

Guía docente de la asignatura

Atención (M30/56/2/31)

Fecha de aprobación por la Comisión Académica: 28/06/2023

Máster

Máster Universitario en Neurociencia Cognitiva y del Comportamiento

MÓDULO

Neurociencia Cognitiva y del Comportamiento

RAMA

Ciencias de la Salud

CENTRO RESPONSABLE DEL TÍTULO

Escuela Internacional de Posgrado

Semestre

Segundo

Créditos

4

Tipo

Optativa

Tipo de enseñanza

Presencial

PRERREQUISITOS Y/O RECOMENDACIONES

Prerequisites to properly follow the course:

1. Fluent reading of scientific English.
2. Basic knowledge about cognitive processes, the mechanisms involved, and explanatory theories.
3. Basic knowledge about the research methodology in Psychology and Neuroscience and in Cognitive Neuroscience in particular.

Students who do not meet these conditions may have to make an extra effort to properly follow the course, thus compensating for their initial deficiencies. However, with that little extra effort, it is expected that they will be able to cover 100% of the course objectives.

BREVE DESCRIPCIÓN DE CONTENIDOS (Según memoria de verificación del Máster)

- Historical and conceptual introduction to the experimental study of attention, and its neural basis.
- Attentional Orientating to Objects and Space and Information Selection.
- Attention, perception, and consciousness.
- Orienting of Attention in Time: Alertness, Vigilance, and Voluntary Temporal Orienting.
- Attention and Cognitive Control processes.



- Dysfunctions of the attention processes.

COMPETENCIAS

COMPETENCIAS BÁSICAS

- CB6 - Poseer y comprender conocimientos que aporten una base u oportunidad de ser originales en desarrollo y/o aplicación de ideas, a menudo en un contexto de investigación.
- CB7 - Que los estudiantes sepan aplicar los conocimientos adquiridos y su capacidad de resolución de problemas en entornos nuevos o poco conocidos dentro de contextos más amplios (o multidisciplinares) relacionados con su área de estudio.
- CB8 - Que los estudiantes sean capaces de integrar conocimientos y enfrentarse a la complejidad de formular juicios a partir de una información que, siendo incompleta o limitada, incluya reflexiones sobre las responsabilidades sociales y éticas vinculadas a la aplicación de sus conocimientos y juicios.
- CB9 - Que los estudiantes sepan comunicar sus conclusiones y los conocimientos y razones últimas que las sustentan a públicos especializados y no especializados de un modo claro y sin ambigüedades.
- CB10 - Que los estudiantes posean las habilidades de aprendizaje que les permitan continuar estudiando de un modo que habrá de ser en gran medida autodirigido o autónomo.

RESULTADOS DE APRENDIZAJE (Objetivos)

Goals:

To offer students knowledge about the cognitive processes involved in Attention.

To provide students with experiences that allow them to know and understand the tasks and experimental paradigms used for the study of attention, differentiating between the different attentional functions of Alertness, Orienting, and Cognitive Control.

To provide students with information about current theories of Attention.

To provide students with experiences that allow them to know the brain areas involved in Attention.

Learning outcomes. By reaching these goals the student will be able to:

Perform a literature search to elaborate on a particular aspect of attention.

Understand the cognitive processes involved in Attention, and the main theories explaining them.

Know and understand the main tasks and experimental paradigms used for the study of attentional functions: Alertness, Orienting, and Cognitive Control.



Analyze a situation in relation to the attentional processes involved and the critical variables that determine the involvement of these processes. Plan the use of different attentional tasks to measure attentional performance.

Analyze the attentional performance of patients with brain damage, and relate the brain damage to specific attentional deficits.

PROGRAMA DE CONTENIDOS TEÓRICOS Y PRÁCTICOS

TEÓRICO

The course will be developed in 16 sessions of 2 face-to-face hours (32 hours), plus other activities of an autonomous nature by the students, preparatory to the individual sessions and individual work (64 hours), plus a final 4 hours session where students will present their integrative work of all sessions in the form of a small research project. The PRADO platform will be used for the development of the course.

Session 1. Presentation of the course.

Session 2. Psychology of attention: Historical and conceptual introduction.

Session 3. Psychology of attention: The different attentional functions.

Session 4. Spatial orienting of attention and inhibition of return.

Session 5. Attentional orientating based on socio-emotional keys: Gaze and joint attention.

Session 6. Information Selection.

Session 7. Attention, processing, and selection of information: Theory of Perceptual Load.

Session 8. Attention, processing, and perceptual awareness.

Session 9. Attention, learning, and memory: Implicit vs. Explicit.

Session 10. Temporal orienting of Attention.

Session 11. Alertness and Sustained Attention.

Session 12. Automaticity and Cognitive Control Processes.

Session 13. Mechanisms of conflict monitoring and adjustment.

Session 14. Control of action: Task switching and multitasking.

Session 15. Measurement of attentional networks, and other attentional mechanisms in different populations I.

Session 16. Measurement of attentional networks, and other attentional mechanisms in different populations II.

Final Session. Discussion and sharing of the research project on Attention (elaborated across the



different sessions).

PRÁCTICO

Questions elaboration for each session, and participation in the discussion. Each student must upload to the page of the course a critical summary of the reading carried out together with one or more thought questions to discuss in each session (42 hours)

Oral presentation of a specific topic. Each student must present the specific topic for in a session, trying to integrate the reading articles into a single presentation, in case there is more than one article for that session (8 hours)

Elaboration of evaluation questions for each session. After each session, each student must prepare and upload a multiple-choice question, with a statement, and 4 alternatives (3 false and another, the correct alternative) to the page of the course (4 hours)

Search and presentation of a work in which attentional functions are measured and investigated in a particularly interesting population (4 hours)

Preparation of the small research project to be defended in the last session (6 hours).

