

Course Syllabus

1	Course title	Effect of Processing on Food Properties
2	Course number	0633934
3	Credit hours (theory, practical)	3
	Contact hours (theory, practical)	3
4	Prerequisites/corequisites	
5	Program title	Food science and technology
6	Program code	032
7	Awarding institution	University of Jordan
8	School	Agriculture
9	Department	Nutrition and Food Technology
10	Level of course	PhD
11	Year of study and semester (s)	2018/2019 1 st semester
12	Final Qualification	Ph.D. in Food Science and Technology
13	Other department (s) involved in teaching the course	–
14	Language of Instruction	English
15	Date of production/revision	6/12/2019

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.
22407 Basem@ju.edu.jo

17. Other instructors:

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

18. Course Description:

As stated in the approved study plan.
This course deals with the various factors , food composition , added ingredients, and the used technologies on the different physical , chemical , sensorial and biological properties of food.

19. Course aims and outcomes:

A- Aims:

After completing this course , the student is expected to :

A1 – Describe and identify the major research focus area in the modern food science and technology that deals with the effect of processing on food properties

A2 – Describe the influence of processing steps on chemical and physical properties of foods

A3 – Distinguish features of each process that influence food properties

B1- State the important functional properties of food components that undergo during processing

B2- Explain the relationship between the particular process or treatment and its effect on food properties

C1- Describe the specific reaction that induce changes in food

C2 – Explain how processing and preservation potential to improve food safety , quality and shelf life

D1- Demonstrate the ability to explain the interrelationship between changes in food properties and their effect on the shelf life of food

D2- Evaluate the effects of food processing on food quality attributes

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- Describe and identify the major research focus area in the modern food science and technology that deals with the effect of processing on food properties

A2- Describe the influence of processing steps on chemical and physical properties of foods

A3- Explain the relationship between the particular process or treatment and its effect on food properties

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

B1- Distinguish features of each process that influence food properties

B2- Demonstrate the ability to explain the interrelationship between changes in food properties and their effect on the shelf life of food

B3 - Evaluate the effects of food processing on food quality attributes

C. Subject- Specific Skills: Students is expected to:

C1- Describe and identify the major research focus area in the modern food science and technology that deals with the effect of processing on food properties

C2- Describe the specific reaction that induce changes in food

D. Transferable Key Skills: Students is expected to

D1- State the important functional properties of food components that undergo during processing

D2- Explain how processing and preservation potential to improve food safety , quality and shelf life

D3- Explain the relationship between the particular process or treatment and its effect on food properties

D4 - Describe the influence of processing steps on chemical and physical properties of foods

20. Topic Outline and Schedule

Topic	No. of lecture (s) /Week	Sources	ILOs
Introduction			
Effect of freezing on food properties	(wk 1-2)		A1, A2 , B1
Effect of heating on food properties	(wk 3)		A1 , A3 , C1
Effect of processing on starch properties	(wk 4)		A1 , A2 , B1 , B2
Effect of processing on milk properties	(wk 5)		A1,A2,C1
Effect of irradiation on food texture and rheology	(wk 6)		A-3, B-1, C-1.
Effect of drying on food properties	(wk 7)		A1 , A2 , B1
Effect of frying on the chemicals stability of oils	(wk 8)		A1 , B2 , D2
Effect of vegetables and fruit cooking methods on their phytochemicals	(wk 9)	Marwah (1999) Chapter 10	A1 , C1
Effect of high pressure processing on food properties	(wk 10)		A1 , C1
Effect of processing on major fruits antioxidants	(wk 11-14)		A1,C1,B2

21. Teaching Methods and Assignments:

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

The course will be structured in lectures and discussions. The course comprises overviews, from general understanding to expert knowledge on key topics, and learning based on lectures as well as independent learning. A presentation project is also included in the evaluation process.

22. Evaluation Methods and Course Requirements:

ILO/s	Learning Methods	Evaluation Methods
A- Knowledge and Understanding (A1-A4)	Lectures and Discussions	Exams & Quizzes
B- Intellectual Analytical and Cognitive Skills (B1-B2)	Lectures and Discussions	Exams
C. Subject Specific Skills (C1-C3)	Lectures and Discussions	Exams
D-Transferable Key Skills (D1-D2)	Project & presentation	Projects presentation and homework assignments.

23. Course Policies:

- A- Attendance policies:
- B- Absences from exams and handing in assignments on time:
- C- Health and safety procedures:
- D- Honesty policy regarding cheating, plagiarism, misbehavior:
- E- Grading policy:
- F- Available university services that support achievement in the course:

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

25. References:

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

- 1- Gould, G.W(1996) New Methods of Food Preservation. Chapman & Hall, London
- 2- Zeuthen, P. and Sorenen, L.B. (2003). Food Preservation Techniques. CRC Press ,Boston
- 3- Selected Scientific papers
- 4- Fellows, P.(2000) . Food Processing Technology. CRC Press, New York

Recommended books, materials, and media:

26. Additional information:

Name of Course Coordinator: **Prof.Dr.Basem Al-Sawalha** Signature: ----- Date: -----

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

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

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

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