

## Course Syllabus

1	<b>Course title</b>	Nutritional Epidemiology
2	<b>Course number</b>	0603971
3	<b>Credit hours (theory, practical)</b>	3
	<b>Contact hours (theory, practical)</b>	3
4	<b>Prerequisites/corequisites</b>	None
5	<b>Program title</b>	Ph.D. in Human Nutrition and Dietetics
6	<b>Program code</b>	031
7	<b>Awarding institution</b>	The University of Jordan
8	<b>School</b>	Faculty of Agriculture
9	<b>Department</b>	Nutrition and Food Technology
10	<b>Level of course</b>	Graduate
11	<b>Year of study and semester (s)</b>	
12	<b>Final Qualification</b>	PhD
13	<b>Other department (s) involved in teaching the course</b>	
14	<b>Language of Instruction</b>	English
15	<b>Date of production/revision</b>	Spring, 2019/2020

### 16. Course Coordinator: Dr. Rima H. Mashal

Office numbers, office hours, phone numbers, and email addresses should be listed.

Room #102, Ext. 22406, [rima@ju.edu.jo](mailto:rima@ju.edu.jo)

Office hours					
Day/Time	Sunday	Monday	Tuesday	Wednesday	Thursday
	1:00-2:00		1:00-2:00		1:00-2:00

### 17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.

### 18. Course Description:

As stated in the approved study plan.

Study of purposes, principles and methods of nutritional epidemiology, emphasizing advanced developments of nutritional epidemiological research designs, implementation, processing and interpretation.

## 19. Course aims and outcomes:

### A- Aims:

1. To be familiar with various definitions and basic concepts of epidemiology.
2. To understand how eating pattern contribute to the prevention of disease and the improvement of public health.
3. To be familiar with method used in the assessment of food consumption, nutrient intake, and nutritional status of a population.
4. To understand the association between nutrition and disease occurrence.
5. to understand the stages of epidemiologic method.
6. to be familiar with the design, conduct, analysis, and interpretation of epidemiologic studies related to nutrition.
7. To create awareness and understanding of the nature and identification of the non-communicable or lifestyle diseases that exist in developed and less developing countries.
8. To understand the contemporary changes in food consumption patterns.
9. To examine the impact of nutrition on specific diseases, including obesity, diabetes, heart disease, cancer, and autoimmune diseases.

### B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to

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

**A1-** Describe the current state of epidemiological evidence for relationships of diet to the development of selected diseases.

**A2-** To provide the students with an understanding of the theoretical and practical considerations in the conduct of epidemiologic studies related to diet, nutrition, and chronic diseases.

**A3-** To gain an understanding of the rationales, advantages, and disadvantages of various research designs in nutritional epidemiology.

**A4-** Describe performance characteristics (validity, reliability, dependability, sensitivity and specificity) of nutritional status indicators and measures and how they are assessed.

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

**B1-** Develop a new way of thinking about nutrition science and the role diet plays in maintaining health or creating disease.

**B2-** To understand issues related to nutritional assessment, including usual methods applied in epidemiology studies; example: the appropriateness of various study designs for specific nutrition research question.

**B3-** To become aware of statistical data analysis and interpretation issues of special importance in nutritional epidemiology studies.

**B4-** Gain an understanding of the appropriate applications of the various research methods and the interpretation of results.

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

**C1-** Describe strategies that can be used to evaluate or adjust for other dietary and

lifestyle factors that may explain or influence relationships of diet and disease.

**C2-** Analyze and interpret scientific data and be able to summarize findings in a report.

**C3-** Identify the different methods used to measure diet in nutritional epidemiologic studies and describe strengths and limitations of each method.

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

**D1-** Participate in discussions about current controversies in nutritional epidemiology research.

**D2-** Develop a picture of how scientific theories take shape according to the weight of accumulated scientific evidence.

**D3-** Critically evaluate nutritional epidemiology research publications.

**20. Topic Outline and Schedule:**

<b>Content</b>	<b># Week</b>	<b>Instructor</b>	<b>Achieved ILO/s</b>	<b>Evaluation Method</b>	<b>Reference</b>
<b>1. Introduction and definitions</b>	1/1 <sup>st</sup> week		A1		Handouts
<b>2. Disease process:</b> <ul style="list-style-type: none"> <li><b>a. Theories of disease</b></li> <li><b>b. Essential factors of disease occurrence: Agent, host, and environment</b></li> </ul> <b>3. Stages of Epidemiologic methods:</b> <ul style="list-style-type: none"> <li><b>a. Descriptive</b></li> <li><b>b. Analytic</b></li> <li><b>c. Experimental</b></li> <li><b>d. Preventive</b></li> </ul> <b>4. Goals of nutritional epidemiology.</b> <ul style="list-style-type: none"> <li><b>a. Advantages &amp; disadvantages</b></li> <li><b>b. Sources of bias</b></li> </ul>	2-3/2 <sup>nd</sup> week		A2	Exams, Quizes, Reports & assignments.	
<b>5. Types of epidemiologic study:</b> <ul style="list-style-type: none"> <li><b>a. Case-control studies</b></li> <li><b>b. Cross-sectional approach</b></li> <li><b>c. Prospective and retrospective studies</b></li> </ul>	6/3 <sup>rd</sup> -4 <sup>th</sup> week		B1	Exams, Quizes,	

