



UNIVERSITI TEKNOLOGI MARA

FST202: FOOD QUALITY CONTROL

Course Name (English)	FOOD QUALITY CONTROL APPROVED
Course Code	FST202
MQF Credit	2
Course Description	This course introduces students to the quality control concepts, systems and technology for the food industry. It covers quality control for food, food-sampling techniques, food sampling plans, food defects identification and some common quality control measures (pH, acidity, texture, viscosity and colour) used in the food industry.
Transferable Skills	Technical skills Teamwork skills
Teaching Methodologies	Lectures, Blended Learning, Lab Work, Demonstrations
CLO	CLO1 Discover the quality control concepts, systems and techniques for the food industry CLO2 Demonstrate quality control techniques used in food industry CLO3 Propose the food quality system in an established food premise
Pre-Requisite Courses	No course recommendations
Topics	
1. 1. Introduction 1.1) 1.1. Definition and concept of quality (quality control, quality assurance and total quality management). 1.2) 1.2. Importance and objectives of quality control. 1.3) 1.3. Differences between quality control (QC) and quality assurance (QA). 1.4) 1.4. Food safety and quality management system (5S, GMP, HACCP and ISO)	
2. 2. Quality Control and Traceability of Food Supply Chain 2.1) 2.1. Agricultural and raw material control 2.2) 2.2. Process and finished products control 2.3) 2.3. Packaging and storage control 2.4) 2.4. Product recall	
3. 3. Sampling Plan and Techniques 3.1) 3.1. The importance of sampling 3.2) 3.2. Sampling techniques for different types of food 3.3) 3.3. Sampling plans 3.4) 3.4. Malaysian guideline for food sampling	
4. 4. Defects in Food 4.1) 4.1. Classification of defects 4.2) 4.2. Types of defect in foods 4.3) 4.3. Methods of defect detection 4.4) 4.4. Latest defects sensing technology for food quality control	
5. 5. pH and Acidity 5.1) 5.1. Buffer 5.2) 5.2. Differences between pH and acidity 5.3) 5.3. Types of acids 5.4) 5.4. Methods of acidity measurements	
6. 6. Texture 6.1) 6.1. The importance of texture in food quality control 6.2) 6.2. Mechanical, geometrical and other characteristics of the texture 6.3) 6.3. Food texture measurements	

7. 7. Viscosity

7.1) 7.1. Definition and the importance of viscosity in the food industry

7.2) 7.2. Newtonian and non-Newtonian fluids

7.3) 7.3. Viscosity measurement and equipment

8. 8. Colour

8.1) 8.1. Definition and the importance of colour in the food industry

8.2) 8.2. Colour systems

8.3) 8.3. Colour measurement and equipment

Assessment Breakdown	%
Continuous Assessment	70.00%
Final Assessment	30.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	One (1) video presentation (maximum 5 minutes) regarding a food quality system (GMP, HACCP or ISO) that can be used in an established food premise. The video may be developed via web 2.0 tools. This is a group assignment (maximum of 4 members/ group)	20%	CLO3
	Lab Exercise	A report submitted by each group. Attendance and participation shall be considered during the assessment.	30%	CLO2
	Test	Test- Chapter 1, 2, 3 & 4	20%	CLO1

Reading List	Reference Book Resources
	<ul style="list-style-type: none"> • Egan, H., Kirk, R.S. and Sawyer, R 1981, <i>Pearson`s Chemical Analysis of Foods.</i>, Ed., , Longman Scientific & Technical [ISBN:] • Herschdoerfer, S.M. 1985, <i>Quality Control in the Food Industry. Vol 1 , 2 Ed.</i>, , Academic Press London & New York [ISBN:] • Kramer and Twigg. 1975, <i>Quality Control in the Food Industry. Vol 1 & , 0 Ed.</i>, , AVI Publishers [ISBN:] • Messina, W.S. 1987, <i>Statistical Quality Control for Manufacturing</i>, Ed., , John Wiley & Sons [ISBN:] • Parker,R. 2003, <i>Introduction to Food Science.</i>, Ed., , Delmar Thomson Learning.New York, USA [ISBN:] • Earle, M., Earle, R. & Anderson, A. 2001, <i>Food Product Development Maximising Succe</i>, Ed., , Woodhead Publishing Ltd. Cambridge, UK [ISBN:] • McKenna, B.M. 2003, <i>Texture in Food Semisolid foods: Volume , Ed.</i>, , Woodhead Publishing Ltd. Cambridge, UK [ISBN:] • Kilcast, D. 2004, <i>Texture in Food Solid foods: Volume 2.</i>, Ed., , Woodhead Publishing Ltd. Cambridge, UK. [ISBN:] • Inteaz Alli 2003, <i>Food Quality Assurance</i>, CRC Press [ISBN: 9781566769303] • Samir Dani, <i>Food Supply Chain Management and Logistics</i>, Kogen Page UK [ISBN: 9780749473648] • Xiaonan Lu 2017, <i>Sensing Techniques for Food Safety and Quality Control</i>, Royal Society of Chemistry [ISBN: 9781782626640] • Ruth Macdonald,Cheryll Reitmeier 2017, <i>Understanding Food Systems</i>, Academic Press USA [ISBN: 9780128044452] • Tee E Siong 1996, <i>Malaysia Guidelines on Food Sampling</i>, Food Quality Control Division, Ministry of Health Malaysia Malaysia
Article/Paper List	This Course does not have any article/paper resources
Other References	This Course does not have any other resources