

## Course Syllabus

1	<b>Course title</b>	Food Packaging
2	<b>Course number</b>	0633342
3	<b>Credit hours (theory, practical)</b>	2
	<b>Contact hours (theory, practical)</b>	2
4	<b>Prerequisites/corequisites</b>	Principles of Food Science (633220), General Chemistry (2) (303102)
5	<b>Program title</b>	BSc. Food Science and Technology
6	<b>Program code</b>	042
7	<b>Awarding institution</b>	The University of Jordan
8	<b>School</b>	Agriculture
9	<b>Department</b>	Nutrition and Food Technology
10	<b>Level of course</b>	Undergraduate
11	<b>Year of study and semester (s)</b>	Second semester
12	<b>Final Qualification</b>	BSc
13	<b>Other department (s) involved in teaching the course</b>	Non
14	<b>Language of Instruction</b>	English
15	<b>Date of production/revision</b>	2020

### 16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.  
 Prof. Ghadeer F. Mehyar, 11:00-12:00 Sunday, Tuesday and Thursday  
 10:00-11:00 & 12:00 :14:00 Monday and Wednesday  
 g.mehyar@ju.edu.jo

### 17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.  
 Non

### 18. Course Description:

The course covers the functions of food packages as well as the types of packaging materials and packages used in the food industry like traditional, synthetic, edible and biodegradable packages; packaging requirements of foods in relation to safety and quality; packages for different food commodities; machinery used for food filling and packaging; packaging and environment and introduction to the active and intelligent packaging systems. Different factors involved in package design in relation to consumer attitude are also discussed.

**19. Course aims and outcomes:**

A- Aims:

- 1- To familiarize the student with the functions and roles of a food package and how they are met by the design.
- 2- To introduce the students to the types of packages and packaging materials and the methods and machinery used in their production.
- 3- To teach the student the methods of testing the packaging materials and the packages themselves.
- 4- To introduce the student to the concepts of intelligent packaging.
- 5- To make the student aware of the environmental and social implications of the food packaging industries.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to

**A. Knowledge and Understanding:** Student is expected to

- A1- Name the functions and requirements of a food package.
- A2- Classify the packages used in the food industries based on the different criteria.
- A3- Know how to test the strength and integrity of a package.
- A4- Test for the different package components.
- A5- Know how the filling machines work and function.

**B. Intellectual Analytical and Cognitive Skills:** Student is expected to

- B1- Distinguish between the different package components by reading the results of their reactions with the various chemicals.
- B2- Recognize an intelligent package when he/she sees one.
- B3- Appreciate the filling and sealing operations.
- B4- Understand the food- package interactions and their effects on the quality of the food and the health of the consumer.

**C. Subject- Specific Skills:** Student is expected to

- C1- Conduct a test for a package strength and integrity.
- C2- Choose the appropriate package for the different food items.
- C3- Design a package for a certain food item.

**D. Transferable Key Skills:** Student is expected to

- D1- Behave in an environment- friendly manner with packages.
- D2- Analyze a food package from technical, social and economic stand points.
- D3- Offer advice to food manufacturers on how to package their products.

**20. Topic Outline and Schedule:**

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Introduction	1	Prof. Ghadeer Mehyar	A1	Exams & class participation	Food Science. Potter (1995)
Natural, Glass and Tinplate.	2	Prof. Ghadeer Mehyar	A2	Exams & class participation	Food Science. Potter (1995)
Wood, Wood pulp and Paperboard.	3	Prof. Ghadeer Mehyar	A2	Exams & class participation	Food Packaging. Principles and Practices. Robertson

					(2013)
Plastics and mixed.	4	Prof. Ghadeer Mehyar	A2	Exams & class participation	Food Packaging. Principles and Practices. Robertson (2013)
Classification of packages	5	Prof. Ghadeer Mehyar	A2, A3, B1, B2	Exams & class participation	Food Packaging. Principles and Practices. Robertson (2013)
Testing of Packaging materials.	6	Prof. Ghadeer Mehyar	A3, A4, B1	Exams & class participation	Food Science. Potter (1995)
Package Testing	6,7	Prof. Ghadeer Mehyar	A3, A4, C1	Exams & class participation	Food Science. Potter (1995)
Packaging Machinery	8	Prof. Ghadeer Mehyar	A5, B3	Exams & class participation	A Hand Book of Food Packaging. Paine, (1992).
Packaging and environment	9	Prof. Ghadeer Mehyar	D1, C2, C3	Exams & class participation	A Hand Book of Food Packaging. Paine, (1992).
Considerations in Package Design.	10	Prof. Ghadeer Mehyar	B2, D2, D3	Exams & class participation	A Hand Book of Food Packaging. Paine, (1992).
Food Quality, Safety and Packaging.	11	Prof. Ghadeer Mehyar	B4, C2, C3	Exams & class participation	A Hand Book of Food Packaging. Paine, (1992).
Packaging of Meat, poultry and eggs.	12	Prof. Ghadeer Mehyar	C2, C3, D3	Exams & class participation	Food Packaging. Principles and Practices. Robertson (2013)
Fruits and vegetables.	13	Prof. Ghadeer Mehyar	C2, C3, D3	Exams & class participation	Food Packaging. Principles and Practices. Robertson (2013)
Dairy products	13,14	Prof. Ghadeer Mehyar	C2, C3, D3	Exams & class participation	Food Packaging. Principles and Practices. Robertson (2013)
Drinks and beverages	14	Prof. Ghadeer Mehyar	C2, C3, D3	Exams & class participation	Food Packaging. Principles and Practices.

					Robertson (2013)
Bakery products	15	Prof. Ghadeer Mehyar	C2, C3,D3	Exams & class participation	Food Packaging. Principles and Practices. Robertson (2013)

### 21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:  
Lectures and student participation

### 22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:  
Students outcome grades  
Students evolutions  
Course evaluation

### 23. Course Policies:

A. Attendance policies:  
In case if the absence exceeded 15%, the student will automatically will fail the course.

B- Absences from exams and handing in assignments on time:  
Makeup exam will be assigned. Postponing the assignment delivery time could be provided.

C- Health and safety procedures:  
Are instructed from the beginning of the course.

D- Honesty policy regarding cheating, plagiarism, misbehavior:  
Withdrawal of the exam

E- Grading policy:  
It is given tothe students from the beginning of the course.

F- Available university services that support achievement in the course:  
Labs are well equipped for this purpose.

### 24. Required equipment: (Facilities, Tools, Labs, Training....)

Non

**25. References:**

Required book (s), assigned reading and audio-visuals:

- 1- Potter, N. and Hothchkiss, J. 1995. Food Science. Chapman and Hall
- 2- Robertson, G. 2013. Food Packaging. Principles and Practices. CRC, Taylor and Francis Group. Boca Raton, FL. USA.
- 3- Paine, H. Y. 1992. A Hand Book of Food Packaging. Blackie Academic and Professional, UK.

Recommended books, materials, and media:

- 1. Kerry, J and Butler, P. 2008. Smart Packaging Technologies for Fast moving Consumer Goods. John Wiley & Sons Ltd. UK.

**26. Additional information:**

Non

Name of Course Coordinator: -----Prof. Ghadeer F. Mehyar--Signature: ----- Date: 1<sup>st</sup> March 2020--

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- -Signature: -----