



Course E-Syllabus

1	Course title	Nutrition for athelets
2	Course number	0603332
2	Credit hours	2
3	Contact hours (theory, practical)	(2,0)
4	Prerequisites/corequisites	Human Nutrition and Metabolism
5	Program title	Nutrition and Dietetics
6	Program code	
7	Awarding institution	The University of Jordan
8	School	Agriculture
9	Department	Nutrition and Food Science
10	Level of course	3
11	Year of study and semester (s)	3
12	Final Qualification	
13	Other department (s) involved in teaching the course	
14	Language of Instruction	English/ Arabic
15	Teaching methodology	Face to Face
16	Electronic platform(s)	☐ Moodle ☐ Microsoft Teams ☐ Skype ☐ Zoom ☐ Others
17	Date of production/revision	

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.

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	nding of	cellular	from a	informati		the	groups	nutrient	professi	diet and	questio
	the basis		•	on	analy	enhance		intake	onal	health	ning
	of	ic	sources	clearly	sis	ment of	individu	and the	behavio ·	to	given
	nutrition	process	in relation	and effective	using	employa		consum	r in	evaluate	
	al science	es, the structur	to nutrition	ly both	comp uter	bility includin	promote the	ption of food	accorda nce	and commu	tion, testing
	and the	e and	and	to	softw	g skills	benefits	constitu	with the	nicate	hypoth
	nutrient	function		individu	are	necessa		ents in	legal	and	eses,
Cours	composit	of the	through	als and	and	ry for	balance	individu	and	comme	formula
e' ILOS	ion of	various	working	to	apply	employ	d diet	als and	ethical	nt on	ting
	food,	physiol	with	groups	these	ment	through	groups	bounda	dietary	sugges
	and	ogical	others,	using	meth	requirin	out the		ries of	or boolth	tions
	discover the links	system s and	communi cation,	both oral and	ods to	g the exercise	lifespan and		the dietetic	health informat	with awaren
	between	s and the	self-	and written	analy ze	of some	demonst		professi	ion both	ess of
	diet and	principl	Manage	means	data	personal			on	from	the
	disease	es of	ment and	50.10	obtain					scientifi	ethical
	and	biologic	problem		ed	bility;	use			С	and
	health	al	solving		from	decision				sources	social
	and the	chemist	and		а	making	laborato			and that	
	social/et	ry.	reflect on		wide	in .	ry skills			which is	that
	hical		the		variet	complex				availabl	are
	factors which		various compone		y of sourc	and unpredic				e to the public.	involve d in
	impinge		nts		es	table				public.	diet
	on diet		1110		and	contexts					and
	and				situati						health
	health				ons	the					
						learning					
						ability					
						needed					
						to					
						underta					
						ke appropri					
						appropri					
						further					
						training					
						of a					
						professi					
						onal or					
						equivale					
						nt nature					
V						nature					
C.											
Subject-											
Specific											
Skills:											
Students											
is											
expected											
C4 Dool	Х		Х	Х			Х		Х	Х	
C1- Deal	^		^	^			^		^	^	
with											
athletes											
meal											
plans.											

										4.0	4.4
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
D	Demonst		Evaluate	Commu	Utilize		Commu	Assess	Demon	Apply	Apply
Program	rate a	the	critically	nicate	the	trate	nicate	diet,	strate	Critically	
's ILOS	depth	principl	scientific	ideas	meth	skills to	effective	food	consist	knowled	
	understa	es of	research	and	ods of	support	ly with	and	ent	ge of	g by
	nding of	cellular	from a	informati	data	the	groups	nutrient	professi	diet and	questio
	the basis	metabol	variety of	on	analy	enhance	and	intake	onal	health	ning
	of	ic	sources	clearly	sis	ment of	individu	and the	behavio	to	given
	nutrition	process	in relation	and	using	employa	als to	consum	r in	evaluate	informa
	al	es, the	to	effective	comp	bility	promote	ption of	accorda	and	tion,
	science	structur	nutrition	ly both	uter .	includin	the	food	nce	commu	testing
	and the	e and	and	to	softw	g skills	benefits	constitu	with the	nicate	hypoth
	nutrient	function	health	individu	are	necessa		ents in	legal	and	eses,
Cours	composit		through	als and	and	ry for	balance	individu	and	comme	formula
e'	ion of	various	working	to	apply	employ	d diet	als and	ethical	nt on	ting
ILOS	food,	physiol	with	groups	these	ment	through	groups	bounda	dietary	sugges
	and	ogical	others,	using	meth	requirin	out the	و است	ries of	or	tions
	discover	system	communi	both oral	ods to		lifespan		the	health	with
	the links	s and	cation,	and	analy	exercise			dietetic	informat	awaren
	between	the	self-	written	ze	of some	demonst		professi	ion both	ess of
	diet and	principl	Manage	means	data	personal			on	from	the
	disease	es of	ment and	modilo	obtain				0	scientifi	ethical
	and	biologic	problem		ed	bility;	use			C	and
	health	al	solving		from	decision				sources	social
	and the	chemist	and		а	making	laborato			and that	issues
	social/et	ry.	reflect on		wide	in	ry skills			which is	that
	hical	ıy.	the		variet	complex	Ty Skills			availabl	are
	factors		various		y of	and				e to the	involve
	which		compone		sourc	unpredic				public.	d in
	impinge		nts		es	table				public.	diet
	on diet		1113		and	contexts					and
	and				situati						health
	health				ons	the					Health
	Health				UIIS	learning					
						ability needed					
						to					
						underta					
						ke					
						appropri					
						ate					
						further					
						training					
						of a					
						professi					
						onal or					
						equivale					
						nt					
						nature					

