

## Course E-Syllabus

1	<b>Course title</b>	Nutrition and physical activity
2	<b>Course number</b>	0633764
3	<b>Credit hours</b>	3
	<b>Contact hours (theory, practical)</b>	(3,0)
4	<b>Prerequisites/corequisites</b>	
5	<b>Program title</b>	Master in Nutrition and Dietetics
6	<b>Program code</b>	
7	<b>Awarding institution</b>	The University of Jordan
8	<b>School</b>	Agriculture
9	<b>Department</b>	Nutrition and Food Science
10	<b>Level of course</b>	Master Degree
11	<b>Year of study and semester (s)</b>	Master
12	<b>Final Qualification</b>	
13	<b>Other department (s) involved in teaching the course</b>	
14	<b>Language of Instruction</b>	English/ Arabic
15	<b>Teaching methodology</b>	<input type="checkbox"/> Blended <input checked="" type="checkbox"/> Online
16	<b>Electronic platform(s)</b>	<input type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....
17	<b>Date of production/revision</b>	

### 18 Course Coordinator:

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### 19 Other instructors:

### 20 Course Description:

Providing students with sound principles of exercise and nutrition and their interaction for the promotion of health and performance in certain population groups; the optimum nutrient and hydration needs for exercise of varying intensities and duration; fundamentals of strength, power, and muscular endurance assessment; facts and fallacies about the available supplements and ergogenic aids; applied topics in nutrition and exercise for weight management and chronic diseases prevention.

## 21 Course aims and outcomes:

### A- Aims:

1. Describe and compare the basic concepts and terms of sports nutrition within the field of nutrition.
2. Compare and contrast aerobic and anaerobic metabolism and the nutrients involved as sources of energy.
3. Outline the dynamics of carbohydrate, protein, and fat metabolism during physical activity of various intensities and durations.
4. Know nutrients and energy needs and how they differ by type of exercise and intensities.
5. Explain exercise economy and mechanical efficiency.
6. Estimate energy expenditure during walking, running, and swimming.
7. Define maximal oxygen consumption ( $VO_{2max}$ ) and outline common protocols of its assessment.
8. Describe a common test to evaluate power output capacity of the short-term energy system.
9. Outline the methods that are commonly used to assess muscular strength.
10. Describe factors that influence the aerobic training response such as training duration and intensity.
11. Outline why combining physical activity with food restriction achieves successful weight loss.
12. Explain the role of exercise in the treatment and prevention of selected chronic diseases.
13. Survey the effectiveness of various ergogenic aids in current use.
14. Know current recommendations concerning the quantity and quality of exercise to develop and maintain cardiorespiratory and muscular fitness in healthy adults.

### B- Intended Learning Outcomes (ILOs):

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

**A. Knowledge and Understanding:** Student is expected to

A1- Understand the basic concept of sport nutrition

A2- Combining physical activity with food restriction.

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

B1- Estimate energy expenditure and maximal oxygen consumption

B2- Outline the methods to assess the sport protocols that relate to nutrition

**C. Subject- Specific Skills:** Students is expected to

C1- Deal with athletes meal plans.

C2- Discuss the characteristics, nutritional needs.

**D. Transferable Key Skills:** Students is expected to

D1- Use the world wide web to document information when performing assignments.

## 22. Topic Outline and Schedule:

Week	Lecture	Topic	Teaching Methods*/ platform	Evaluation Methods**
1	1.1	a. Terminology b. Definition c. Classes and functions of nutrients  a. Macro and micro-nutrients b. Water: i. heat illness ii. Hyponatremia	Micorsoft team	A1,B1,A2
	1.2	a. Increased nutrient demands b. Consumption before, during, and after exercise of various duration and intensity		A1,B3,A2
	1.3	a. Direct and indirect calorimetry b. Determination of oxygen consumption c. The respiratory quotient (RQ) d. Heart rate to estimate energy expenditure -		A1,A2,C3
2	2.1	a. Physical activity ratio b. The oxygen requirement c. Multiples of resting metabolism as METs a. Principles of exercise training b. Factors that influence aerobic training response -		A1,A2, D2
	2.2	a. Specificity and generality b. Maximal oxygen consumption (VO <sub>2max</sub> ) c. Immediate and short-term energy system Performance and physiologic tests		A2
	2.3	a. Types of muscle actions (concentric vs. eccentric) b. Methods to assess muscular strength		C2,B3
3	3.1	a. Ergogenic aids b. Macro/micro nutrients supplements		C1,D1
	3.2	a. Ideal weight and body composition in athletes b. Weight loss, diet and exercise		A1,A2
	3.3	a. Physical activity and disease prevention <ul style="list-style-type: none"> <li>• Diabetes</li> <li>• Cardiovascular diseases</li> <li>• Osteoporosis</li> </ul> b. Gender differences in energy utilization c. Physical activity during pregnancy		A4,C2
4	4.1	a. Terminology b. Definition c. Classes and functions of nutrients  a. Macro and micro-nutrients b. Water: i. heat illness ii. Hyponatremia		B3,D2

- Teaching methods include: Synchronous lecturing/meeting; Asynchronous lecturing/meeting
- Evaluation methods include: Homework, Quiz, Exam, pre-lab quiz...etc

### 23 Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

<b>Evaluation Activity</b>	<b>Mark</b>	<b>Topic(s)</b>	<b>Period (Week)</b>	<b>Platform</b>
Mid Exam	30	Lectures and Discussions.		
Project exam	15	Lectures and Discussions.		
Student participation	5	Lectures and Discussions.		
Final Exam	50	Lectures and Discussions.		

### 24 Course Requirements (e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

Software

Lectures, group discussion and student critical reading and presentation of research papers. Teaching tools include the use of the board, transparencies, PowerPoint presentation and handouts.

### 25 Course Policies:

A- Attendance policies:

B- Absences from exams and submitting assignments on time:

C- Health and safety procedures:

D- Honesty policy regarding cheating, plagiarism, misbehavior:

E- Grading policy:

F- Available university services that support achievement in the course:

### 26 References:

**Main Reference/s:**

- **William, D. McArdle. Frank, I. Katch, Victor L. Katch. Exercise Physiology: Energy, Nutrition, and Human Performance. Lippincott Williams & Wilkins Publishers; 7th edition (2010).**

**Recommended:**

- **Robert A. Robergs and Scott O. Roberts. Exercise Physiology: Exercise, Performance, and Clinical Applications. Mosby-Year Book, Inc., 1996.**
- **Williams, M. H. Nutrition for Health, Fitness, and Sport. 6<sup>th</sup> Edition. (2002)**

**27 Additional information:**

Name of Course Coordinator: Hadeel Ali Ghazzawi Signature: ----- Date: 26 November 2020

Head of Curriculum Committee/Department: ----- Signature: -----

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

Head of Curriculum Committee/Faculty: ----- Signature: -----

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