



## *The Hebrew University of Jerusalem*

### *Syllabus*

## ***NUTRITION IN HEALTH AND DISEASE - 73951***

*Last update 09-08-2023*

*HU Credits:* 3

*Degree/Cycle:* 2nd degree (Master)

*Responsible Department:* Nutritional Sciences - International Prog.

*Academic year:* 0

*Semester:* 1st Semester

*Teaching Languages:* English

*Campus:* Rehovot

*Course/Module Coordinator:* Dr. Aliza Stark

*Coordinator Email:* [Aliza.Stark@mail.huji.ac.il](mailto:Aliza.Stark@mail.huji.ac.il)

*Coordinator Office Hours:* Sunday 12-13

*Teaching Staff:*

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Dr. Aliza Stark

Course/Module description:

Lectures and exercises that cover the biochemical and physiological bases of human nutritional requirements. Topics will include digestion, the biochemistry, metabolism and regulation of macronutrients (carbohydrates, proteins, lipids) and discussion of chronic diseases related to macronutrient intake.

Course/Module aims:

To provide the most up-to-date knowledge regarding the role of nutrition in health and to encourage critical analyses of the available evidence used to establish optimal nutrient recommendations.

Learning outcomes - On successful completion of this module, students should be able to:

- Differentiate between essential and non-essential nutrients. Know the Dietary Reference Intakes (DRI) and recognize the level of evidence behind current nutritional recommendations.
- Know the basic anatomy and physiology of the digestive tract.
- Identify body stores of energy; understand energy balance in the body and its relationship to body composition.
- Define the function of proteins and amino acids in the body. Have a basic understanding of nitrogen metabolism and protein balance.
- Identify dietary carbohydrates and dietary fiber. Have a basic understanding of their digestion, absorption and metabolism.
- Describe the structure and function of lipids and fatty acids. Understand their transport in the body, production and metabolism.

Attendance requirements(%):

100

Teaching arrangement and method of instruction: Lectures 2 hour  
Exercise 1 hour

Course/Module Content:

- Essentiality and Nutritional Requirements
- The Digestive Tract
- Energy Metabolism
- Proteins and Amino Acids

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- Carbohydrates
  - Lipids

Required Reading:

*Modern Nutrition in Health and Disease. Ross AC et al. (editors) 11th edition, Philadelphia, PA: Lippincott Williams & Wilkins, 2014 Available Online*

*Mahan LK, Raymond JL, Escott-Stump S. Krause's Food & the Nutrition Care Process, 14th edition, 2017.*

Additional Reading Material:

*Current Articles from the literature will be required*

Grading Scheme:

*Written / Oral / Practical Exam 70 %*

*Submission assignments during the semester: Exercises / Essays / Audits / Reports / Forum / Simulation / others 30 %*

Additional information:

*None*