d. Longitudinal studies e. Clinical and field trials.						
6. Statistical approaches to epidemiological data: a. Measures of disease occurrence: i. Prevalence and incidence ii. Disease rates b. Measures of disease-exposure association: Relative Risk and odds ratio c. Correlation & Regression	4-5/5 <sup>th</sup> - 6 <sup>th</sup> week		A3,A4, B1,C3, D3	Reading Assignments; Exams.	Ref. 1	
7. Precision, accuracy, and validity of epidemiologic studies	4, 8 <sup>th</sup> & 9 <sup>th</sup> week		A3, B1, B2		Recent Review Articles. Ref.	
8. Inferences from epidemiologic evidence: - Current selected topics.	4, 10 <sup>th</sup> & 11 <sup>th</sup> week		A3, B1, B2,D2	Term papers & assignments.	Ref.1 Handouts.	and

## 21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

ILO/s	Learning Methods
A. Knowledge and Understanding (A1-A4)	Lectures and Discussions
B. Intellectual Analytical and Cognitive Skills (B1-B3)	Lectures and Discussions
C. Subject Specific Skills (C1-C3)	Group discussions and oral presentations
D. Transferable Key Skills (D1-D3)	Oral presentations

## 22. Evaluation Methods and Course Requirements:

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

Regular class periods will be in a lecture and discussion format. Term paper and oral presentations will provide hands-on experience on evaluating scientific evidence relating nutrition to diseases of life-style. Students are expected to attend class, and complete all assignments, and to participate in discussions.

**Projects and Assignments**

- ❖ Each student is to prepare a term paper. The term paper is to be on a nutritional problem of particular interest to the student. For the paper, the student should utilize reference material to discuss the following: Nature of the nutritional problem; Population groups that are affected; Prevalence; Causes and contributing factors (Scientific evidence); Recommendations for treatment and prevention and References.
- ❖ The term paper will be presented to the class as scheduled.
- ❖ Each student will be required to lead a class discussion on one paper. Students and readings will be assigned by the instructor.

**Evaluation**

ILO/s	Evaluation Methods
A. Knowledge and Understanding (A1-A4)	Exams, Quizes,
B. Intellectual Analytical and Cognitive Skills (B1-B3)	Reading Assignments; Exams.
C. Subject Specific Skills (C1-C3)	Term papers & assignments.
D. Transferable Key Skills (D1-D3)	Reports & assignments.

**23. Course Policies:**

A- Attendance policies:

B- Absences from exams and handing in assignments on time:

C- Health and safety procedures:

D- Honesty policy regarding cheating, plagiarism, misbehavior:

- Concerns or complaints should be expressed in the first instance to the module lecturer; if no resolution is forthcoming, then the issue should be brought to the attention of the module coordinator (for multiple sections) who will take the concerns to the module representative meeting. Thereafter, problems are dealt with by the Department Chair and if still unresolved the Dean and then ultimately the Vice President. For final complaints, there will be a committee to review grading the final exam.
- For more details on University regulations please visit:

<http://www.ju.edu.jo/rules/index.htm>

E- Grading policy:

Exam	%	Date
1 <sup>st</sup> Exam	10	
2 <sup>nd</sup> Exam	30	
<u>Assignments:</u>		
Term Paper	10	
Oral Report	10	
Final	40	

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

**24. Required equipment:** ( Facilities, Tools, Labs, Training....)

Classrooms, Smart boards

**25. References:**

Required book (s), assigned reading and audio-visuals:  
**Main Reference/s:**  
✓ Walter Willett. Nutritional Epidemiology, 3<sup>rd</sup> edition. Oxford University Press, 2013.

Recommended books, materials, and media:

1. Gibson, Rosalind S. Principles of Nutritional Assessment. New York, N.Y.: Oxford University Press, 2005.
2. Additional Readings: To further understand the material, a selection of classic and contemporary research articles are assigned, the majority of which are *required* reading. Recommended reading is also provided to enhance learning.

**26. Additional information:**

Name of Course Coordinator: **Dr. Rima H. Mashal** -Signature: ----- Date: -----

Head of curriculum committee/Department: ----- Signature: -----

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

Head of curriculum committee/Faculty: ----- Signature: -----

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