The Hashemite University

الجامعـــــة الهاشميـــــة

Deanship of Academic Development
and International Outreach

عمادة التطوير الأكاديمي
والتواصل الدولي

Syllabus: Epidemiology of foodborne diseases (2105021741)

Second Semester 2021 /2022

COURSE INFORMATION	
Course Name: Epidemiology of Foodborne **Semester**: Second 2021/2022 **Department:** Clinical Nutrition and Dietetics Sciences **Faculty:** Applied Medical Sciences	**Course Code: 2105021741** **Section:** **Core Curriculum:**
Day(s) and Time(s): Sunday: 13:00-16:00 **Classroom:** Building of Medical Schools 311	**Credit Hours:** 3 **Prerequisites**: None

COURSE DESCRIPTION

To know the principles of epidemiology and its applications in studying foodborne diseases and poisonings, researching and evaluating the epidemiological patterns of food diseases, the severity and distribution of these diseases, and exploring methods for verifying their sources, analyzing risks, methods of transmission, and controlling food diseases. The course combines lectures, case studies, discussions, and a class project

DELIVERY METHODS

The course will be delivered through a combination of active learning strategies. These will include:

- PowerPoint lectures and active classroom-based discussion
- Collaborative learning through small groups acting in an interdisciplinary context.
- Tutorial sessions through engaging students in learning activities including analyzing results in the published articles or engaging in technical skills development.
- Seminars by students who will lead in delivering a presentation, presenting a paper or discussing an idea.

FACULTY INFORMATION

Name	**Dr. Murad Al-Holy**
Academic Title:	**Professor**
Office Location:	**Medical complex, 2nd floor 2162**
Telephone Number:	
Email Address:	**Murad*@hu.edu.jo***
Office Hours:	**Mon- Thu.: 10.00:00 to 11:00** ***Please send an e-mail to us for a meeting at any other time.***

REFERENCES AND LEARNING RESOURCES

Required Textbook:

Readings and Resources: In addition to the text, supplementary readings and resources may be posted on the course site on Microsoft Teams and Moodle. The readings may be supplemented during the course

Electronic resources:

1. World Health Organization (WHO) – Foodborne Disease Burden
   https://www.who.int/activities/estimating-the-global-burden-of-foodborne-diseases
2. Centers for Disease Control and Prevention (CDC) – Foodborne Illness Estimates
   https://www.cdc.gov/foodborneburden/index.html
3. CDC Foodborne Outbreak Surveillance System (FDOSS)
   https://www.cdc.gov/fdoss/index.html
4. Foodborne Diseases Active Surveillance Network (FoodNet)
   https://www.cdc.gov/foodnet/index.html
5. European Food Safety Authority (EFSA) – Foodborne Outbreaks Dashboard
   https://www.efsa.europa.eu/en/data/foodborne-outbreaks
6. Foodborne Disease Burden Epidemiology Reference Group (FERG)
   https://www.who.int/groups/foodborne-disease-burden-epidemiology-reference-group-(ferg)
7. Food and Agriculture Organization (FAO) – Food Safety
   https://www.fao.org/food-safety

US Food and Drug Administration (FDA) – Foodborne Illness & Contaminants
https://www.fda.gov/food/foodborne-pathogens

ACADEMIC SUPPORT

It is The Hashemite University's 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 Needs 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 LOs	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.	- Assess the public health disease burden of key foodborne diseases - Characterize the major bacterial, viral, and parasitic foodborne pathogens, including, each, clinical presentation, epidemiology, points of entry into the food chain, and approaches to prevention.	Lecture	Assignment
	(KP2) Familiarity with advanced scientific research methodologies and creativity strategies.			
To review the scientific literature on therapeutic nutrition and food safety to practice scientific writing.	(KP3) Demonstrate advanced knowledge of food safety principles and their application in managing foodborne diseases.		Flipped class	Quizzes
	(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.			
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		Lecture	Exam
	(SP3): Identify appropriate research methodology to evaluate food safety and nutrition-related medical issues.		Lecture	Assignment
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.	- Understand the main approaches for the prevention and control of foodborne disease - Study major causes of bacterial foodborne illness and investigate certain epidemiological studies on these causative agents.	Presentations	Term paper
	(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.			

