

The Hashemite University



الجامعة الهاشمية



Deanship of Academic Development  
and International Outreach

عمادة التطوير الأكاديمي  
والتواصل الدولي

## Syllabus: Special Topics in Medical Nutrition Therapy (2105021793)

Second Semester 2021 /2022

COURSE INFORMATION	
<b>Course Name:</b> Special Topics in Medical Nutrition Therapy <b>Semester:</b> second <b>Department:</b> Department of Clinical Nutrition <b>Faculty:</b> Applied Medical Sciences	<b>Course Code:</b> 2105021793 <b>Section:</b> 1 <b>Core Curriculum:</b> Major elective requirement
<b>Day(s) and Time(s):</b> Wed. 10:00-13:00 <b>Classroom:</b> AMS-311	<b>Credit Hours:</b> 3 <b>Prerequisites:</b> 2105021720
COURSE DESCRIPTION	
This course deals with certain selected topics in medical nutrition therapy (MNT) including: functional foods and nutraceuticals in MNT, nutrition situation in Jordan, nutritional concerns in selected chronic diseases and other topics.	
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>Dr. Narmeen Al-Awwad</b>
<b>Academic Title:</b>	<b>Assis. Prof.</b>
<b>Office Location:</b>	<b>Medical complex, 2nd floor 2163</b>
<b>Telephone Number:</b>	
<b>Email Address:</b>	<b>narmeen@hu.edu.jo</b>

<b>Office Hours:</b>	<b>Sun- Thu.: 11:00 to 12:00</b> <i>Please send an e-mail (narmeen@hu.edu.jo) to meet at any other time.</i>
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<b>REFERENCES AND LEARNING RESOURCES</b>	
	Ghosh D, Bagchi D and Konishi T. 2015. Clinical Aspects of Functional Foods and Nutraceuticals. Taylor & Francis Group, CRC, London.
-	Hannah D. Holscher Dietary fiber and prebiotics and the gastrointestinal microbiota. GUT MICROBES. 2017, VOL. 8, NO. 2, 172–184. <a href="http://dx.doi.org/10.1080/19490976.2017.1290756">http://dx.doi.org/10.1080/19490976.2017.1290756</a>
-	Plaza-Diaz et al. Mechanisms of Action of Probiotics. Adv Nutr 2019;10:S49–S66.
-	Al-Awwad, N.J.; Ayoub, J.; Barham, R.; Sarhan, W.; Al-Holy, M.; Abughoush, M.; Al-Hourani, H.; Olaimat, A.; Al-Jawaldeh, A. Review of the Nutrition Situation in Jordan: Trends and Way Forward. Nutrients 2022, 14, 135. <a href="https://doi.org/10.3390/nu14010135">https://doi.org/10.3390/nu14010135</a>
-	Lichtenstein et al 2021 Dietary Guidance to Improve Cardiovascular Health: A Scientific Statement From the American Heart Association. Circulation. 2021;144:e472–e487. DOI: 10.1161/CIR.0000000000001031
-	Huiyuan Zhu, Dexi Bi, Youhua Zhang, Cheng Kong, Jiahao Du, Xiawei Wu, Qing Wei and Huanlong Qin. Ketogenic diet for human diseases: the underlying mechanisms and potential for clinical implementations. Signal Transduction and Targeted Therapy (2022) 7:11 ; <a href="https://doi.org/10.1038/s41392-021-00831-w">https://doi.org/10.1038/s41392-021-00831-w</a>
-	Brayner et al. Dietary Patterns Characterized by Fat Type in Association with Obesity and Type 2 Diabetes: A Longitudinal Study of UK Biobank Participants. J Nutr 2021;151:3570–3578.
-	Lewis et al. Lower Dietary and Circulating Vitamin C in Middle- and Older-Aged Men and Women Are Associated with Lower Estimated Skeletal Muscle Mass. J Nutr 2020;150:2789–2798.
-	Others

## ACADEMIC SUPPORT

It is The Hashemite University 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 for individual's needs.

