Syllabus

Neuropsy. of the frontal lobes: functions and disfunctions - 51708

Last update 12-02-2017

HU Credits: 2

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: psychology

Academic year: 0

Semester: 2nd Semester

Teaching Languages: Hebrew

Campus: Mt. Scopus

Course/Module Coordinator: Prof. Dan Hoofien

Coordinator Email: dan.hoofien@mail.huji.ac.il

Coordinator Office Hours: Upon appointment

Teaching Staff:
Prof Dan Hoofien
Course/Module description:
The human frontal lobes (FL) are a central and important subject of research in current neurosciences. Their importance stems from their supervisory and controlling role of complex human behaviors, like executive functions, emotional regulation and reward seeking. In many respects the F.L. are the source of the huge differences between humans and other wild-life civilizations. The course will aim at learning the structural and functional aspects of the FL and the known interactions between them.

Course/Module aims:
To learn and comprehend, theoretically and clinically, the main sub-structures of the F.L. in general and the pre-frontal lobes in particular; their open and closed connections with other CNS structures; the cognitive and mental functions that are mediated by these components and the interactions between them, in sickness and in health.

Learning outcomes - On successful completion of this module, students should be able to:
- Will be able to define the structural and functional components of the F.L. according to updated theories and studies that investigate them.
- Will be able to differentiate, evaluate and compare, structurally and functionally, between three pre-frontal structures and their functions: The dorsolateral (executive functions), the orbitofrontal (impulse control) and the medial (initiation).
- Will be able to explain the F.L. functions in both healthy and disease states.

Attendance requirements(%):
100

Teaching arrangement and method of instruction: The course will include frontal lectures accompanied by PPP, case presentations and discussions based on pre-read articles and book-chapters.

Course/Module Content:
- The F.L. in the context of the CNS and human existence.
- The history of the F.L. early theories and interpretations.
- The structure of the F.L.
- Open connections and closed circles
- The Dorso-lateral area and attention, memory and executive functions
- The Orbito-frontal area and impulse control
- The medial area and initiation
- The polar area (10) and meta-cognition
- Development of the F.L. from birth to aging.

**Required Reading:**

**Text books:**


**Introduction: From Phineas Gage to Tim Shallice**


**Neuroanatomy**


Dorso Lateral Pre-Frontal

Attention:


Memory:

Executive functioning:
8. NIH-EXAMINER Manual:

Orbital-Frontal (ventro-medial) Pre Frontal


Area 10


Development of the frontal lobes:


Additional Reading Material:

Course/Module evaluation:
End of year written/oral examination 100 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 0 %

Additional information:
Prior knowledge of the structure of the CNS is needed. Therefore a prerequisite for this course is a course in physiological psychology or biology of behavior. The course is aimed for 2nd' and 3rd'year undergraduate and graduate students.