

Course Syllabus

1	Course title	Food Additives
2	Course number	0603420
3	Credit hours (theory, practical)	2 hrs (theory)
	Contact hours (theory, practical)	2 hrs/ wk
4	Prerequisites/corequisites	303102
5	Program title	Food Science and Technology
6	Program code	042
7	Awarding institution	The University of Jordan
8	School	Agriculture
9	Department	Department of Nutrition and Food Technology
10	Level of course	2 nd , 3 rd and 4 th year
11	Year of study and semester (s)	2019, Fall and summer semesters
12	Final Qualification	Based on grades
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English and Arabic
15	Date of production/revision	Nov., 2019

16. Course Coordinator:

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

Prof Maher Al-dabbas (course coordinator)

17. Other instructors:

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

Dept head office, Ex. 22422 email; m.aldabbas@ju.edu.jo

Office hrs: every day 14-15

18. Course Description:

This course deals with the advantages and disadvantages of food additives, their uses in food industries, safety evaluation and regulatory aspects. It also deals with the different classes of food additives with respect to chemical and physical nature as well as mode of action.

19. Course aims and outcomes:

A- Aims:

The aim of this course is to introduce the students to the importance and purposes of food additives, their legislative processes as well as their safety evaluation. The students should get familiar with the application of different food additive classes i.e. food colors, preservatives, antioxidants, flavors ...etc in food processing.

After completion of the course, the participants are expected to:

1. To acquire a basic knowledge of food additives, their importance and the advantages and disadvantages of their uses.
2. Describe the legislative processes as well as their safety evaluation
3. To Differentiate between the different classes of food additives and how to apply them properly in food processing such as:
 - additives used to extend shelf life including preservatives and antioxidants
 - additives used to improve sensory properties including colors sweeteners and flavoring agents.
 - additives used to improve textural properties including stabilizers, emulsifiers, thickening agents ...etc.
 - processing aids including solvents, enzymes, anti-caking agents, releasing agents ...etc.
4. To Differentiate between natural and artificial food additives

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 the objectives of the study of food additives

A2- Familiar with importance, advantages and disadvantages of food additives usage in food

A3- To be familiar with legislative processes as well as their safety evaluation

A4- To acquire a fundamental background to differentiate between the different classes of food additives and how to apply them properly in food processing

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

B1- Choose the most appropriate additives used to extend shelf life including preservatives in different food.

B2- Select, to improve sensory properties including colors sweeteners and flavoring agents.

B3. Have knowledge about additives used to improve textural properties including stabilizers, emulsifiers, thickening agentsetc.

B4- Familiar with processing aids including solvents, enzymes, anti-caking agents, releasing agents ...etc.

C. Subject- Specific Skills: Students is expected to

C1- Understand the food additives, their importance and the advantages and disadvantages

C2- Understanding legislations regarding food additives

C3- Understanding the use of permitted additives to improve food quality

D. Transferable Key Skills: Students is expected to

D1- Choose proper and safe food additive for specific food items

D2- Able to know all legislation process in Jordan regarding approval of use of food additives

D3- Adopt the necessary of additives usage and be active on social media to give facts about additives

D4- Identify the needs of safe food additives in factories for stability of local products

