



The Hebrew University of Jerusalem

Syllabus

The Degenerating Brain: From Research to Hope - 76949

Last update 05-11-2024

HU Credits: 2

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Brain Science: Computation & Information Proc.

Academic year: 0

Semester: 2nd Semester

Teaching Languages: English

Campus: Mt. Scopus

Course/Module Coordinator: Prof. Hermona Soreq

Coordinator Email: hermona.soreq@mail.huji.ac.il

Coordinator Office Hours: By appointment

Teaching Staff:

Prof. Hermona Soreq,
Ms. Hodaya Vrabel

Course/Module description:

The class will familiarize students with the current views on the molecular and cellular pathways involved in neurodegenerative diseases and on their impact and relevance in clinical diagnosis and treatment. The course will include guest lectures by experts in the field of neurodegenerative diseases.

Course/Module aims:

The class will outline a general view of the topic to the students, including research methodology used in the field, and suggested future hopes for treatment of neurodegenerative diseases.

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

The students will get tools for basic understanding of research and suggested treatments of neurodegenerative diseases.

Attendance requirements(%):

95%

Teaching arrangement and method of instruction: Tutorials, presentations and scientific articles

Course/Module Content:

- Introduction to the central nervous system - cell structure and intracellular organelles, From DNA to proteins, neuronal communication.
- Genetics, molecular mechanisms, symptoms and therapies of neurodegenerative diseases, such as Alzheimer's disease, Parkinson's disease, Huntington's disease and more.
- Genetics and Molecular mechanisms of aging.

Required Reading:

Three scientific articles from "Scientific American" journal.

Additional Reading Material:

Life - the science of biology

Grading Scheme:

Essay / Project / Final Assignment / Home Exam / Referat 60 %

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

Attendance / Participation in Field Excursion 10 %

Additional information:

Attendance is mandatory.

Active participation is mandatory.