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|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| The Hashemite University                       |    | Approval date:     |
| Faculty of App. Med. Sci.                      |                                                                                                                                                                                                                                                        | Issue:             |
| Department of Clinical Nutrition and Dietetics |                                                                                                                                                                                                                                                        | Credit Hours 3 hrs |
| The academic year 2021/2022                    |                                                                                                                                                                                                                                                        | Bachelor           |

### Course information

| Course#                                                                                                                                                                                                                                                      | Course title                 | Prerequisite                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------|
| 140502220                                                                                                                                                                                                                                                    | Introduction to food science | 140502210 or 1905021211                                                |
| <b>Course type</b><br><input type="checkbox"/> University Requirement <input type="checkbox"/> Faculty Requirement<br><input checked="" type="checkbox"/> Major Requirement <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Compulsory |                              | <b>Class time</b><br><b>9-10</b><br><b>Sun, Tue,</b><br><b>Thur</b>    |
|                                                                                                                                                                                                                                                              |                              | <b>Room #</b><br><b>مجمع قاعات</b><br><b>ابن خلدون</b><br><b>1.غ.م</b> |

### Instructor Information

| Name              | Office No. | Phone No. | Office Hours | E-mail            |
|-------------------|------------|-----------|--------------|-------------------|
| Buthaina Alkhatib |            |           |              | bkhatib@hu.edu.jo |

### Course Delivery Method

| Course Delivery Method            |                                 |                                             |
|-----------------------------------|---------------------------------|---------------------------------------------|
| <input type="checkbox"/> Physical | <input type="checkbox"/> Online | <input checked="" type="checkbox"/> Blended |

### 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.

### Course Learning Outcomes

| Number           | Outcomes                                                                                                                                                                                                                                                       |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Knowledge</b> |                                                                                                                                                                                                                                                                |
| <b>K1</b>        | Knowledge and Understanding: The student is expected to:<br>1. Define the scope of food science and technology<br>2. Describe food categories and their characteristics.<br>3. Understand the chemistry of food components and their effects on their quality. |
| <b>K2</b>        | Intellectual Analytical and Cognitive Skills: The student is expected to:<br>1. Explain reasons why foods are processed.<br>2. Explain how food spoilage occurs and its causes.                                                                                |
| <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.<br>3. Explain food package types and differences. |
| <b>S2</b>           | Understand some new concepts in food science i.e. GMO, food toxicants, food security, etc.                                     |
| <b>S3</b>           | 1. Food laws and regulations in Jordan.<br>2. Food inspection systems in Jordan.<br>3. Status of food processing in Jordan     |
| <b>Competencies</b> |                                                                                                                                |
| <b>C1</b>           | -                                                                                                                              |

### Learning Resources

|                       |                                                                                                                                                                                |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course textbook       | 1. Potter, N. and Hotchkiss, J. (1995). Food Science, 4th edition. Chapman and Hall.<br>2. Murano, P.S. (2003). Understanding Food Science and Technology. Thomson, Australia. |
| Supporting References | Lecture notes, handouts & articles                                                                                                                                             |
| Supporting websites   | <a href="http://www.JFDA.gov">www.JFDA.gov</a>                                                                                                                                 |
| Teaching Environment  | <input checked="" type="checkbox"/> Classroom <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> Learning platform <input type="checkbox"/> Other         |

### Meetings and subject's timetable

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

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

### Course Contributing to Learner Skill Development

|                                                                                 |
|---------------------------------------------------------------------------------|
| Using Technology                                                                |
| Using different scientific websites to collect data about nutrient requirements |
| Communication skills                                                            |

|                                                                              |
|------------------------------------------------------------------------------|
| Prepare a report about food composition and analysis and make a presentation |
| <b>Application of concepts learned</b>                                       |
| Calculation of food composition components                                   |

### Assessment Methods and Grade Distribution

| Assessment Methods           | Grade Weight | Assessment Time (Week No.) | Link to Course Outcomes |
|------------------------------|--------------|----------------------------|-------------------------|
| <b>First-hour Exam</b>       | 25%          | 6 <sup>th</sup> week       | K1, K2                  |
| <b>Second-hour Exam</b>      | 25 %         | 12 <sup>th</sup> week      | K1, S2                  |
| <b>Various Assessments *</b> | 10%          | Continuous                 | K1, K2, S1              |
| <b>Final Exam</b>            | 40%          | 16 <sup>th</sup> week      | K1, K2,S1, S2,S3        |
| <b>Total</b>                 | <b>100%</b>  | <b>100%</b>                |                         |

\* includes a quiz, in-class and out-of-class assignment, presentations, reports, videotaped assignments, group or individual projects.

### Alignment of Course Outcomes with Learning and Assessment Methods

| Number              | Learning Outcomes                                                                                                                                                                                                                                            | Learning Method* | Assessment Method**      |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------|
| <b>Knowledge</b>    |                                                                                                                                                                                                                                                              |                  |                          |
| <b>K1</b>           | Knowledge and Understanding: The student is expected to:<br>1. Define the scope of food science and technology<br>2. Describe food categories and their characteristics.<br>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:<br>1. Explain reasons why foods are processed.<br>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<br>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.<br>2. Food inspection systems in Jordan.<br>3. Status of food processing in Jordan                                                                                                                                   | Lecture          | <b>Report</b>            |
| <b>Competencies</b> |                                                                                                                                                                                                                                                              |                  |                          |
| <b>C1</b>           | -                                                                                                                                                                                                                                                            | -                | -                        |

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

\*\* includes a quiz, in-class and out-of-class assignment, presentations, reports, videotaped assignments, group or individual projects.

## Course Policies

| Policy                  | *--<br>Policy Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Passing Grade</b>    | The minimum passing grade for the course is (50%) and the minimum final mark recorded on the transcript is (35%).                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Missing Exams</b>    | <ul style="list-style-type: none"> <li>• Missing an exam without a valid excuse will result in a zero grade to be assigned to the exam or assessment.</li> <li>• A Student who misses an exam or scheduled assessment, for a legitimate reason, must submit an official written excuse within a week from an exam or assessment due date.</li> <li>• A student who has an excuse for missing a final exam should submit the excuse to the dean within three days of the missed exam date.</li> </ul>                                                                             |
| <b>Attendance</b>       | The student is not allowed to be absent more than (15%) of the total hours prescribed for the course, which equates to six lectures days (M, W) and seven lectures (S,T,R). If the student misses more than (15%) of the total hours prescribed for the course without a satisfactory excuse accepted by the dean of the faculty, s/he will be prohibited from taking the final exam and the grade in that course is considered (zero), but if the absence is due to illness or a compulsive excuse accepted by the dean of the college, then withdrawal grade will be recorded. |
| <b>Academic Honesty</b> | Philadelphia University pays special attention to the issue of academic integrity, and the penalties stipulated in the university's instructions are applied to those who are proven to have committed an act that violates academic integrity, such as cheating, plagiarism (academic theft), collusion, and violating intellectual property rights.                                                                                                                                                                                                                            |

### Assessment Rubric of the Program Learning Outcome

|                                                             |
|-------------------------------------------------------------|
| It will be introduced to the students for all required task |
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