Program 's ILOS Cours e' ILOS	1. Demonst rate a depth understa nding of the basis of nutrition al science and the nutrient composition of food, and discover the links between diet and disease and health and the social/et hical factors which impinge on diet and health	the principl es of cellular metabol ic process es, the structur e and function	through working with others, communi cation, self- Manage ment and problem solving	4. Communicate ideas and informati on clearly and effective ly both to individu als and to groups using both oral and written means	5. Utilize the meth ods of data analy sis using computer softw are and apply these meth ods to analy ze data obtain ed from a wide variet y of sourc es and situati ons	trate skills to support the enhance ment of employa bility includin g skills necessary for employ ment requirin g the exercise of some personal responsi bility; decision making in complex and unpredictable contexts; and the learning ability needed to undertake appropriate further training of a professi	individu als to promote the benefits of a balance d diet through out the lifespan and demonst rate the ability to use scientific laborato ry skills	8. Assess diet, food and nutrient intake and the consum ption of food constitu ents in individu als and groups	9. Demon strate consist ent professi onal behavio r in accorda nce with the legal and ethical bounda ries of the dietetic professi on	health to evaluate	thinkin g by questio ning given
						of a professi onal or equivale nt					
C2- Discuss the character istics, nutrition al needs.	х		X			nature X	X				X

Program 's ILOS Cours e' ILOS	1. Demonst rate a depth understa nding of the basis of nutrition al science and the nutrient composit ion of food, and discover the links between diet and disease and health and the social/et hical factors which impinge on diet and health	the principl es of cellular metabol ic process es, the structur e and function	3. Evaluate critically scientific research from a variety of sources in relation to nutrition and health through working with others, communi cation, self-Manage ment and problem solving and reflect on the various compone nts	4. Communicate ideas and informati on clearly and effective ly both to individu als and to groups using both oral and written means	5. Utilize the meth ods of data analy sis using comp uter softw are and apply these meth ods to analy ze data obtain ed from a wide variet y of sourc es and situati ons	trate skills to support the enhance ment of employa bility includin g skills necessa ry for employ ment requirin g the exercise of some personal responsi bility; decision making in complex and unpredic table contexts	individu als to promote the benefits of a balance d diet through out the lifespan and demonst rate the ability to use	8. Assess diet, food and nutrient intake and the consum ption of food constitu ents in individu als and groups	9. Demon strate consist ent professi onal behavio r in accorda nce with the legal and ethical bounda ries of the dietetic professi on	health to evaluate	thinkin g by questio ning given
						ke appropri ate further training of a professi onal or equivale nt nature					
D. Transfera ble Key Skills: Students is expected to						Hatule					
D1- Use the world wide web to documen	х	Х		х	Х		х	Х		х	

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	Demonst		Evaluate	Commu	Utilize			Assess	Demon	Apply	Apply
Program	rate a	the	critically	nicate	the	trate	nicate	diet,	strate	Critically	
's ILOS	depth	principl	scientific	ideas	meth	skills to	effective	food	consist	knowled	
	understa	es of	research from a	and informati	ods of data	support the	ly with	and	ent	ge of	g by
	nding of the basis	cellular metabol	variety of	on	analy	enhance	groups and	nutrient intake	professi onal	diet and health	questio ning
	of	ic	sources	clearly	sis	ment of	individu	and the	behavio	to	given
	nutrition	process	in relation		using	employa		consum		evaluate	
	al	es, the	to	effective	comp	bility	promote	ption of	accorda	and	tion,
	science	structur	nutrition	ly both	uter	includin	the	food	nce	commu	testing
	and the	e and	and	to	softw	g skills	benefits	constitu	with the	nicate	hypoth
Cours	nutrient	function		individu	are _.	necessa		ents in	legal	and	eses,
e'	composit		through working	als and	and	ry for	balance d diet	individu als and	and ethical	comme	formula
ILOS	ion of food,	various physiol	working	to groups	apply these	employ ment	through	groups	bounda	nt on dietary	ting sugges
	and	ogical	others,	using	meth	requirin	out the	groups	ries of	or	tions
	discover	system	communi	both oral	ods to		lifespan		the	health	with
	the links	s and	cation,	and	analy	exercise			dietetic	informat	awaren
	between	the	self-	written	ze	of some	demonst		professi	ion both	ess of
	diet and	principl	Manage	means	data	personal			on	from	the
	disease	es of	ment and		obtain					scientifi	ethical
	and health	biologic al	problem solving		ed from	bility; decision	use scientific			c sources	and social
	and the	chemist	and		a	making	laborato			and that	
	social/et	ry.	reflect on		wide	in	ry skills			which is	that
	hical	. , .	the		variet	complex	. , 00			availabl	are
	factors		various		y of	and				e to the	involve
	which		compone		sourc	unpredic				public.	d in
	impinge		nts		es .	table					diet
	on diet				and	contexts					and
	and health				situati	; and the					health
	Health				ons	learning					
						ability					
						needed					
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						underta					
						ke .					
						appropri					
						ate further					
						training					
						of a					
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ng											
assignm											
ents.											
22. Topic	Outline	and Sch	edule								

22. Topic Outline and Schedule:

***	.		Teaching	Evaluation
Week	Lecture	Topic	Methods*/ platform	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 _{2max}) 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
	3.1	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	3.3	 a. Physical activity and disease prevention Diabetes Cardiovascular diseases Osteoporosis 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:

Evaluation Activity	Mark	Topic(s)	Period (Week)	Platform
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):

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. 6th Edition. (2002)

27 Additional information:	
Name of Course Coordinator: Hadeel Ali Ghazzawi	Signature: Date: 4/10/ 2021
Head of Curriculum Committee/Department:	Signature:
Head of Department:	Signature:
Head of Curriculum Committee/Faculty:	Signature:
Dean:	-Signature: