



**Syllabus\* : Food science (140502220)**  
**Second Semester 2021 /2022**

COURSE INFORMATION	
<b>Course Name:</b> food Science <b>Semester:</b> second <b>Department:</b> Department of Clinical Nutrition <b>Faculty:</b> Applied Medical Sciences	<b>Course Code:</b> 140502220 <b>Section:</b> 1 <b>Core Curriculum:</b> Major requirements
<b>Day(s) and Time(s):</b> Sun, Tue, Thur: 9:00-10:00 <b>Classroom:</b> A.M. 204	<b>Credit Hours:</b> 3 <b>Prerequisites:</b> 140502210 or 1905021211
COURSE DESCRIPTION	
Main definitions and principles of food science and technology; the composition of foods and their role in food processing; the influence of processing on food attributes; causes of food spoilage and an introduction to the principles of food preservation methods.	
DELIVERY METHODS	
The course will be delivered through a combination of active learning strategies. These will include: <ul style="list-style-type: none"> <li>• PowerPoint lectures and active classroom-based discussion</li> <li>• Collaborative learning through small groups acting in an interdisciplinary context.</li> <li>• Relevant films and documentaries</li> <li>• Video lectures</li> <li>• E-learning resources: e-reading assignments and practice quizzes through Model and Microsoft Team</li> </ul>	
FACULTY INFORMATION	
<b>Name</b>	<b>Buthaina Mahmoud Alkhatib</b>
<b>Academic Title:</b>	<b>Lecturer</b>
<b>Office Location:</b>	<b>Applied Medical Sciences-1129</b>
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<b>Email Address:</b>	<b>bkhatib@hu.edu.jo</b>
<b>Office Hours:</b>	<b>Sunday</b> 10:00- 11:00; 12:00-13:00 <b>Tuesday</b> 12:00- 13:00

Please send an e-mail (bkhatib@hu.edu.jo) to meet at any other time.

## REFERENCES AND LEARNING RESOURCES

### Required Textbook

1. Potter, N. and Hotchkiss, J. (1995). Food Science, 4th edition. Chapman and Hall.
2. Murano, P.S. (2003). Understanding Food Science and Technology. Thomson, Australia.

### Suggested Additional Resources:

Lecture notes, handouts & articles

### Useful Web Resources:

[www.ifda.jo](http://www.ifda.jo)

## COURSE LEARNING OUTCOMES

Number	Outcomes	Corresponding Program outcomes
<b>Knowledge</b>		
<b>K1</b>	Knowledge and Understanding: Student is expected to: <ol style="list-style-type: none"> <li>1. Define the scope of food science and technology</li> <li>2. Describe food categories and their characteristics.</li> <li>3. Understand the chemistry of food components and their effects on its quality.</li> </ol>	<b>KP1</b>
<b>K2</b>	Intellectual Analytical and Cognitive Skills: Student is expected to: <ol style="list-style-type: none"> <li>1. Explain reasons why foods are processed.</li> <li>2. Explain how food spoilage occurs and its causes.</li> </ol>	<b>KP3</b>
<b>Skills</b>		
<b>S1</b>	<ol style="list-style-type: none"> <li>1. Explain the principles of the food preservation methods</li> <li>2. Explain the components of food quality and the different quality factors.</li> </ol>	<b>SP1</b>
<b>S2</b>	Understand some new concepts in food science i.e. GMO, food toxicants, food security, etc.	<b>SP1</b>
<b>S3</b>	<ol style="list-style-type: none"> <li>1. Food laws and regulations in Jordan.</li> <li>2. Food inspection systems in Jordan.</li> <li>3. Status of food processing in Jordan</li> </ol>	<b>SP1</b>
<b>Competencies</b>		
<b>C1</b>	-	-

## STUDENT LEARNING OUTCOMES MATRIX\*

Number	Learning Outcomes	Learning Method*	Assessment Method**
<b>Knowledge</b>			

<b>K1</b>	Knowledge and Understanding: The student is expected to: 1. Define the scope of food science and technology 2. Describe food categories and their characteristics. 3. Understand the chemistry of food components and their effects on its quality.	Lecture	<b>Assignment</b>
<b>K2</b>	Intellectual Analytical and Cognitive Skills: The student is expected to: 1. Explain reasons why foods are processed. 2. Explain how food spoilage occurs and its causes.	Flipped class	<b>Quiz + Assignment</b>
<b>Skills</b>			
<b>S1</b>	1. Explain the principles of the food preservation methods 2. Explain the components of food quality and the different quality factors.	Lecture	<b>Quiz</b>
<b>S2</b>	Understand some new concepts in food science i.e. GMO, food toxicants, food security, etc.	Lecture	<b>Quiz</b>
<b>S3</b>	1. Food laws and regulations in Jordan. 2. Food inspection systems in Jordan. 3. Status of food processing in Jordan	Lecture	<b>Report</b>
<b>Competencies</b>			
<b>C1</b>	-	-	-

## ACADEMIC SUPPORT

It is The Hashemite University's policy to provide educational opportunities that ensure fair, appropriate, and reasonable accommodation to students who have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities are encouraged to contact their instructor to ensure that their individual needs are met. The University through its Special Need section will exert all efforts to accommodate individual needs.

**Special Needs Section:**

**Tel: 0788661058**

**Location:** Applied Medical Sciences, office 1129

**Email:** bkhatib@hu.edu.jo

## COURSE REGULATIONS

***Participation***

Class participation and attendance are important elements of every student's learning experience at The Hashemite University, and the student is expected to attend all classes. A student should not miss more than 15% of the classes during a semester. *Those exceeding this limit of 15% will receive a failing grade regardless of their performance.* It is a student's responsibility to monitor the frequency of their own absences. **Attendance record begins on the first day of class irrespective of the period allotted to drop/add and late registration. It is**

**a student's responsibility to sign-in; failure to do so will result in a non-attendance being recorded.**

In exceptional cases, the student, with the instructor's prior permission, could be exempted from attending a class provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the acceptability of an absence for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent will be allowed to withdraw from the course.

### ***Plagiarism***

Plagiarism is considered a serious academic offense and can result in your work losing marks or being failed. HU expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, and the wider University community. As such, a student is expected not to engage in behaviors that compromise his/her own integrity as well as that of the Hashemite University.

Plagiarism includes the following examples, and it applies to all student assignments or submitted work:

- **Use of the work, ideas, images or words of someone else without his/her permission or reference to them.**
- **Use of someone else's wording, name, phrase, sentence, paragraph, or essay without using quotation marks.**
- **Misrepresentation of the sources that were used.**

**The instructor has the right to fail the coursework or deduct marks where plagiarism is detected**

### ***Late or Missed Assignments***

In all cases of assessment, students who fails to attend an exam, class project or deliver a presentation on the scheduled date without prior permission, and/or are unable to provide a medical note, will automatically receive a fail grade for this part of the assessment.

- Submitting a term paper on time is a key part of the assessment process. Students who fail to submit their work by the deadline specified will automatically receive a 10% penalty. Assignments handed in more than 24 hours late will receive a further 10% penalty. Each subsequent 24 hours will result in a further 10% penalty.
- In cases where a student misses an assessment on account of a medical reason or with prior permission; in line with University regulations an incomplete grade for the specific assessment will be awarded and an alternative assessment or extension can be arranged.

### ***Student Complaints Policy***

Students at The Hashemite University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-

academic. For more information about the policy and processes related to this policy, you may refer to the students' handbook.

## COURSE ASSESSMENT

### **Course Calendar and Assessment**

Students will be graded through the following means of assessment and their final grade will be calculated from the forms of assessment as listed below with their grade weighting taken into account. The criteria for grading are listed at the end of the syllabus

Assessment	Grade Weighting	Deadline Assessment
First-Hour exam	25%	3/4/2022
Second-Hour exam	25%	8/5/2022
Quizzes and Assignments	10%	Continuous
Final Exam	40%	16 <sup>th</sup> Week

### **Description of Exams**

Test questions will predominately come from the material presented in the lectures. Semester exams will be conducted during the regularly scheduled lecture period. The exam will consist of a combination of multiple-choice, short answer, match, true and false, and/or descriptive questions.

