The Hebrew University of Jerusalem

Syllabus

NEW HORIZONS IN FOOD AND NUTRITION RESEARCH - 71479

Last update 07-10-2016

<u>HU Credits:</u> 2

<u>Degree/Cycle:</u> 1st degree (Bachelor)

<u>Responsible Department:</u> biochemistry & food sciences

<u>Academic year:</u> 0

<u>Semester:</u> 1st Semester

<u>Teaching Languages:</u> Hebrew

<u>Campus:</u> Rehovot

<u>Course/Module Coordinator:</u> Prof. Masha Niv
Prof. Masha Niv

<u>Coordinator Email:</u> masha.niv@mail.huji.ac.il

<u>Coordinator Office Hours:</u> sunday 10:30-12:00

<u>Teaching Staff:</u>
  Prof Masha Niv

<u>Course/Module description:</u>
  The goal of the course is to present to the students some of the current advances and challenges in Food Science and Nutrition. Each lecturer will present contemporary research methods and results from his/her lab. The topics include: functional food; new product development; water-soluble polymers in food and biotechnology; anti-freeze proteins; Free radicals in chemical and biological systems; Fatty liver, metabolic changes and oxidative stress; improving eating habits; relationships among food, nutrition and the biological clock; environmental factors and bone development; understanding and modification of taste perception; development and discovery of potential drugs by computation; mild stress in bacteria; starvation and degenerative diseases in unicellular models; cancer-preventing diet; food for memory improvement; nutrition and the inflammatory bowel disease. Upon course completion, the students will be knowledgeable regarding the challenges and main findings that were presented in each of the lectures. The students will be able to briefly describe a research direction in Food Science or Nutrition that was most interesting for them or, in their opinion, has exciting applied or academic potential.

<u>Course/Module aims:</u>
  To familiarize the student with the research topics of the researches in the field of nutrition, food science and biochemistry, present current scientific questions and challenges.

<u>Learning outcomes - On successful completion of this module, students should be able to:</u>
  Familiarize with various pr their research subjects
Decide weather they want to join a r search lab
Decide if they wish to go to the nutrition industry

<u>Attendance requirements(%):</u>
  100

Teaching arrangement and method of instruction: Lectures

<u>Course/Module Content:</u>
  Taste perception and computer-aided prediction

Bacterial behavior under moderate stress
Food coating, transdermal drug delivery
Environmental effects on bone growth
Circadian effects on nutrition
Synthesis of novel antimicrobial compounds
Nature-derived compounds in food - technology and IP
and more, see moodle for exact schedule

Required Reading:
 n/a

 Additional Reading Material:
  As advised by course lecturers

 Course/Module evaluation:
 End of year written/oral examination 100 %
 Presentation 0 %
 Participation in Tutorials 0 %
 Project work 0 %
 Assignments 0 %
 Reports 0 %
 Research project 0 %
 Quizzes 0 %
 Other 0 %

Additional information:
  None