

The Hebrew University of Jerusalem

Syllabus

METABOLISM OF LIPIDS - 71903

Last update 16-10-2020

HU Credits: 4

Degree/Cycle: 2nd degree (Master)

Responsible Department: Animal and Veterinary Science

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: Rehovot

Course/Module Coordinator: Dr. Argov-Argaman Nurit

Coordinator Email: argov.nurit@mail.huji.ac.il

Coordinator Office Hours: By appointment

Teaching Staff:

Prof Argov Nurit

Course/Module description:

Definition and nomenclature of lipids. Fatty acid and anatomy-lipids. Membranes. Metabolic pathways of fatty acids. Lipid absorption and transport in animals. Energy accumulation. ANATOMY and lipid oxidation. Metabolism of sterols. Analytical methods.

Course/Module aims:

Impart knowledge in the field of lipids with a focus on physiological processes involving lipids. In addition, understanding of various complex molecules that exist in nature and how the different structure of the molecules belonging to the family of lipids affects their biological activity.

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

Design and perform experiments that require knowledge and methods for lipid research

Attendance requirements(%):

Teaching arrangement and method of instruction: Lectures+Discussions+Laboratory

Course/Module Content:

Introduction to lipids
Fatty acid synthesis: Understanding the process and control mechanisms of enzymatic and non-enzymatic oxidation of fatty acid
Membranes
Eicosanoids
Digestion and absorption of lipids
transport of plasma lipids

Required Reading:

Papers to be distributed during the course

Additional Reading Material:
Distributed during the course

Grading Scheme:

Additional information:

In the last 6 weeks of the semester (depending in number of participants) students will give seminars on lipid metabolism related subjects, that will be published by the teacher. In addition, students will be requested to submit a question prior to the lecture of their peers.

Laboratory (3 days) will be held at the end of the semester. The laboratory report will account for 30% of the final grade.