20. Topic Outline and Schedule:

Topic	Instructor	Week	Achieved ILOs	Evaluation Methods	Reference
<p>Introduction to food additives Food additives definition, classification and importance</p>	Prof. Maher Al-Dabbas	1 st wk	A1, A2, and A4	Discussion and feedback	<p>1. Alsaed , Ali K. (2007). Food Additives, University of Jordan, Amman(Arabic)</p> <p>2. Smith, J.(1991). Food Additives User's Handbook. Van Nostrand Reinhold, New York</p> <p>3. Larry B., Micheal D., Salminen and John H (2002). Food Additives. 2nd edition. Marcell Dekker, Inc. New York</p>
Legislative processes for the food additives.	Prof. Maher Al-Dabbas	2 nd & 3 rd wks	A1, A2, A3, C2 B4 and D4	Discussion and feedback	<p>Alsaed , Ali K. (2007). Food Additives, University of Jordan, Amman(Arabic)</p> <p>2. Smith, J.(1991). Food Additives User's Handbook. Van Nostrand Reinhold, New York</p> <p>3. Larry B., Micheal D., Salminen and John H (2002). Food Additives. 2nd edition. Marcell Dekker, Inc. New York</p>
Specifications for identity and purity of food additives and evaluating of their safety	Prof. Maher Al-Dabbas	3 rd , 4 th & 5 th wks	A1, A2, C1, C2 B4 and D4	Quiz	<p>Alsaed , Ali K. (2007). Food Additives, University of Jordan, Amman(Arabic)</p> <p>2. Smith, J.(1991). Food Additives User's Handbook. Van Nostrand Reinhold, New York</p> <p>Larry B., Micheal D., Salminen and John H (2002). Food Additives. 2nd edition. Marcell Dekker, Inc. New York</p>

Food colors	Prof. Maher Al-Dabbas	5 th &6 th wk	A1,A2, C1, C2 B4 and D4	Presentations	Alsaed , Ali K. (2007).Food Additives, University of Jordan, Amman(Arabic) 2.Smith, J.(1991).Food Additives User's Handbook.Van Nostrand Reinhold, New York Larry B., Micheal D., Salminen and John H (2002). Food Additives. 2nd edition.Marcell Dekker, Inc. New York
Preservatives	Prof. Maher Al-Dabbas	7 th wk	A1,A2, C1, C2 B4 and D4	discussion	Alsaed , Ali K. (2007).Food Additives, University of Jordan, Amman(Arabic) 2.Smith, J.(1991).Food Additives User's Handbook.Van Nostrand Reinhold, New York Larry B., Micheal D., Salminen and John H (2002). Food Additives. 2nd edition.Marcell Dekker, Inc. New York
Antioxidants	Prof. Maher Al-Dabbas	8 th wk	A1,A2, C1, C2 B4 and D4	Analysis and discussion	Alsaed , Ali K. (2007).Food Additives, University of Jordan, Amman(Arabic) 2.Smith, J.(1991).Food Additives User's Handbook.Van Nostrand Reinhold, New York Larry B., Micheal D., Salminen and John H (2002). Food Additives. 2nd edition.Marcell Dekker, Inc. New York
Emulsifiers, Stabilizers & thickening agents	Prof. Maher Al-Dabbas	9 th wk	A1,A2, C1, C2 B4 and D4	Discussion	Alsaed , Ali K. (2007).Food Additives, University of Jordan, Amman(Arabic) 2.Smith, J.(1991).Food Additives User's Handbook.Van Nostrand Reinhold, New York Larry B., Micheal D.,

					Salminen and John H (2002). Food Additives. 2nd edition. Marcell Dekker, Inc. New York
Processing aids such as solvents , enzymes, anti-caking and antifoaming agents	Prof. Maher Al-Dabbas	10 th wk	A1,A2, C1, C2 B4 and D4	assignments	Alsaed , Ali K. (2007).Food Additives, University of Jordan, Amman(Arabic) 2.Smith, J.(1991).Food Additives User's Handbook. Van Nostrand Reinhold, New York Larry B., Micheal D., Salminen and John H (2002). Food Additives. 2nd edition. Marcell Dekker, Inc. New York
Flavours and sweeteners	Prof. Maher Al-Dabbas	11 & 12 th wk	A1, C2, D2 and D3	Analysis and discussion	Alsaed , Ali K. (2007).Food Additives, University of Jordan, Amman(Arabic) 2.Smith, J.(1991).Food Additives User's Handbook. Van Nostrand Reinhold, New York Larry B., Micheal D., Salminen and John H (2002). Food Additives. 2nd edition. Marcell Dekker, Inc. New York
Acids, basis and buffering agents and nutritive additives	Prof. Maher Al-Dabbas	13 & 14 wks	A3, B2, C3 and D1	assignments	Alsaed , Ali K. (2007).Food Additives, University of Jordan, Amman(Arabic) 2.Smith, J.(1991).Food Additives User's Handbook. Van Nostrand Reinhold, New York Larry B., Micheal D., Salminen and John H (2002). Food Additives. 2nd edition. Marcell Dekker, Inc. New York
Incidental food additives		14 th & 15 th wks	A3, B2, C2, C3	Analysis and discussion	Alsaed , Ali K. (2007).Food Additives,

