האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

Functional Neuroanatomy - 51778

Last update 08-03-2022

HU Credits: 2

Degree/Cycle: 2nd degree (Master)

Responsible Department: Psychology

Academic year: 0

Semester: 2nd Semester

Teaching Languages: Hebrew

Campus: Mt. Scopus

Course/Module Coordinator: Dr. Zilbershtain Kra Yael

Coordinator Email: Yael.Zilbershtain-Kra@mail.huji.ac.il

Coordinator Office Hours: Sundays, by appointment

Teaching Staff:

Dr. Yael zilbershtain-kra

Course/Module description:

The course familiarizes the students with the structure of the human brain as a basis for understanding principals of its functionality.
In the course we will go over the different functional systems that lay at the foundation of the brain's structure, we will survey the anatomical paths and structures in a clinical and research approach.

Course/Module aims:

Familiarization with the central nervous system in humans, its structure, function, and principals of action.

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

1. To describe the structure of the human brain, the principles of its organization and its operation.

2. Identify and differentiate between different brain structures on the whole brain and in cross sections.

3. Assign functional roles to brain structures and neural pathways.

4. Apply the information learned to understand the effect of neurological injuries on functioning.

Attendance requirements(%):

80%

Teaching arrangement and method of instruction: Frontal lectures, clinical case discussion, lab lesson at the dissection class and short rehearsal questions after each lesson

Course/Module Content:

**Development of the human nervous system- principles of action and general concepts.*
** General structure of the brain and nervous system - functional differentiation, principles of organization.*

** Major methods in neuroanatomy*
** Sensory systems - the somatosensory system, the visual system, the auditory and equilibrium system, the taste system, the olfactory system*
** Motor system - reflexes, motor tracks.*
** Feedback and control systems - the basal nucleus, the cerebellum, the brain stem, and the hypothalamus.*
**The limbic system*
** The brain as a whole functional unit and the recognition of brain structures in cross sections.*

Required Reading:
Blumenfeld, H. (2010). Neuroanatomy Overview and Basic Definitions. In Blumenfeld, H. Neuroanatomy through clinical cases (pp. 14-46). Sunderland, Mass: Sinauer Associates.
Additional selected chapters from this book will be given for each topic.

Nolte, J. (2009). The human brain: an introduction to its functional anatomy. Selected chapters.

Additional Reading Material:
Neuroanatomy: An Atlas of Structures, Sections, and Systems, 7th/8th Edition. Duane E. Haines, PhD
Neuroanatomy an illustrated colour text. 4th edition Crossman, Alan R
Neuroanatomy : Draw It to Know It. Fisch, Adam. Oxford : Oxford Univ. Press. 2009
Clinical Neuroanatomy, 27e. Stephen G. Waxman

Course/Module evaluation:
End of year written/oral examination 80 %
Presentation 5 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 5 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 10 %
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Additional information:

Subject to change if the semester is online