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 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 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 fail 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
Mid-term Exam	30%	
Term paper and Seminar	25%	
Final Exam	45%	

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

Week	Topic	Learning Methods	Tasks
1	1. Basic Epidemiology Information	Lecture	Short report
2	2. Estimates of major foodborne pathogens (Scallan et al., 2011) 3. Emergence of antibiotic resistance	Collaborative learning	Quiz
3	4. Epidemiology, Cost, and Risk Analysis of Foodborne Disease	Lecture	
4	5. Foods associated with foodborne illness	Flipped class	Quiz
5	6. Burden of foodborne disease	Lecture	
6	7. Prevention and control of foodborne disease	Lecture	
Midterm exam			
7-11	1- Examples of Foodborne disease outbreaks a- Chemical intoxications b- Staphylococcal food poisoning c- Botulism d- *Clostridium perfringins* food poisoning e- *Bacillus food poisoning* f- Salmonellosis g- Shigellosis h- Listeriosis i- *Cronobacte*r outbreaks	Lecture	Assignment
12-15	**Students' project presentation and discussion**	Presentations	presentation and term paper
Final exam			

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

Assessment Rubrics

Classroom Participation: Assessment Criteria					
Criteria	**Quality**				**Score**
	Excellent (4 points)	**Good (3 points)**	**Satisfactory (2 points)**	**Needs Improvement (1 points)**	
The degree to which student integrates course readings into classroom participation	- often cites from readings; - uses readings to support points; - often articulates "fit" of readings with topic at hand.	-occasionally cites from readings; - sometimes uses readings to support points; -occasionally articulates "fit" of readings with topic at hand **.**	-rarely able to cite from readings; - rarely uses readings to support points; - rarely articulates "fit" of readings with topic at hand	-unable to cite from readings; -cannot use readings to support points; cannot articulates "fit" of readings with topic at hand .	
Interaction/ participation in classroom discussions	-always a willing participant, responds frequently to questions; - routinely volunteers point of view .	-often a willing participant, - responds occasionally to questions; - occasionally volunteers point of view .	-rarely a willing participant, - rarely able to respond to questions; - rarely volunteers point of view .	-never a willing participant., - never able to respond to questions; - never volunteers point of view .	
Interaction/ participation in classroom learning activities	-always a willing participant; -acts appropriately during all role plays; - responds frequently to questions; - routinely volunteers point of view.	-often a willing participant; -acts appropriately during role plays; - responds occasionally to questions; -occasionally volunteers point of view.	-rarely a willing participant. -occasionally acts inappropriately during role plays; - rarely able to respond to direct questions; -rarely volunteers point of view .	-never a willing participant - often acts inappropriately during role plays;, - never able to respond to direct questions; - never volunteers point of view.	
Demonstration of professional attitude and demeanor	-always demonstrates commitment through thorough preparation; - always arrives on time; - often solicits instructors' perspective outside class.	- rarely unprepared; rarely arrives late; - occasionally solicits instructors' perspective outside class **.**	-often unprepared; occasionally arrives late; - rarely solicits instructors' perspective outside class .	-rarely prepared; - often arrives late; -never solicits instructors' perspective outside class	

Classroom Participation: Oral Presentation										
Element	**Excellent**		**Satisfactory**			**Needs Improvement**				***s c o r e***
	8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**0**	
Organization	▪ There is a logical sequence of information. ▪ Title slide and closing slide are included appropriately.		▪ There is some logical sequence of information. ▪ Title slide and closing slides are included.			▪ There is little or no logical sequence of information. ▪ Title slide and/ or closing slides are not included.				
Slide Design (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.				
Content	▪ Presentation covers topic completely and in depth. ▪ Information is clear, appropriate, and accurate.		▪ Presentation includes some essential information. ▪ Some information is somewhat confusing, incorrect, or flawed.			▪ Presentation includes little essential information. ▪ Information is confusing, inaccurate, or flawed.				
Language	▪ Spelling, grammar, usage, and punctuation are accurate. ▪ Fluent and effective		There are minor problems in spelling, grammar, usage, and/or punctuation.			▪ There are persistent errors in spelling, grammar, usage, and/or punctuation. ▪ Less or not fluent and effective.				
Delivery	▪ Ideas were communicated with enthusiasm, proper voice projection and clear delivery. ▪ There was sufficient eye contact with audience. ▪ There were sufficient use of other non-verbal communication skills. ▪ Appropriate delivery pace was used.		▪ There was some difficulty communicating ideas due to voice projection, lack of preparation, incomplete work, and/or insufficient eye contact. ▪ Insufficient use of non-verbal communication skills. ▪ Delivery pace is somewhat appropriate.			▪ There was great difficulty communicating ideas due to poor voice projection, lack of preparation, incomplete work, and/or little or no eye contact. ▪ No use of non verbal communication skills. ▪ Inappropriate delivery pace was used.				
Interaction with Audience	▪ Answers to questions are coherent and complete. ▪ Answers demonstrate confidence and extensive knowledge.		▪ Most answers to questions are coherent and complete. ▪ Answers somehow demonstrate confidence and extensive knowledge.			▪ Answers to questions are neither coherent nor complete. ▪ Is tentative or unclear in responses.				
Total score	***= (y*5/16)***									