1	**Course title**	Practical Training
2	**Course number**	0603497
3	**Credit hours (theory, practical)**	3
	Contact hours (theory, practical)	3
4	**Prerequisites/corequisites**	Food Chemistry and Analysis (603321).
5	**Program title**	Food Science and Technology
6	**Program code**	042
7	**Awarding institution**	The University of Jordan
8	**School**	Agriculture
9	**Department**	Nutrition and Food Technology
10	**Level of course**	4
11	**Year of study and semester (s)**	Spring/Second Semester
12	**Final Qualification**	BSc.
13	**Other department (s) involved in teaching the course**	None
14	**Language of Instruction**	English
15	**Date of production/revision**	12/2/2020

16. Course Coordinator: Food Science and Technology Faculty Members

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

Office hours					
Day/Time	**Sunday**	**Monday**	**Tuesday**	**Wednesday**	**Thursday**
Day					
Time					

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					

18. Course Description:

This course aims to acquire student's practical skills of food chemical and microbial analysis, interpretation of the results, writing the scientific report and determine compliance of the food samples with national and international standards.

19. Course aims and outcomes:

The aim of this course is to overview various topics of food science and technology in the form of presentations as well as practical sessions.

Successful completion of the course should lead to the following outcomes:

A. Knowledge and Understanding: Student is expected to

A1- Understand the basic principles of samples preparation, sampling plans and draws samples of various food and master methods of sample storage and preparation.

A2- Understand the basic principles of preparation of analytical solutions, describing conditions for their storage and standardization and determine their concentrations.

A3- Designing a scientific experiment including the methodology and objectives.

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

B1- Carry out food analysis using atomic absorption, GLC, HPLC, column chromatography and other instrumental techniques.

B2- Carry out validation procedure for an analytical method: recovery, reproducibility, accuracy and precision.

B3- To be knowledgeable with the International standards for the sensory evaluation

C. Subject- Specific Skills: Students is expected to

C1- Microbial analysis; cultures preparation, culturing, incubation conditions.

C2- Direct microscopic examination of foods to assess microbial condition of the food.

C3- Carry out analysis of the results to judge over compliance with specifications and writing the scientific report with interpretation of the results.

D. Transferable Key Skills: Students is expected to

D1- Gain basic knowledge related to the food science and technology

D2- Know how to apply the different analysis methods and techniques

D3- To get familiar with the standards for various food products

20. Topic Outline and Schedule:

1. Preparation and standardization of chemical and microbial solutions and cultures.
2. Sampling types and procedures.
3. Principles of chromatography.
4. Chromatographic techniques and their application on food samples .
5. Culturing of different representative food samples.
6. Monitoring growth of food processing microorganism such as cultures of yogurt and pickles
7. Judging and interpretation of the result and check the compliance with Jordanian standards.
8. Interpretation of results and preparation of small project.

21. Teaching Methods and Assignments:

The course will be structured in theoretical and practical exercises and excursions. Lectures will also be presented to students by several faculty members on selected topics. The course comprises an overview form general understanding of the major topics in food science and technology and learning will be based on lectures as well as independent learning through exercises, excursions and a practical work.

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.

Laboratory Reports and Assignments
Each student/group of a maximum of 5 students will be asked to write a report about their project/product and present their findings. Sensory and chemical testing will be performed and analysis of data will be presented.

23. Course Policies:

Students and instructors each have an important role in maintaining a classroom/laboratories environment optimal for learning, and are expected to treat each other with respect during class, using thoughtful dialogue, and keeping disruptive behaviours 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 behaviours 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:

Learning Resources

1-Smeith Otles. Handbook of food analysis instruments. CRC Press, (2008).

2- Grosch, W and Belitz, H. D. Food Chemistry. (2008).

3- Ronald, R Eitenmiller and Junsoo Lee. Food Chemistry, composition and analusis. Springer Berlin / Heidelberg. (2009).

4- Belitz, H. D, W Grosch and Scheberle, P. Food Chemistry, Springer, 3rd Ed. (2004).

5- Offecial Methods for the Microbiological Examination of Foods. Vol 1 – 5. *Online:*

http://www.hc-sc.gc.ca/fn-an/res-rech/analy-meth/microbio/volume1/index-eng.php

26. Additional information:

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

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

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

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

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