

COURSE UNIT INFORMATION SHEET (SYLLABUS)

2020/2021

Name
Cognitive Neurosciences of Reading
Teaching staff (Also indicate the Professor in charge)
Tânia Fernandes (in charge); Susana Araújo; Marco Diaz-Lago
Creditação (ECTS)
6
Functioning
4th year, 1st semester: maximum 20 students (Secção de Cognição Social Aplicada; optative for the other sections and for the master in Cognitive Science): 4h/week
Learning goals
1. To develop critical reasoning and reflective thinking about the present cognitive research in the field of reading and visual word recognition. 2. To promote analytic thinking and ability to interpret the results of research adopting behavioural experimental and neuroimaging techniques in the field of reading. 3. To develop autonomous skills in research in cognitive science, especially in cognitive psychology and neuroscience, focusing in the study of the cognitive and neural processes underpinning visual word recognition.
Skills to be developed
1. Advanced skills in experimental design, planning and execution of scientific research in the field of reading. 2. Skills of preparation and application of experimental paradigms in research on cognitive processes, including with experimental designing softwares (e.g., E-Prime; Matlab). 3. Skills of interpretation and discussion of results (including behavioral data) framed by the present cognitive theories of visual word recognition.
Prerequisites (precedences) *
N/A
Contents
1. Introduction, concept of modulatory and emergence of novel cognitive systems. 2. Influences of culture in the cognitive system: macro and micro levels. 3. Neuro-cognitive methods of research in visual word recognition 4. The neural circuitry of reading in fluent readers and throughout the development of reading in typical-developing participants. 5. Developmental dyslexia and its neurocognitive profile. 6. Neurocognitive models of visual word recognition. 7. The impact of learning to read on cognitive systems of language and visual object recognition. 8. Reading in the blind.
References
Alexander, P., & Rebecca, T. (2015). The Oxford Handbook of Reading. Oxford University Press



Cornelissen, P., Hansen, P., Kringelbach, M., & Pugh, K. (2010). The Neural Basis of Reading: Oxford University Press.

Dehaene, S. (2009). Reading in the brain: The new science of how we read. Penguin.

Putnam, A. L., Sungkhasettee, V. W., & Roediger, H. L. (2016). Optimizing Learning in College: Tips From Cognitive Psychology. *Perspectives on Psychological Science*, 11(5), 652-660. doi:10.1177/1745691616645770

Spapé, M., van Steenbergen, Verdonchot, R., & van Dantzig, S. (2014). The E-Primer: An introduction to creating Psychological Experiments in E-Prime. Leiden University Press.

Specific references will be given along the semester through e-learning platform.

Teaching Methods

Theoretical classes: expository with presentation and discussion with the students of references regarding the topic (available at e-learning in the previous week before the class).

Practical classes: Presentation and discussion of scientific papers by the students; conduction of the different steps comprising a research project in cognitive neuroscience of reading.

In the case of any situation that impedes that classes are in-person, classes will occur via zoom, while keeping the UC functioning unchangeable (equivalent schedule, assessment, and components).

Evaluation Regimes (Geral and/or Alternative)

Approval in this course will imply two components (all COMPULSORY) of evaluation: (a) and (b).

Students can decide to do or not to do component (c). The final grade corresponds to the sum of the partial grades of the two (or three) components.

The specific characteristics of the components of assessment and their criteria will be available in classes and on e-learning platform.

Evaluation Elements (Dates due, weights, minimum required grades)

(a) Individual written essays throughout the semester (50%*).

(b) Group work regarding research with E-Prime (35%).

(c) Individual work in class (10%)

(d) Participation in experimental research by the Research Team in Memory and Language (5%; 1 out of 20, optional).

* If the student decides not to do (c), component (a) will have a weight of 55%.

For approval in this UC students have to have a score above 8.5 (out of 20) in the component (a).

Rules for grade improvement

Due to the nature of the evaluation elements, only component (a) can be improved.

Rules for students having previously failed the course unit *

Students that have previously attended the course, who had a score above 8.5 out of 20 on components (a) and (b) in the academic year immediately before the present one can keep these scores. Component (c) is the same as for the other students.

Requirements on attendance and punctuality



Rules for special students

(workers, elite athletes, student body leaders, military, fathers/mothers, with special needs)

Language of instruction

Portuguese and English.

Disciplinary violations and penalties

According to the Evaluation of Learning Regulation of the Faculty of Psychology of the University of Lisbon, the following behaviors are considered as disciplinary offenses subject to disciplinary action:

- a) To use or attempt to use materials, information, notes, study resources or other objects and equipment not authorized in academic exercises;
- b) To help or try to help a colleague in committing a disciplinary offense;
- c) To submit the same written work for evaluation in different course units without permission from the instructors, even if with minor changes;
- d) To present someone else's work as one's own;
- e) To forge, or change without permission from the author, any information or citation in an academic work;
- f) To interfere, change or attempt to change grades;
- g) To try to prevent or interfere with the proper functioning of classes, research or other academic activities;
- h) To make false accusations regarding instructors, governance bodies, other students or non-teaching staff of the FPUL;
- i) To falsify signatures in attendance sheets, documents relating to evaluation elements or in any official document relating to an academic process or status.

Disciplinary offenses committed in any assessment element can lead to its annulment, and must be reported to the Pedagogical Council or, considering their gravity and repetition, may lead to other penalties, to be determined by the Rector of the Universidade de Lisboa.

* If applicable