



Research Methodology in Clinical Nutrition and Dietetics (140502473)

First Semester 2022/2023

COURSE INFORMATION

<p><b>Course Name:</b> Research Methodology in Clinical Nutrition and Dietetics</p> <p><b>Semester:</b> First</p> <p><b>Department:</b> Department of Clinical Nutrition and Dietetics</p> <p><b>Faculty:</b> Applied Medical Sciences</p>	<p><b>Course Code:</b> 140502473</p> <p><b>Section:</b> 1</p> <p><b>Core Curriculum:</b> Elective Requirements</p>
<p><b>Day(s) and Time(s):</b></p> <p>Sunday, Tuesday and Thursday: 11:00- 12:00</p> <p><b>Classroom:</b> Building of Medical Schools 309</p>	<p><b>Credit Hours:</b> 3</p> <p><b>Prerequisites:</b> -</p>

COURSE DESCRIPTION

This course is designed to help students understand scientific research comprehensively. Topics will include the scientific method and inquiry fundamentals, ethical research considerations, research study designs, and basic quantitative and qualitative data collection methods. Through discussion, article analysis, and hands-on practice, this course will teach students how to conduct a research project from beginning to end.

DELIVERY METHODS

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

- PowerPoint lectures
- Active classroom-based discussion
- Supplementary articles
- E-learning resources: e-reading and search through Microsoft Team

FACULTY INFORMATION

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<b>Email Address:</b>	hhourani@hu.edu.jo
<b>Office Hours:</b>	Sun and Tues: 10:00-11:00 Tuesday and Wednesday: 12:00-1:00

## REFERENCES AND LEARNING RESOURCES

### Required Textbook:

Drummond, Karen Eich & Murphy-Reyes, Alison. (2018). *Nutrition Research: Concepts and Applications*. Jones & Bartlett Learning. ISBN: 9781284101539

### Suggested Additional Resources

Different types of published articles

### Websites

<https://surveysystem.com/sscalc.htm>

<http://www.raosoft.com/samplesize.html>

## ACADEMIC SUPPORT

The Hashemite University's policy is to provide educational opportunities that ensure fair, appropriate, and reasonable accommodation to students with 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 their individual needs are met. The University, through its Special Needs section will exert all efforts to accommodate individual needs.

### Special Needs Section:

**Tel:** +962 5 3903333/ 5366

**Location:** Building of Medical Schools 2167

**Email:** hhourani@hu.edu.jo

## STUDENT LEARNING OUTCOMES MATRIX

Core Curriculum Learning Outcomes	Program Learning Outcomes	Course Objectives	Course Student Learning Outcomes	Assessment Method
To provide students with the optimum educational standard in the field of clinical nutrition and general knowledge in food technology	<b>KP1:</b> Demonstrate a depth understanding of the basis of nutritional science and the nutrient composition of food and discover the links between diet and disease and health	The course provides an introduction to: <ol style="list-style-type: none"> <li>1. Research methods in clinical, experimental, and epidemiological nutrition.</li> <li>2. Types of study designs in nutrition</li> <li>3. Interpret basic statistical approaches used in nutrition research</li> <li>4. Components of research ethics</li> </ol>	Define and list the sections of the research	-
To provide optimal educational and training opportunities for students during their professional preparation for careers in nutrition.	<b>KP2:</b> demonstrate an understanding of food chemistry, technology, preparation, safety and correlates nutrition with food technology and future challenges.		List the basic elements of research ethics.	-
To participate in community services for health promotion and disease prevention programs	<b>KP3:</b> Explain the principles of cellular metabolic processes, the structure and function of the various physiological systems, and the principles of biochemistry		Describe the research proposal, how dietary surveys are conducted at the population level, and how the results can be used	-
To encourage creativity and innovation in solving problems of emerging cases in the field of clinical nutrition	<b>KP4:</b> Providing students with high levels of educational quality based on training on specific pathological conditions in therapeutic nutrition.		Select and evaluate the most important epidemiological research methods.	-
	<b>SP1:</b> Evaluate critically scientific research from a variety of sources in relation to nutrition and health through working with others, communication, self-management, and problem-solving and reflect on the various components		Evaluate experimental and clinical research methods in the field of nutrition.	Exam
To sustain the concept of collaboration to promote an appropriate diet solution in cases of health and disease	<b>SP2:</b> Communicate effectively with groups and individuals to promote the benefits of a balanced diet throughout the lifespan and demonstrate the ability to use scientific laboratory skills.		Calculate the sample size for each study design.	assignment
	<b>SP3:</b> Assess diet, food and nutrient intake, and the consumption of food constituents in individuals and groups		Conduct elementary statistical analyses of dietary intake data.	-
	<b>CP1:</b> Demonstrate consistent professional behavior in accordance with the legal and ethical boundaries of the dietetic profession		Select and analyze an article in the field of nutrition	Exam
	<b>CP2:</b> Critically apply knowledge of diet and health to evaluate and communicate and comment on dietary or health information both from scientific sources.		Write a scientific report.	

**CP3:** Utilize the methods of data analysis using computer software and apply these methods to analyze data obtained from a wide variety of sources and situations, and apply critical thinking, testing hypotheses, formulating suggestions in diet and health

Prepare and present a research proposal.

Group activity  
Group activity

## 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 offence 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 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 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 listed below, with their grade weighting taken into account. The criteria for grading are listed at the end of the syllabus.

