1	**Course title**	Drug- Nutrient Interactions
2	**Course number**	0603763
3	**Credit hours (theory, practical)**	3 (3, 0)
	Contact hours (theory, practical)	3 (3, 0)
4	**Prerequisites/corequisites**	-
5	**Program title**	MSc. In Human Nutrition and Dietetics
6	**Program code**	036
7	**Awarding institution**	University of Jordan
8	**School**	Agriculture
9	**Department**	Nutrition and food technology
10	**Level of course**	Second
11	**Year of study and semester (s)**	2019/2020, Fall semester
12	**Final Qualification**	MSc
13	**Other department (s) involved in teaching the course**	None
14	**Language of Instruction**	English
15	**Date of production/revision**	3/4/2020

16. Course Coordinator:

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

Prof Reema Tayyem, 11-12 (Sunday, Monday, Thursday), email: r.tayyem@ju.edu.jo

17. Other instructors:

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

None

18. Course Description:

As stated in the approved study plan.

Drug-Nutrient Interaction (DNI) is a new perspective that has emerged and new data have been generated on the subject matter. Providing both the scientific basis and clinical relevance with appropriate recommendations for many interactions, the topic of drug-nutrient interactions is significant for dietitians and researchers. For dietitians in particular, this course will offer a guide for understanding, identifying or predicting, and ultimately preventing or managing drug-nutrient interactions to optimize patient care.

19. Course aims and outcomes:

A- Aims:

1. Identify that DNI are of greatest potential significance to those in poor nutritional state
2. Be aware that patients must be assessed individually for the effect of DNI
3. Distinguish between how drugs can affect and be affected by food
4. Plan a map for meals and drugs and to draft drug schedules.
5. Be familiar of DNI in different situations including patient with chronic disease, elderly, fetus, Infant, pregnant woman, and malnourished patient.

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- Define drug-food interactions
    A2- Understand the biochemical metabolic mechanisms involved in drug-food interactions
    A3- Understand what recommendations to make to prevent undesirable drug interactions
    A4- Know about new foods, supplements and ethnic dishes and how they may contribute to food-drug interactions

B. Intellectual Analytical and Cognitive Skills: Student is expected to
    B1- Be able to collect information from various sources using libraries, Internet and institute report.
    B2- Be able to critically make specific recommendations about the common food-drug interaction
    B3- Be able to discuss questions raised by patients on the common food-drug interaction.

C. Subject- Specific Skills: Students is expected to:
    C1- Recognize that drugs can exert unfavourable effect on nutritional status

    C2- Differentiate between the effect of different types of drugs on the nutritional status and the effectiveness of these drugs.

D. Transferable Key Skills: Students is expected to
    D1- Present the topic orally using different audio-visual aids in the area of public speaking.

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
1- INTRODUCTION: - *Historial background*	1	Reema Tayyem	A, B, C,D	Books and literature related to the topic	1
2- OVERVIEW OF DRUG– NUTRIENT INTERACTIONS - *A Perspective on Drug–Nutrient Interactions* - *Drug Disposition and Response* - *Metabolizing Enzymes and P-Glycoprotein* - *Nutrient Disposition and Response*	2-3	Reema Tayyem	A, B, C	Books and literature related to the topic	1, 2
3- INFLUENCE OF NUTRITIONAL STATUS ON DRUG DISPOSITION AND EFFECT - *The Impact of Protein-Calorie*	4-5	Reema Tayyem	A, B, C,D		1, 2, 3

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Malnutrition on Drugs. - *Influence of Obesity on Drug Disposition and Effect*					
4- INFLUENCE OF FOOD OR NUTRIENTS ON DRUG DISPOSITION AND EFFECT - *Drug Absorption with Food* - *Effects of Specific Foods and Non-Nutritive Dietary Components on Drug* - *Metabolism* - *Interaction Issues* - *Nutrients That May Optimize Drug Effects* - *Dietary Supplement Interactions With Medication* - *Dietary Supplement Interaction With Nutrients*	6-8	Reema Tayyem	A, B, C,D	Books and literature related to the topic	1, 2, 3
5- DRUG–NUTRIENT INTERACTIONS BY LIFE STAGE - *Drug–Nutrient Interactions in Infancy and Childhood* - *Drug–Nutrient Interaction Considerations in Pregnancy and Lactation* - *Drug–Nutrient Interactions in the Elderly*	9-11	Reema Tayyem	A, B, C	Books and literature related to the topic	1, 2, 3
6- DRUG–NUTRIENT INTERACTIONS IN SPECIFIC CONDITIONS - *Drug–Nutrient Interactions in Patients With Cancer* - *Drug–Nutrient Interactions in Transplantation* - *Drug–Nutrient Interactions and Immune Function* - *Drug–Nutrient Interactions in Patients With Chronic Infections* - *Antimicrobial–Nutrient Interactions: An Overview* - *Drug–Nutrient Interactions in Patients Receiving Enteral Nutrition*	12-13	Reema Tayyem	A, B, C,D	Books and literature related to the topic	1, 2, 3
7- PROJECTS PRESENTATIONS BY THE STUDENTS	**14**	Reema Tayyem	A, B, C,D	Books and literature related to the topic	

21. Teaching Methods and Assignments:

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

Different methods of instructions were adopted as brain storming, group discussion, case study and visiting pharmacies. Additionally, different aids were used to facilitate and illustrate teaching such as watching videos and self-reading handouts.

22. Evaluation Methods and Course Requirements:

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

- **Med-exam**   30%
- **Project and assignments**   20%
- **Final Exam**   50%

23. Course Policies:

A- **Attendance policies:** As declared by The University of Jordan Laws and Regulations.

B- **Absences from exams and handing in assignments on time:** As declared by The University of Jordan Laws and Regulations.

C- **Health and safety procedures:** None

D- **Honesty policy regarding cheating, plagiarism, misbehavior:** As declared by The University of Jordan Laws and Regulations.

E- **Grading policy**: As shown Evaluation Methods and Course Requirements

F- **Available university services that support achievement in the course:** Data show projector and class

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

Data show projector and class.

25. References:

Required book (s), assigned reading and audio-visuals:

1. *Joseph I. Boullata, Vincent T. Armenti,* **Handbook of Drug-Nutrient Interactions.** *Springer Science & Business Media, 2010*

Recommended books, materials, and media:

2. *Up-to-date scientific* articles, reviews and meta-analysis will be used.
3. *Position and practice papers.*
4. Other resources.

26. Additional information:

None
5

Name of Course Coordinator: ----------------------------------Signature: ----------------- Date: -----------

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

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

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

Dean: -- -Signature: ---

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