

Deanship of Academic Development  
and International Outreach

 عمادة التطوير الأكاديمي  
والتواصل الدولي

## Syllabus: Human Nutrition (1905021211)

### First Semester 2023 /2024

| COURSE INFORMATION                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                 |
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| <b>Course Name:</b> Human Nutrition<br><b>Semester:</b> Second Semester<br><b>Department:</b> Department of Clinical Nutrition and Dietetics<br><b>Faculty:</b> Applied Medical Sciences                                                                                                                                                                                                                                                                  | <b>Course Code:</b> 1905021211<br><b>Section:</b> 1 and 2<br><b>Core Curriculum:</b> Obligatory |
| <b>Day(s) and Time(s):</b> Sun, Tue, Thu: 10:30-11:30 and 12:30-1:30<br><b>Classroom:</b> AMS- 204, 311                                                                                                                                                                                                                                                                                                                                                   | <b>Credit Hours:</b> 3<br><b>Prerequisites:</b> 140502210 and 1801041105                        |
| COURSE DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                 |
| This course will discuss the fundamentals of human nutrition as a component of health promotion and disease prevention. The primary focus will be on macro-and micronutrients including carbohydrate, lipids, protein, minerals, vitamins, and water. Areas covered include chemical structures, digestion, absorption, metabolism, functions, food sources, and recommendations along with their role in health and disease.                             |                                                                                                 |
| 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>• 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>                                                                                                                                                                                                                                                                                                                                                                                                                                               | Nada Abdallah Saleh                                                                             |
| <b>Academic Title:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                    | Teaching Assistant                                                                              |
| <b>Office Location:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                   | Applied Medical Sciences-2116                                                                   |
| <b>Telephone Number:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                  | Extension 5540                                                                                  |
| <b>Email Address:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                     | Nadaa_mo@hu.edu.jo                                                                              |
| <b>Office Hours:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                      | Sunday 11:30-12:30<br>Monday 11:30-12:30<br>Tuesday 11:30-12:30                                 |

## REFERENCES AND LEARNING RESOURCES

### Required Textbook

1. Understanding Nutrition. Whitney E., Rolfes SR, 15th edition. 2019.
2. **Support material (s):** Lecture notes, handouts & articles.

### Useful Web Resources:

<http://arborcom.com>   [www.nal.usda.gov/finc](http://www.nal.usda.gov/finc)   [www.eatright.org](http://www.eatright.org)  
[www.cyberdiet.com](http://www.cyberdiet.com)   [navigator.tufts.edu](http://navigator.tufts.edu)

