended Text	<ul style="list-style-type: none"> Geoffrey C.P. 2010, <i>Food Science and Technology</i>, John Wiley and Sons London
	Reference Book Resources	<ul style="list-style-type: none"> Singh and Heldman 2001, <i>Introduction to Food Engineering</i>, 3rd ed. Ed., Academic Press Fellows P. 2000, <i>Food Processing Technology, Principles and Practice</i>, 2nd ed. Ed., Woodhead Cambridge
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	