**Special Needs Section:**

**Tel:**

**Location:**

**Email:**

**STUDENT LEARNING OUTCOMES MATRIX\***

Core Curriculum Learning Outcomes	Program Learning Outcomes	Course Objectives	Course Student Learning Outcomes	Assessment Method
To promote independent creative problem-solving in the context of nutritional issues.	(KP1) Possess advanced and up-to-date information in the fields of therapeutic nutrition, diets, and food safety, according to the latest developments in scientific research.	1. To understand the nutrition situation in Jordan and the needed nutritional researches and studies at the national scale.	<b>Knowledge and Understanding:</b> Student is expected to <b>CLO1-</b> Understand the nutritional situation in Jordan and recognize the needed nutritional data that must be covered by national studies and researches. <b>CLO2-</b> Understand the concept and health benefits of functional foods and spread the related awareness without overestimation of conventional functional foods <b>CLO3-</b> Recognize the concept of chronic diseases, nutritional factors affecting the development of these diseases, and the role of nutrition in the therapeutic aspects <b>Skills:</b> <b>CLO4-</b> Evaluate methodologies used in microbiota research and their clinical applications. <b>CLO5-</b> Utilize statistical tools and research methodologies to assess and propose solutions for nutrition-related issues. <b>CLO6-</b> Assess the strength of evidence behind dietary guidelines and their implications for public health. <b>Competence:</b> <b>CLO7-</b> Analyze the impact of dietary fiber and prebiotics on gut microbiota composition and overall health. <b>CLO8-</b> Develop evidence-based recommendations for incorporating dietary fiber and prebiotics in clinical and public health settings.	Assignments, Quizzes, Reports, and presentation
	(KP2) Familiarity with advanced scientific research methodologies and creativity strategies.			
To review the scientific literature on therapeutic nutrition and food safety for practicing scientific writing.	(KP3) Demonstrate advanced knowledge of food safety principles and their application in managing foodborne diseases.	2. To recognize the concept of functional foods and pharmaceuticals and their health implications, including probiotic and prebiotic.		
	(KP4) The ability to think critically in the field of therapeutic nutrition and food safety			
To prepare and support researchers who work on chronic illness prevention and treatment.	(SP1): Apply evidence-based nutrition and food safety information to resolve issues and apply advanced and integrated knowledge of food safety and nutrition-related health issues.	3. To be familiar with the chronic diseases that are common in Jordan and the area and their nutritional concerns and therapy.		
To establish reputable nutrition departments in hospitals and other healthcare facilities.	(SP2): Design and implement innovative approaches for product development, quality control, and biological safety in food production			
	(SP3): Identify appropriate research methodology to evaluate food safety and nutrition-related medical issues.			
To enhance experts and researchers in therapeutic nutrition and food safety for various academic institutions, research centers, and food plants.	(SP4): Write a professional and polished scientific report on therapeutic nutrition and food safety using appropriate mathematical/statistical techniques to analyze research problems.	4. To apply evidence-based nutrition and food safety principles to solve complex dietary and health-related issues.		
	(CP1): Continuous self-learning, self-assessment, and the ability to deal with and solve problems of a high degree of difficulty.			
	(CP2): Maintain ethical standards and best practices in research, product development, and public health initiatives related to nutrition and food safety.			
To help enhance food producers with experts in the field of product development, quality control, and biological safety.	(CP3): Demonstrate a high level of work ethic reflective of responsibility/commitment towards service to society based on validated study methodology for community-based nutritional status assessment.			
To disseminate food safety and nutrition-related information through a variety of tools, such as public and private business, marketing, and social media.	(CP4): Lead research and multidisciplinary projects on medical nutritional therapy and food safety, work within a team, evaluate its performance and contribute to professional knowledge.			
	(CP5): Establish and manage reliable nutrition and food safety programs in health facilities, public health organizations, and the food industry.			

