

Course Syllabus

1	Course title	Food Preservation
2	Course number	0643341
3	Credit hours (theory, practical)	3
	Contact hours (theory, practical)	2,3
4	Prerequisites/corequisites	603220
5	Program title	Food Science and Technology
6	Program code	042
7	Awarding institution	University of Jordan
8	School	Agriculture
9	Department	Nutrition and Food Technology
10	Level of course	3 rd year
11	Year of study and semester (s)	2020/Spring
12	Final Qualification	B.S.
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English and Arabic
15	Date of production/revision	Feb./2020

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.
074/ Office Hours, S,T,W 10:30-1:30. Tel. Land. 22408/0777498806/ayedamr@ju.edu.jo

17. Other instructors:

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

18. Course Description:

Importance and aims of food preservation, causes of food spoilage and methods used in its prevention are discussed including the biological, physical and chemical methods. Preservation of foods by fermentation, heating, low temperature, low water activity and chemicals are elaborated with emphasis on their principles, engineering aspects and effects on food characteristics. Other nontraditional and nonthermal methods are also discussed including irradiation, electric field, ultrasound, high pressure, dielectric, ohmic and infrared heating. Laboratory exercises are designed to enforce theoretical part. The course is open to third year students and is offered in both Arabic and English.

19. Course aims and outcomes:

A- Aims:

After completing this course, the student should be able to:

1. Explain the economic, social and health importance of food preservation.
2. Become familiar with food spoilage agents.
3. Explain food spoilage cases of the foods common in Jordan.
4. Choose the right method to preserve a particular food taking into consideration the quality and shelf life.
5. Become familiar with the principles governing the selected preservation methods.
6. Discuss the effects of preservation method on the quality and safety food.
- 7- Solve some essential mathematical problems related to food preservation.
- 8- Prepare some common preserved foods.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to
Successful completion of the course should lead to the following outcomes:

A. Knowledge and Understanding: Student is expected to

A1- Explain the importance and aims of food preservation

A2- Give examples of food spoilage types and agents.

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

B1- Explain the principles of preserving different types of foods.

B2- Choose the right method to preserve a particular food taking into consideration the quality and shelf life.

B3- Solve problems related to food spoilage.

C. Subject- Specific Skills: Students is expected to

C1- Choose the equipment required to start a food preservation facility.

C2- identify the problem of spoiled foods and choose the right method for its preservation.

D. Transferable Key Skills: Students is expected to

D1- Discuss the effects of preservation method on the quality and safety of food.

D2- Diagnose a spoiled food from its properties and know how to avoid the problem.

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Introduction	1	Ayed Amr	A1	Quiz	Food science potter(1995). Amr,2019.
Food spoilage agents and causes.	2-3	Ayed Amr	A1,A2	Quiz	Food science potter(1995). Amr,2019.
Food Poisoning .	3-4		A1,A2	Quiz	Food science potter(1995). Amr,2019.
Biological Methods of Preservation	5-6	Ayed Amr	B1,B2,B3	Quiz	Food science potter(1995). Amr,2019.
Midterm Exam		Ayed Amr			
Thermal Preservation Methods	7-10	Ayed Amr	B2,B3	Quiz and Lab Report, Problems.	Food science potter(1995). Amr,2019.
Food presentation by Drying and Concentration.	11-13	Ayed Amr	C1,C2,D1,D2	Quiz and Lab Report, Problems	Food science potter(1995). Amr,2019.
-Food preservation by ionizing Radiation	14	Ayed Amr	C1,C2, D1,D2	Quiz	Food science potter(1995). Amr,2019.
Nontraditional and Nonthermal Methods.	15	Ayed Amr	C2,C3,D1,D3	Quiz	Food science potter(1995). Amr,2019.
Final Exam	16	Ayed Amr			Food science potter(1995). Amr,2019.

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 and laboratory exercises. The course comprises overviews, from general understanding to expert knowledge on key topics, and learning based on lectures as well as independent learning. Laboratory reports and problem sets are integral part of the learning method.

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Quizzes , Exams, Lab. Reports, Problem Sets.

23. Course Policies:

A- Attendance policies: according to university rules.

B- Absences from exams and handing in assignments on time: Make up is given in case of absence with valid excuses. Late assignments (reports or problem sets) are not accepted.

C- Health and safety procedures: According to college and dpartment measures.

D- Honesty policy regarding cheating, plagiarism, misbehavior: University Rules.

E- Grading policy: Midterm=30, Semester Activities:20, Final=50.

F- Available university services that support achievement in the course: Classrooms, Laboratories.

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

Food Processing and Preservation Laboratory

25. References:

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

Amr, A. 2019. An Introduction to Food Preservation. Zuhdi Publishing/ Amman/ Jordan(in Arabic)

Recommended books, materials, and media:

Potter, N, and Hotchkiss, J. 1995. Food Science, 5th ed., Chapman and Hall, N.Y

26. Additional information:

Name of Course Coordinator: -----Signature: ----- Date: -----

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

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

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

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