<b>Assessment</b>	<b>Grade Weighting</b>	<b>Day and Date</b>
<b>First Hour Exam</b>	25%	Sunday, 13 <sup>th</sup> Nov. 2022
<b>Second Hour Exam</b>	25%	Sunday, 18 <sup>th</sup> Dec. 2022
<b>Group Activity</b>	10%	
<b>Final</b>	40%	To be announced

### **Description of Exams**

Test questions will predominately come from material presented in the lectures and selected articles. Semester exams will be conducted during the regularly scheduled lecture period. Exam will consist of essay, case-study, and short answer questions.

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\*:

<b>Letter Grade</b>	<b>Grade Points</b>
<b>A+</b>	4.00
<b>A</b>	3.75
<b>A-</b>	3.50
<b>B+</b>	3.25
<b>B</b>	3.00
<b>B-</b>	2.75
<b>C+</b>	2.50
<b>C</b>	2.25
<b>C-</b>	2.00
<b>D+</b>	1.75
<b>D</b>	1.50

Weekly Lecture Schedule and Content			
Week	Lectures	Topic	Chapter
1	1	Introduction to research <ul style="list-style-type: none"> <li>• What is research</li> <li>• Ways to Classify Research</li> <li>• Major Types of Nutrition Research Studies</li> </ul>	3
2	2	Research Ethics <ul style="list-style-type: none"> <li>• Ethics and Human Subjects Research</li> <li>• Institutional Review Boards</li> </ul>	3
3	3	Writing research proposal <ul style="list-style-type: none"> <li>• Identify a Topic and Research Question/Objective</li> <li>• Search the Literature and Write the Literature Review</li> </ul>	14
4,5 and 6	4,5 and 6	Quantitative Research Designs <ul style="list-style-type: none"> <li>• Descriptive designs</li> <li>• Experimental designs</li> </ul>	8
<b>First Hour Exam</b>			
7 and 8	7 and 8	Determination of sample size and sampling methods <ul style="list-style-type: none"> <li>• Sample Size Determination</li> <li>• Representativeness</li> <li>• Sampling Methods: probability and non-probability sampling</li> </ul>	Selected Papers
9 and 10	9 and 10	Analysis of data <ul style="list-style-type: none"> <li>• Descriptive Statistics</li> <li>• Frequency Distributions</li> <li>• Range</li> <li>• Mean Deviation</li> <li>• Standard Deviation (Sd)</li> </ul>	3
11, 12, and 13	11, 12, and 13	Research article <ul style="list-style-type: none"> <li>• Research Title and Authors</li> <li>• Introduction of Article</li> <li>• Methods</li> <li>• Results</li> <li>• Discussion/Conclusion</li> </ul>	Selected Papers
14,15, and 16		Presentations of prepared research proposal	

## ASSESSMENT RUBRICS

*Assessment Rubrics to be determined by the department. Add samples below.*

Category	Excellent (4)	Good (3)	Fair (2)	Needs improvement (1)
Content/Organization	<ul style="list-style-type: none"> <li>• Demonstrates full knowledge by answering all class questions with explanations and elaboration</li> <li>• Provides clear purpose and subject; pertinent examples, facts, and/or statistics; supports conclusions/ideas with evidence</li> </ul>	<ul style="list-style-type: none"> <li>• Is at ease with expected answers to all questions, without elaboration                             <ul style="list-style-type: none"> <li>• Has somewhat clear purpose and subject; some examples, facts, and/or statistics that support the subject; includes some data or evidence that supports conclusions</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Is uncomfortable with information and is able to answer only rudimentary questions                             <ul style="list-style-type: none"> <li>• Attempts to define purpose and subject; provides weak examples, facts, and/or statistics, which do not adequately support the subject; includes very thin data or evidence</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Does not have a grasp of information and cannot answer questions about the subject                             <ul style="list-style-type: none"> <li>• Does not clearly define subject and purpose; provides weak or no support of subject; gives insufficient support for ideas or conclusions</li> </ul> </li> </ul>
Visual aids	<ul style="list-style-type: none"> <li>• Gave audience sufficient time to absorb information on visual</li> </ul>	<ul style="list-style-type: none"> <li>• Gave audience almost enough time to absorb material, but occasionally read the slide</li> </ul>	<ul style="list-style-type: none"> <li>• Ran too quickly through visuals and spoke more to the screen than to the audience</li> </ul>	Small number of visuals used



	<ul style="list-style-type: none"> <li>• Spoke to the audience, not the screen</li> <li>• Visuals greatly enhanced presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Visuals added to the presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Visuals did not diminish from the presentation</li> </ul>	
Length of the presentation	Within 20 minutes of the allotted time	Within 15 minutes of the allotted time	Within 10 minutes of the allotted time	Within 5 minutes of the allotted time
Delivery	<ul style="list-style-type: none"> <li>• Holds attention of entire audience with the use of direct eye contact, seldom looking at notes</li> <li>• Speaks with fluctuation in volume and inflection to maintain audience interest and emphasize key points</li> </ul>	<ul style="list-style-type: none"> <li>Consistent use of direct eye contact with audience, but still returns to notes</li> <li>• Speaks with satisfactory variation of volume and inflection</li> </ul>	<ul style="list-style-type: none"> <li>• Displays minimal eye contact with audience, while reading mostly from the notes</li> <li>• Speaks in uneven volume with little or no variation</li> </ul>	<ul style="list-style-type: none"> <li>• Holds no eye contact with the audience as entire report is read from notes</li> <li>• Speaks in low volume and/ or monotonous tone</li> </ul>
Conclusion	Key points are clearly re-stated at the end of the talk so that the audience clearly understands the purpose of the technical work	The presentation has a conclusion, but some of the key points are not highlighted effectively	The presentation has a brief conclusion but is not considerable in content	The presentation seems to end abruptly without any summation for the audience.