			<b>CLO9-</b> Lead interdisciplinary research initiatives to improve nutrition-related health outcomes.	
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## COURSE REGULATIONS

### *Participation*

Class participation and attendance are important elements of every student's learning experience at 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 behaviours that compromise his/her own integrity as well as that of 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
Midterm exam	30%	27/4/2022
Literature review	20%	
Presentation	10%	
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 to 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 on 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+	Pass	2.50
C	Pass	2.25
C-	Fail	2.00

## WEEKLY LECTURE SCHEDULE AND CONTENT DISTRIBUTION

Topic	Week	Lectures
An Overview of Functional Foods and Nutraceuticals	1	2
Dietary fiber and prebiotics and the gastrointestinal microbiota	2	2
Mechanisms of Action of Probiotics	3	2
Review of the Nutrition Situation in Jordan: Trends and Way Forward	4	2
2021 Dietary Guidance to Improve Cardiovascular Health: A Scientific Statement From the American Heart Association.	5-6	4
The ketogenic diet for human diseases: the underlying mechanisms and potential for clinical implementations	7-8	4
<b>MIDTERM EXAM</b>		
Dietary Patterns Characterized by Fat Type in Association with Obesity and Type 2 Diabetes: A Longitudinal Study of UK Biobank Participants	9-10	4
Lower Dietary and Circulating Vitamin C in Middle- and Older-Aged Men and Women Are Associated with Lower Estimated Skeletal Muscle Mass	11-12	4
Others	13-15	6
<b>Final term exam</b>		



**Classroom Participation: Oral Presentation**

Element	Excellent		Satisfactory			Needs Improvement				Score
	8	7	6	5	4	3	2	1	0	
<b>Organization</b>	<ul style="list-style-type: none"> <li>There is a logical sequence of information.</li> <li>Title slide and closing slide are included appropriately.</li> </ul>		<ul style="list-style-type: none"> <li>There is some logical sequence of information.</li> <li>Title slide and closing slides are included.</li> </ul>			<ul style="list-style-type: none"> <li>There is little or no logical sequence of information.</li> <li>Title slide and/ or closing slides are not included.</li> </ul>				
<b>Slide Design</b> (text, colors, background, illustrations, size, titles, subtitles)	Presentation is attractive and appealing to viewers.		Presentation is somewhat appealing to viewers.			Little to no attempt has been made to make presentation appealing to viewers.				
<b>Content</b>	<ul style="list-style-type: none"> <li>Presentation covers topic completely and in depth.</li> <li>Information is clear, appropriate, and accurate.</li> </ul>		<ul style="list-style-type: none"> <li>Presentation includes some essential information.</li> <li>Some information is somewhat confusing, incorrect, or flawed.</li> </ul>			<ul style="list-style-type: none"> <li>Presentation includes little essential information.</li> <li>Information is confusing, inaccurate, or flawed.</li> </ul>				
<b>Language</b>	<ul style="list-style-type: none"> <li>Spelling, grammar, usage, and punctuation are accurate.</li> <li>Fluent and effective</li> </ul>		There are minor problems in spelling, grammar, usage, and/or punctuation.			<ul style="list-style-type: none"> <li>There are persistent errors in spelling, grammar, usage, and/or punctuation.</li> <li>Less or not fluent and effective.</li> </ul>				
<b>Delivery</b>	<ul style="list-style-type: none"> <li>Ideas were communicated with enthusiasm, proper voice projection and clear delivery.</li> <li>There was sufficient eye contact with audience.</li> <li>There were sufficient use of other non-verbal communication skills.</li> <li>Appropriate delivery pace was used.</li> </ul>		<ul style="list-style-type: none"> <li>There was some difficulty communicating ideas due to voice projection, lack of preparation, incomplete work, and/or insufficient eye contact.</li> <li>Insufficient use of non-verbal communication skills.</li> <li>Delivery pace is somewhat appropriate.</li> </ul>			<ul style="list-style-type: none"> <li>There was great difficulty communicating ideas due to poor voice projection, lack of preparation, incomplete work, and/or little or no eye contact.</li> <li>No use of non verbal communication skills.</li> <li>Inappropriate delivery pace was used.</li> </ul>				
<b>Interaction with Audience</b>	<ul style="list-style-type: none"> <li>Answers to questions are coherent and complete.</li> <li>Answers demonstrate confidence and extensive knowledge.</li> </ul>		<ul style="list-style-type: none"> <li>Most answers to questions are coherent and complete.</li> <li>Answers somehow demonstrate confidence and extensive knowledge.</li> </ul>			<ul style="list-style-type: none"> <li>Answers to questions are neither coherent nor complete.</li> <li>Is tentative or unclear in responses.</li> </ul>				
<b>Total score</b>	= (y*5/16)									