



SULTAN QABOOS UNIVERSITY

COURSE OUTLINE

PROGRAM: Spring

1. Course Code	FSHN3106	
2. Course Title	Food Processing	
3. Credits	3	
4. Pre-requisite Course(s)	FSHN2101 or SWAE2001	
5. Co-requisite Course(s)		
6. Equivalent Course(s)		
7. Incompatible Course(s)		
8. Course Category	<input type="checkbox"/> University Requirement	<input type="checkbox"/> University Elective
	<input type="checkbox"/> College Requirement	<input type="checkbox"/> College Elective
	<input checked="" type="checkbox"/> Department Requirement	<input type="checkbox"/> Department Elective
	<input type="checkbox"/> Specialization Requirement	<input type="checkbox"/> Specialization Elective
	<input type="checkbox"/> Other (specify):	
9. Course Owner	College:	Department: X
10. Course Type	<input type="checkbox"/> Lecture	<input checked="" type="checkbox"/> Lecture/Lab
	<input type="checkbox"/> Lecture/Seminar	<input type="checkbox"/> Lecture/Studio
	<input type="checkbox"/> Lecture/Tutorial	<input type="checkbox"/> Lecture/Lab/Tutorial or Seminar
	<input type="checkbox"/> Tutorial	<input type="checkbox"/> Laboratory (Practical)
	<input type="checkbox"/> Field or Work Placement	<input type="checkbox"/> Studio
	<input type="checkbox"/> Seminar	<input type="checkbox"/> Internship
	<input type="checkbox"/> Workshop	<input type="checkbox"/> Project
11. Language of Instruction	English	
12. Course Description		
This course emphasizes the overview of food processing principles to develop shelf stable, convenience and palatable food products. The major goal is to demonstrate thermal food processing methods, such as pasteurization, blanching, sterilization, cooking, baking and frying. The overall course objective is to develop students' initial skills in determining the purpose of processing, mode of preservation, equipment used, required operating conditions for the process in order to achieve required quality, and basic process calculations.		
13. Teaching/Learning Strategies		
Students completing this course should:		
1. Be familiar with several common methods of food processing. The student should understand the basic principles of operation, be able to identify the key variables, and design some of the systems.		
2. Make connections between the chemical and physical changes that occur in food processing and their impact on food quality.		
3. Have insight into how food material variability has an impact on final product quality and safety.		
4. Have hands-on laboratory experience and ability to work in teams.		
5. Calculate some key process parameters such as D, Z and process lethality by hand or using a computer.		
14. Assessment Components and Weight [%]		
<input type="checkbox"/> Quizzes 05	<input type="checkbox"/> Practical 10	<input type="checkbox"/> Other (specify):
<input type="checkbox"/> Homework assignments 05	<input type="checkbox"/> Project 10	
<input type="checkbox"/> In-term examination(s) 25	<input type="checkbox"/> Final examination 45	
15. Grading Method		
<input checked="" type="checkbox"/> A-F Scale <input type="checkbox"/> Pass/Not passed		
16. Textbook(s) and Supplemental Material		

Ramaswamy, H. S. & Marcotte, M. 2005. Food Processing: Principles and Applications, CRC Press.

17. Matching Course Objectives with Program Outcomes and SQU Graduate Attributes

SQU Graduate Attributes

<p>A. SQU graduates should be able to:</p> <ol style="list-style-type: none"> 1. apply the knowledge and skills relevant to the specialization 2. communicate effectively and use information and communication technologies 3. critically analyze complex information and present it in simple clear manner 	<p>B. SQU graduates possess</p> <ol style="list-style-type: none"> 1. interpersonal communication skills and alignment with culture of international labour market to assist them in practical life and in living successfully 2. skills and motivation for independent learning and engagement in lifelong learning and research 3. work ethics and positive values, and intellectual independence and autonomy 4. teamwork skills and display potential leadership qualities 	<p>C. SQU graduates should</p> <p>relish good citizenship qualities, be conscious of their national identity and be socially responsible, engage in community affairs and be mindful of contemporary issues.</p>
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#	Intended Student Learning Outcome /Course Learning Objective	Relevant Program Outcome(s)	Applicable Attribute(s)
1.	Identify and solve problems that may arise in food processing.	An ability to apply food processing and engineering	A1
2.	Students will be able to understand equipment used in the food industry such as heat exchanger and dryer	critical thinking/problem solving, professionalism, life-long learning, interaction, information acquisition, and organizational)	A3,B2
3.	Employ proficient written and verbal communication skills, including the appropriate use of technology.	Acquisition of necessary success skills (communication	A2,
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16. Student Responsibilities

It is the student's responsibility to know and comply with all University Academic Regulations relevant to participation in this course. These regulations specifically include attendance requirement and students' academic code of conduct.

For attendance, it is the student's responsibility to be punctual and to attend all classes.

Students are expected to perform their work with honesty and avoid any academic misconduct, which is defined as the use of any dishonest or deceitful means to gain some academic advantage or benefit. This can take many forms, including but

not limited to, the following: copying, plagiarism, collusion and forging documents. For full details, please refer to the Undergraduate Academic Regulations and to the Student Academic Misconduct Policy.
Additionally, this course requires that you:

COURSE INFORMATION			
Course Code	FSHN3106	Course Title	Food Processing1
Semester/ Year	Spring 19	Section(s)	1
Day, Time, and Place	MON 12:00-13:50 CMT/B13, WED, 12:00-13:50 AGR120		
Course Coordinator	Dr Nasser Al-Habsi		
Office Location	AGR/Food Science	Office Hours	TUE 12:00-1250, WED 9:00- 12:00, THU 10:00-11:50
Office Tel. Ext.	3663	Email	habsin@squ.edu.om

Tentative Schedule			
Week	Lecture #	Topic/Material to be covered	Assessment
1	1	Course outline distribution and general ideas about the course	
2	2	Food Processing	
3	3	Purpose of Food Preservation and Processing	
4	4	Purpose of Food Preservation and Processing	
5	5	Four Basic Methods of Food Preservation and Processing	
6	6	Four Basic Methods of Food Preservation and Processing (Water activity, Freezing, pH and Thermal treatments)	
7	7		Midterm-exam 11/3/2019
8	8	Effects of Heat on Microorganisms and Biological Materials (D and Z value)	
9	9	Tutorial	
10	10	Effects of Heat on Microorganisms and Biological Materials	
11	11	Tutorial	
12	12	Sterilizing Value or Lethality of a Process	
13	13	Tutorial	
14	14	Other Thermal Processing of Foods	
15	15	Other Thermal Processing of Foods	
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17			

APPENDIX B: ADDITIONAL INFORMATION