**Homework:** Will be given for each chapter, while the chapter is in progress you are supposed to work on them continuously and submit them in the next lecture when I finish the chapter.

You are also expected to work on in-chapter examples, self-tests, and a representative number of end-of-chapter problems. The answers of self-tests and end-of-chapter exercises are given at the end of the book.

**Quizzes:** Unannounced quizzes will be given during or/and at the end of each chapter based upon the previous lectures. It will enforce that you come prepared for the class.

No make-up exams, homework or quizzes will be given. Only documented absences will be considered as per HU guidelines.

**Grades are not negotiable and are awarded according to the following criteria\*:**

Letter Grade	Description	Grade Points
A+	Excellent	4.00
A		3.75
A-		3.50
B+	Very Good	3.25

B		3.00
B-		2.75
C+	Good	2.50
C		2.25
C-		2.00
D+	Pass	1.75
D	Pass	1.50
F	Fail	0.00
I	Incomplete	-

### Weekly lecture schedule and content distribution

\* Includes: Lecture, flipped Class, project-based learning, problem-solving based learning, collaborative learning

Week	Topic	Learning Methods	Tasks	Learning Material
1	1. Introduction			Chapter 1, 2 Potter and Hotchkiss (19-95)
2-4	2. Food Science and Technology: principles 3. Food selection	Lecture		Understanding food science and Technology Morano (2003)
5-7	4. Chemistry of food components. 5. Causes of food spoilage	Lecture	Assignment	Potter (1995)
<b>First-hour exam 3/4/2022</b>				
8-10	6. Food quality factors and Their measuring methods.	Flipped class	Report	Morano (2003)
11-12	7. Food preservation	Lecture	Short exam	Morano (2003)
13-14	8. Food evaluation	Collaborative learning	Quiz	Morano (2003)
<b>Second-hour exam 8/5/2022</b>				
15	9. Food operation	Lecture		
16	10. Food packaging	Lecture	Short exam	Food science Potter (1995)
<b>Final Exam</b>				

### ASSESSMENT Rubric

#### Classroom participation: Assessment Criteria

Criteria	Quality				score
	Excellent (4 points)	Good (3 points)	Satisfactory (2 points)	Needs Improvement (1 points)	
The degree to which student integrates course	- often cites from readings. - uses readings to support points.	- occasionally cites from readings. - sometimes uses readings to support points.	- rarely able to cite from readings. - rarely uses readings to support points.	- unable to cite from readings. cannot use readings to support points;	

<b>readings into classroom participation</b>	- often articulates "fit" of readings with the topic at hand.	occasionally articulates "fit" of readings with the topic at hand.	rarely articulates "fit" of readings with the topic at hand	cannot articulate "fit" of readings with the topic at hand.	
<b>Interaction/participation in classroom discussions</b>	- always a willing participant, responds frequently to questions. routinely volunteers' point of view.	- often a willing participant, - responds occasionally to questions. occasionally volunteers' point of view.	- rarely a willing participant, - rarely able to respond to questions. rarely volunteers' point of view.	- never a willing participant., - never able to respond to questions. never volunteers point of view.	
<b>Interaction/participation in classroom learning activities</b>	- always a willing participant. - acts appropriately during all role plays. - responds frequently to questions. routinely volunteers' point of view.	- often a willing participant. - acts appropriately during role-plays. - responds occasionally to questions. occasionally volunteers' point of view.	- rarely a willing participant. - occasionally acts inappropriately during role-plays. - rarely able to respond to direct questions. rarely volunteers' point of view.	- never a willing participant - often acts inappropriately during role-plays. - never able to respond to direct questions. never volunteers point of view.	
<b>Demonstration of professional attitude and demeanor</b>	- always demonstrates commitment through thorough preparation. - always arrives on time. often solicits instructors' perspectives outside class.	- rarely unprepared; rarely arrives late. occasionally solicits instructors' perspectives outside class.	- often unprepared; occasionally arrives late. rarely solicits instructors' perspectives outside class.	- rarely prepared. - often arrives late. never solicits instructors' perspective outside class	