	Prof. Maher Al-Dabbas		and D1		University of Jordan, Amman(Arabic) 2.Smith, J.(1991).Food Additives User's Handbook.Van Nostrand Reinhold, New York Larry B., Micheal D., Salminen and John H (2002). Food Additives. 2nd edition.Marcell Dekker, Inc. New York
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21. Teaching Methods and Assignments:

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

Lectures and discussion with assignments strengthen through panel discussion. Creative thinking through questions given during lectures and ability of solving and analysing problems related to each topic.

22. Evaluation Methods and Course Requirements:

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

Exams, Quizzes, discussion and ability to analyze problems using on the spot questions or requirement of assignments.

23. Course Policies:

A- Attendance policies: **Attendance sheet for each lecture**

B- Absences from exams and handing in assignments on time: **Make up if there is an official excuse, assignment not accepted after specified date.**

C- Health and safety procedures: **Well seated without any drink on lecture**

D- Honesty policy regarding cheating, plagiarism, misbehavior: **Subjected to students punishment committee**

E- Grading policy: **According to average and University policy**

F- Available university services that support achievement in the course: **Requested before the course and available or provided on request.**

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

Suitable lecture room with needed tools, and training in suitable organization related to the field of study at graduation time .

25. References:

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

References available in library, text and handled sheets, movies related to specific subjects may be provided

Recommended books, materials, and media:

Main Reference/s:

1. Alsaed , Ali K. (2007). Food Additives, University of Jordan, Amman(Arabic)
2. Smith, J.(1991). Food Additives User’s Handbook. Van Nostrand Reinhold, New York
3. Larry B., Micheal D., Salminen and John H (2002). Food Additives. 2nd edition. Marcell Dekker, Inc. New York

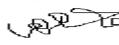
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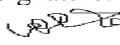
1. Taylor, R.J. (1980). Food Additives. John Wiley & Sons. Toronto.
2. Jacobson, H.F. (1976). Eaters Digest, The Consumers Fact book of Food Additives, Are they safe Anchor Books, NewYork .
3. National Academy of Sciences. (1970). Evaluating the safety of food chemicals. Washington, D.C.
4. IFST (1986). Food Additives - The Professional and Scientific Approach. Institute of FoodScience and Technology, U.K.
5. FAO (1984). FAO/WHO Food Additive Data System. Paper no.30, FAO,Rome.
6. Anonymous (1991). Washington News. Food Tech. vol,45, Different Numbers.
7. Anonymous (1992). Washington News. Food Tech. vol,46, Different Numbers.
8. Furia, E. (1968). Handbook of Food Additives. CRC, Cleveland.
9. Lewis, F.J. (1989). Food Additives Handbook, Van Nostrand Reinhold, NewYork.
10. Sumainah, Gh.M and Safar, A.A.(1993). Food Additives. Damascus University, Damascus, Syria (Arabic).

26. Additional information:

None

Name of Course Coordinator: Prof Maher Al-Dabbas. Signature:  Date: 25th Nov., 2019

Head of curriculum committee/Department: Prof Maher Al-Dabbas. Signature: 

Head of Department: Prof Maher Al-Dabbas Signature: 

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

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