**STUDENT LEARNING OUTCOMES MATRIX\***

| Core Curriculum Learning Outcomes                                                                                                      | Program Learning Outcomes                                                                                                                                                                                                                                            | Course Objectives                                                                                                                                                                                                                                                                                                                                                                                                                                | Course Student Learning Outcomes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Assessment Method |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| To provide students with the optimum educational standard in the field of clinical nutrition and general knowledge in food technology  | <b>KP1:</b> Demonstrate a depth understanding of the basis of nutritional science and the nutrient composition of food and discover the links between diet and disease and health                                                                                    | 1. Understand the basic concepts of nutrition.<br>2. Understand the 6 nutrient groups.<br>3. To provide detailed information on the function, digestion, transport, storage, and metabolism of the nutrients.<br>4. Apply the meaning of nutrient groups on the food intake.<br>5. Address the main nutritional needs.<br>6. Use the worldwide web to document information when performing assignments.<br>7. Manage over and under consumption. | <b>Knowledge and Understanding:</b> Student is expected to<br><b>CLO1-</b> Outline the structures and functions of the six classes of nutrients and its vital roles in supporting health<br><b>CLO2-</b> Describe the digestion, absorption and metabolic pathways for carbohydrate, protein and fat and its role in human nutrition and health.<br><b>CLO3-</b> Identify the dietary reference intakes for healthy people and specific groups<br><b>Skills:</b> Student is expected to<br><b>CLO4-</b> Interpret the health outcomes related to inappropriate intake of different nutrients to recognize the importance of balanced nutrition.<br><b>CLO5-</b> Explain the principle of energy balance and the processes involved to keep a 'healthy weight'.<br><b>Competence:</b> Students is expected to<br><b>CLO6-</b> Demonstrate proper professional skills for using terminologies and technical expressions related to food and human nutrition. | Exams and Quizzes |
| To provide optimal educational and training opportunities for students during their professional preparation for careers in nutrition. | <b>KP2:</b> demonstrate an understanding of food chemistry, technology, preparation, safety and correlates nutrition with food technology and future challenges.                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
| To participate in community services for health promotion and disease prevention programs                                              | <b>KP3:</b> Explain the principles of cellular metabolic processes, the structure and function of the various physiological systems, and the principles of biochemistry                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
| To encourage creativity and innovation in solving problems of emerging cases in the field of clinical nutrition                        | <b>KP4:</b> Providing students with high levels of educational quality based on training on specific pathological conditions in therapeutic nutrition.                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
|                                                                                                                                        | <b>SP1:</b> Evaluate critically scientific research from a variety of sources in relation to nutrition and health through working with others, communication, self-management, and problem-solving and reflect on the various components                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
| To sustain the concept of collaboration to promote an appropriate diet solution in cases of health and disease                         | <b>SP2:</b> Communicate effectively with groups and individuals to promote the benefits of a balanced diet throughout the lifespan and demonstrate the ability to use scientific laboratory skills.                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
|                                                                                                                                        | <b>SP3:</b> Assess diet, food and nutrient intake, and the consumption of food constituents in individuals and groups                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
|                                                                                                                                        | <b>CP1:</b> Demonstrate consistent professional behavior in accordance with the legal and ethical boundaries of the dietetic profession                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
|                                                                                                                                        | <b>CP2:</b> Critically apply knowledge of diet and health to evaluate and communicate and comment on dietary or health information both from scientific sources.                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |
|                                                                                                                                        | <b>CP3:</b> Utilize the methods of data analysis using computer software and apply these methods to analyze data obtained from a wide variety of sources and situations, and apply critical thinking, testing hypotheses, formulating suggestions in diet and health |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |

## 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 offence 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 behaviours 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

| <b>Assessment</b>       | <b>Grade Weighting</b> | <b>Deadline Assessment</b> |
|-------------------------|------------------------|----------------------------|
| First Exam              | 25%                    | TBA                        |
| Second Exam             | 25%                    | TBA                        |
| Assignments and Quizzes | 10%                    | TBA                        |
| Final Exam              | 40%                    | TBA                        |

### **Description of Exams**

Test questions will predominately come from material presented in the lectures. Semester exams will be conducted during the regularly scheduled lecture period. 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 in progress you are supposed to work on them continuously and submit in next lecture when I finish the chapter.

You are also expected to work on in-chapter examples, self-tests and 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 to 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\*:**

| <b>Letter Grade</b> | <b>Description</b> | <b>Grade Points</b> |
|---------------------|--------------------|---------------------|
| 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

| <b>Week</b> | <b>Topic</b>                                          |
|-------------|-------------------------------------------------------|
| 1           | Overview of Nutrition                                 |
| 2           | The carbohydrates: sugars, starches and fibers        |
| 3           | The carbohydrates: continued                          |
| 4           | The lipids: triglycerides, phospholipids, and sterols |
| 5           | The lipids: continued                                 |
| 6           | Protein: amino acids                                  |
| 7           | Digestion, absorption and transportation              |
| 8           | The fat-soluble vitamins                              |
| 9           | The water-soluble vitamins                            |
| 10          | The Water and Major Minerals                          |
| 11          | The Trace Minerals                                    |
| 12          | Energy Balance and Body Composition                   |
| 13          | Nutrition and CVD                                     |
| 14-15       | Nutrition and Diabetes Mellitus                       |