1	**Course title**	Selected Topics in Food Science
2	**Course number**	0603994
3	**Credit hours (theory, practical)**	3
	Contact hours (theory, practical)	3
4	**Prerequisites/corequisites**	
5	**Program title**	PhD in Food Science and Technology
6	**Program code**	032
7	**Awarding institution**	The University of Jordan
8	**School**	Agriculture
9	**Department**	Nutrition and Food Technology
10	**Level of course**	Graduate course
11	**Year of study and semester (s)**	Fall or spring semesters
12	**Final Qualification**	PhD
13	**Other department (s) involved in teaching the course**	None
14	**Language of Instruction**	English
15	**Date of production/revision**	23/12/2020

16. Course Coordinator: Prof. Mohammed Ismael Saleh

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

Office hours					
Day/Time	**Sunday**	**Monday**	**Tuesday**	**Wednesday**	**Thursday**
Day					
Time	**10:00 – 12:00**	**11:00-12:30**	**9:00 – 12:00**	**11:00-12:30**	

17. Other instructors:

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

Office hours					
Day/Time	**Sunday**	**Monday**	**Tuesday**	**Wednesday**	**Thursday**
Day					
Time	**10:00 – 12:00**	**11:00-12:30**	**9:00 – 12:00**	**11:00-12:30**	

18. Course Description:

Study of the advanced research topics in food technology, not covered in other postgraduate courses. Approval of the department is required.

19. Course aims and outcomes:

A- Aims:
Throughout the course, different insights and developments concerning food science and technology, process and product complex relation will be covered in depth. Topics include enzyme technology, mild processing, and functional food engineering and bioactive compounds. A selected set of topics will be instructed by corresponding experts in a team teaching effort

After successful completion of this course, students are expected to:
- Understand the scientific and technological basis underlying novel insights and developments in the sustainable production and design of food products for safe consumption
- Be capable of critically evaluating such developments from a scientific, technological, socio-economical and ethical point of view.

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**- Understand the developments in food functionality in depth.
- **A2-** Understand the special design requirements for food products and its developed applications.
- **A3-** Understand the concept of food analysis and advances in food science and technology.
- **A4**- Understand the concept of food safety and advances in food science and technology.

B. Intellectual Analytical and Cognitive Skills: Student is expected to
- **B1**- Develop a detailed application and use basic principles of food science and technology topics under discussion.

C. Subject- Specific Skills: Students is expected to
- **C1**- Apply, analyze and use of selected principles in food products development and other related applications.
- **C2**- Able to evaluate the needs/requirements for food processing for food applications

D. Transferable Key Skills: Students is expected to
- **D1**- Convey knowledge and use concepts in manufacturing organizations.
- **D2**- Critically review requirements of food applications that can be used in minimize losses and conserve energy.

20. Topic Outline and Schedule:

Content	Week	ILO/s
Space Foods		A1, A2, B, C
Dietary Guidelines-Advisory Committee		C1
Food Chemistry and Analysis		C1-2, D1
Flavor Analysis		C1
Supercritical Extrusion		C1
Food Safety – HACCP		B1, C1, D1
Food Safety – Microbial		B1, C2, D1
International Agriculture		B1, C2
Biotech Crops: Science and Sustainability		B1, D2
Food Systems and Micronutrient Availability		B1
Food Security		B1
Genetically Modified Organisms		B1
Food Product Development; Basic Requirements		C, D
Food Industry - Product Development		D
Environmental Issues Related to Food Science and Technology		C, D

21. Teaching Methods and Assignments:

The course will be structured in lectures, discussions, theoretical and practical exercises. The course comprises overviews, from general understanding to expert knowledge on key topics in food science and technology. Learning is based on lectures as well as independent learning through exercises, excursions**.**

22. Evaluation Methods and Course Requirements:

Class work will be presented. Exams, assignments and presentation evaluation will be graded for evaluation. Exams will be administered after completion of the course technical units; these unit exams will comprise both essay and problem-oriented questions. The final exam is comprehensive.

23. Course Policies:

Students and instructors each have an important role in maintaining a classroom environment optimal for learning, and are expected to treat each other with respect during class, using thoughtful dialogue, and keeping disruptive behavior to a minimum. Class discussions are interactive and diverse opinions will be shared; please be thoughtful in sharing your perspectives and responses with one another. Other behavior that can be disruptive are chatting and whispering during class, the use of electronic equipment, preparing to leave before class is over, and consistently arriving late to class. Please keep these disruptions to a minimum. Inappropriate behavior in the classroom may result in a request to leave the class and/or subject to penalty.

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

Classroom facilities

25. References:

Main Reference/s: Dephne Rowland. 2020. Selected Topics in Food Science and Nutrition. CALLISTO REFERENCE. ISBN-13: 978-1641162500, ISBN-10: 1641162503 **Additional reference:** - Selected materials related to food science and technology

26. Additional information:

Name of Course Coordinator: **Prof. Mohammed Ismael Saleh** Signature: ---------- Date: ---------

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

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

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

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