



Course Specifications

Course Title:	Food Packaging
Course Code:	2064103-2
Program:	Bachelor in Food Science and Nutrition
Department:	Food Sciences and Nutrition Department
College:	College of Science
Institution:	Taif University

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A. Course Identification

1. Credit hours: 2 Hours
2. Course type
a. University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/>
b. Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered: 11 th Level / 4 nd year
4. Pre-requisites for this course (if any): Food preservation (2063201-3)
5. Co-requisites for this course (if any): None

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	√	100 %
2	Blended	---	---
3	E-learning	---	---
4	Distance learning	---	---
5	Other	---	---

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	30
2	Laboratory/Studio	---
3	Tutorial	---
4	Others (specify)	---
	Total	30

B. Course Objectives and Learning Outcomes:

<p>1. Course Description</p> <p>This course deals with studying the significance of food packaging- Raw materials used for manufacturing of food packages- Properties and conditions of appropriate packaging materials- Packaging Techniques-Methods of food packages sterilization-common artifacts and faults of the food packages materials.</p>
<p>2. Course Main Objective:</p> <ol style="list-style-type: none"> 1) This course provides the student with information on the importance of packaging and explain its relationship with food manufacturing. 2) The environment and identify the types and characteristics of various packaging materials and applications in the field of food processing and discuss the relationship between packing material and product. 3) To identify and evaluate packaging methods and machines used in food factories.

3. Course Learning Outcomes:

CLOs		Aligned PLOs
1.0	Knowledge and understanding	
1.1	Recognize the importance and methods of food packaging.	K 3
1.2	Define the factors affecting the selection and the design of packaging materials.	K 3
2.0	Skills:	
2.1	Modify the materials used in food packaging.	S 4
2.2	Compare between different systems of food packaging.	S 4
3	Values:	
3.1	Communicate effectively both orally and in writing.	V 1
3.2	Committed responsibility, respect and scientific ethics	V 3

C. Course Content:

No	List of Topics	Contact Hours
1	Food packaging: introduction, needs, functions, The concept of food products packaging system, development.	3
2	Basic aspects of food packaging, Conditions that must be met in food packages, the dangers to which food containers are exposed.	3
3	Characteristics of packaging materials used with food products (Chemistry and physical properties), Methods for welding and sealing of food packaging materials.	3
4	Factors influencing design and selection of packaging materials: Product, distribution, marketing, packaging operation, cost.	3
5	Specific tests for the quality of packaging materials and food packaging.	3
6	Interactions between packaging materials and foods and their effect on product shelf life and quality.	3
7	Packaging guidelines: (Safety and legislation -Convenience and environmental issues - Retail containers - Shipping containers).	3
8	Basic requirements for packaging materials and systems used with some foods.	3
9	Recent trends in Food packaging (Modified atmosphere packaging - Active packaging - Edible packaging or edible films - Aseptic packaging)	3
10	Food labeling and package printing (Importance, types, methods) and Package printing (inks and color selections).	3
Total		30

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding		
1.1	Recognize the importance and methods of food packaging.	- Lecturer	- Written, and oral exams
1.2	Define the factors affecting the selection and the design of packaging materials.	- Lecturer - Educational Videos - discussion	- Written, and oral exams
2.0	Skills		
2.1	Modify the materials used in food packaging.	- Brain storming	- Oral exams - Evaluation of assignments

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
2.2	Compare between different systems of food packaging.	- Lecturer - Brain storming - Problem solving	- Written and oral exams - Discussion and opinion evaluation
3.0	Values		
3.1	Communicate effectively both orally and in writing.	- Cooperative learning - Presentation	- Evaluation the communication of each student with his colleagues
3.2	Supports the information technology for solving scientific and technical problems.	- Interactive learning - Software and websites use	- Evaluation of the prepared assignments of each student or group

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Assignments, term paper, oral presentations, and interaction during lectures.	Continues	10%
2	Midterm exam	5-6	30%
3	Periodical short exams	8	10%
4	Final exam	12	50%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support:

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice:

- There are 6 h per week for this purpose and the students know these hours according to the time of professor who teach the course.
- Student satisfaction surveys are conducted for academic guidance.
- Develop an improvement plan for academic guidance based on the results of the questionnaire analysis.

F. Learning Resources and Facilities

1. Learning Resources:

Required Textbooks	- Arvanitoyannis, I. (2012). Modified Atmosphere and Active Packaging Technologies. CRC Press: Dewey https://www.crcpress.com/Modified-Atmosphere-and-Active-Packaging-Technologies/Arvanitoyannis/p/book/9781138199026
Essential References Materials	- Food Packaging Science and Technology Journal - Food Packaging and Shelf Life' Journal
Electronic Materials	- Sciencedirect.com - PubMed. - Springer. - Wiley
Other Learning Materials	- None.

2. Facilities Required:

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	- Classroom (capacity not more than 40 students) for 3 h/week. (Must be equipped with data show facility).
Technology Resources (AV, data show, Smart Board, software, etc.)	- Data Show projectors, smart blackboard. - Computer Portable PowerPoint presentations to special lectures.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	- Data Show projectors, smart blackboard. - Computer Portable PowerPoint presentations to special lectures.

G. Course Quality Evaluation:

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students, faculty, program leaders and Peer Reviewer	<ul style="list-style-type: none"> • Continuous monitoring by directors of program and quality assurance unit (Direct). • Applying Questionnaires received from the Deanship of Academic Development for Student evaluation (indirect). • Evaluation of course report (indirect).
Extent of achievement of course learning outcomes	Students, faculty, program leaders and Peer Reviewer	<ul style="list-style-type: none"> • Applying Questionnaires for Student evaluation (indirect). • Evaluation of course report (indirect).
Quality of learning resources	Faculty, program leaders, administrative staff, independent reviewers.	<ul style="list-style-type: none"> • Continuous monitoring by directors of program and quality assurance unit (Direct). • Applying Questionnaires for Student evaluation (indirect). • Evaluation of course report (indirect).

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Department council - Academic Development Committee	
Reference No.	Department council NO: 2	Subject NO: 1
Date	30 /02 /1444 H	