The Hebrew University of Jerusalem

Syllabus

The Wonderful Connection between Brain and Mind - 51167

Last update 12-09-2024

HU Credits: *2*

Degree/Cycle: *1st degree (Bachelor)*

Responsible Department: *Psychology*

Academic year: *0*

Semester: *1st Semester*

Teaching Languages: *Hebrew*

Campus: *Ein Karem*

Course/Module Coordinator: *Prof. Ravid Doron*

Coordinator Email: *raviddor@gmail.com*

Coordinator Office Hours: *Sunday, By appointment*

Teaching Staff:
Prof. Ravid Doron

Course/Module description:
Understanding the principles of the health and illness brain in psychology and psychiatric. Moreover Understanding the nervous system – sensation, conduction and processing of sensory information; the influence of medication and drugs on the nervous system; sensory systems in the body: transduction and information processing principles; the autonomous system and hormonal mechanisms controlled by the brain

Course/Module aims:
Understand the brain function in the normal and abnormal and how we can rehabilitate the brain.

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

1. Describe the different cells of the nervous system – neurons and glial cells.
2. State the nervous system's protections, meninges, CSF
3. Describe the development of the nervous system
4. Describe the anatomic structure of the cerebral cortex and the function of its lobes.
5. Identify the brain structure in various sections (coronal, horizontal, sagittal).
6. Describe the function of the various sub-cortical areas and their role
7. Explain what will happen in case of various types of injuries in brain areas such as the cortex or sub-cortical areas.
8. Identify brain mechanisms responsible for sleep and wakefulness and involved in sleep disturbances
9. Describe the biological basis of depression and anxiety disorders, familiarize with current treatments
10. Identify the brain mechanism as well as environmental and hereditary factors involved in schizophrenia, the disease's symptoms and treatments
11. Familiarize with the possible role of the brain's reward system in drug dependence, and focus on the impact of cannabis on young and adult brains

Attendance requirements(%):
80%

Teaching arrangement and method of instruction: Lecture

Course/Module Content:

1. The chemical synapse as a data processing source
2. Functional anatomy: development of the nervous system
3. Functional anatomy: the functions of cortical and sub-cortical regions in the brain
4. Structure and function of the peripheral nervous system
5. Transmitters, medication, drugs and toxins in the nervous system
6. Sleep and wakefulness: brain areas and the neurotransmitters involved in these mechanisms
7. Sleep disorders and their treatment
8. Psychopathological disorders: schizophrenia, depression and addictions

Required Reading:

Carlson N. R., Physiology of Behavior, Boston: Allyn and Bacon, 12th Edition, 2013

Additional Reading Material:

Grading Scheme:

Written / Oral / Practical Exam 100 %

Additional information:

the final grade is calculated as follows:
Final exam: 100%