



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%