

**COURSE UNIT**

Neuropsychological Rehabilitation

**HEAD LECTURER**

Adriana Sampaio

**ACADEMIC STAFF**

Ana Pinheiro; Óscar Gonçalves

**LEARNING OUTCOMES**

The goal of this course is to provide students with in-depth knowledge of Neuropsychological Rehabilitation considering principles, programs and techniques, different neurocognitive domains (attention, memory, executive functions, language, perceptual / spatial disorders), as well as various clinical conditions (Neurodevelopmental disorders, cerebral palsy, epilepsy, cranioencephalic trauma, cerebrovascular accidents, dementia).

Students will gain knowledge on the complexity of neuropsychological rehabilitation; identify practical and ethical issues related to the use of different rehabilitation techniques; Critically review the published research.

**SYLLABUS**

1. Neuropsychological Rehabilitation.
2. Objectives, assumptions. Models. Principles: neuroplasticity, synaptic reorganization, learning, compensation, variability, measure of results.
3. Neuropsychological assessment, design and planning of individualized interventions, measure and evidence of intervention effectiveness.
4. Factors that contribute to cognitive recovery or that affect rehabilitation outcomes.
5. Clinical conditions: neurodevelopmental disorders, cerebral palsy, epilepsy, traumatic brain injury, stroke, dementia.
6. Programs of cognitive and behavioral intervention in pediatric context: guiding principles.
7. Rehabilitation programs for elderly adults: cognitive aging and stimulation. Research Projects in Portugal: "NEP-UM", "+ Memory".
8. Intervention with neuromodulation.
9. Work with patients and families. External aid.

**TEACHING METHODS**

The classes will be based on presenting content, but students will be encouraged to intervene. Special emphasis will be given to the presentation of neuropsychological rehabilitation programs; Evaluation of protocols; To participation in neuropsychological test scoring exercises (in class or in the field) and interpretation of results in small groups. The participation of the students in the class is encouraged, namely through the identification of and response to important questions related to the syllabus.

**ASSESSMENT METHODS**

Assessment includes three components:

1. Attendance and participation in the classes (10%);
2. Short answer questions about the topics addressed in the course (60%);
3. Group presentation and report paper detailing the design and evaluation of an intervention for a neuropsychological deficit (group study from topics covered in class) (30%)

**BIBLIOGRAPHY**

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2. Eslinger, P. J. (Ed.) (2002). Neuropsychological interventions: Clinical research and practice. New York: Guilford Press.
3. Johnstone, B. & Stonnington, H. H. (Eds.) (2001). Rehabilitation of neuropsychological disorders: A practical guide for rehabilitation professionals. Philadelphia, PA: Psychology Press.

4. Halligan, P. W. & Wade, D. T. (Eds.) (2005). Effectiveness of rehabilitation for cognitive deficits. New York: Oxford University Press.
5. Noggle, C.A., Dean, R.S., & Barisa, M.T. (Eds.) (2013). Neuropsychological rehabilitation. New York: Springer.
6. Prigatano, G.P. (1999). Principles of neuropsychological rehabilitation. New York: Oxford University Press.
7. Sohlberg, M. M. & Mateer, C. A. (2001). Cognitive Rehabilitation: An integrative neuropsychological approach. New York: Guilford.