BIBLIOGRAFÍA

BIBLIOGRAFÍA FUNDAMENTAL

Specific bibliography will be provided for each topic.

Styles, Elizabeth A. (1997). The Psychology of Attention. Hove: Psychology Press Ltd. Petersen, Steven. E., & Posner, Michael. I. (2012). The attention system of the human brain: 20 years after. Annual Review of Neuroscience, 35, 73-89
Gazzaniga, Michael. S., Ivry, Richard. B. & Mangun, George. R. (2019) Attention. In: Cognitive Neuroscience: The Biology of Mind. (5th. Ed.). New York: W.W. Norton & Company.
Mengotti, Paola; Kašbauer, Anne Sophie; Fink, Geron, R.; & Vossel, Simone (2020). Lateralization, functional specialization, and dysfunction of attentional networks. Cortex, 132, 206-222

BIBLIOGRAFÍA COMPLEMENTARIA

Specific complementary recent bibliography will be provided for each topic.

ENLACES RECOMENDADOS

The platform PRADO (Plataforma de Recursos de Apoyo a la Docencia, de la Universidad de Granada) will be used: <https://pradoposgrado2021.ugr.es/course/view.php?id=481>

EVALUACIÓN (instrumentos de evaluación, criterios de evaluación y porcentaje sobre la calificación final)



EVALUACIÓN ORDINARIA

Article 18 of the UGR Assessment Policy and Regulations establishes that the ordinary assessment session (convocatoria ordinaria) will preferably be based on the continuous assessment of students, except for those who have been granted the right to a single final assessment (evaluación única final), which is an assessment method that only takes a final exam into account.

Attendance and attitude in the sessions: quality of the questions prepared for each session, and participation in the discussion. Students must upload to the teaching platform a critical summary of the reading together with some thought questions for discussion during the session. (30%)

Oral presentation of a specific topic. Each student will present at a session, trying to integrate into a single presentation the different articles, in case there is more than one for that session. (20%)

Evaluation questions prepared for each session. After each session, the students must design and upload to the teaching platform a multiple-choice question with a statement, and 4 alternatives (three false and the correct choice). (15%)

Search and presentation of a paper in which attentional functions are investigated in a particularly interesting population (15%)

Exam about the level of integration about the content of the course (20%). This exam will consist, in part, of the questions prepared by all students, and a more general question of integration, to be selected by the teacher. In consensus with students, this part of the evaluation can be substituted by the preparation and defense of a small research project on some aspect of attention.

In order for the student to pass the subject, they must obtain at least 5 out of 10 in the total qualification of the subject. All partial grades will be proportionally added to obtain the total of the final grade.

EVALUACIÓN EXTRAORDINARIA

Article 19 of the UGR Assessment Policy and Regulations establishes that students who have not passed a course in the ordinary assessment session (convocatoria ordinaria) will have access to an extraordinary assessment session (convocatoria extraordinaria). All students may take part in this extraordinary assessment session, regardless of whether or not they have followed continuous assessment activities. In this way, students who have not carried out continuous assessment activities will have the opportunity to obtain 100% of their mark by means of an exam and/or assignment, about all the content of the subject, and which will take place on the date proposed by the International School for Postgraduate Studies (EIP).

The content of this exam will be the specific material (i.e., papers) that will be provided for each topic. The exam will include multiple-choice and short questions and a short essay about a research plan to test a specific hypothesis.

EVALUACIÓN ÚNICA FINAL

Article 8 of the UGR Assessment Policy and Regulations establishes that students who are unable



to follow continuous assessment methods due to justifiable reasons shall have recourse to a single final assessment (evaluación única final), which is an assessment method that only takes a final exam into account.

In order to opt for a single final assessment (evaluación única final), students must send a request, using the corresponding online procedure, to the coordinator of the master's program, in the first two weeks of the course or in the two weeks following their enrolment (if the enrolment has taken place after the classes have already begun). The coordinator will communicate this information to the relevant teaching staff members, citing and verifying the reasons why the student is unable to follow the continuous assessment system.

In this case, the evaluation will consist of 100% of the grade through a test and/or assignment that includes all the content of the subject, and which will take place on the date proposed by the Postgraduate School. This exam will consist of short questions to be developed by the students, and a more general integration question, which will be selected by the teacher. In consensus with the students, the preparation and defense of a small research project on some aspect of attention could be added to this exam.

INFORMACIÓN ADICIONAL

Summary of HOURS OF DEDICATION TO TRAINING ACTIVITIES AND TEACHING METHODOLOGY:

- 1.- Face-to-face classes: **32 hours**
 - Lecture by the teacher on the syllabus, methodology and assessment: 20 hours.
 - Discussion and debate sessions: 6 hours
 - Oral presentations by students: 6 hours
- 2.- Written exam and/or presentation of research project: **4 hours**
- 3.- Independent work: **64 hours**
 - Critical reading of scientific articles, preparation of sessions, preparation of syntheses of contents, and post-session evaluation questions: 60 hours.
 - Consultation and tutoring by the lecturer: 4 hours.

The teaching methodology and assessment will be adapted to students with specific needs (SEN), in accordance with Article 11 of the Regulations on assessment and grading of students at the University of Granada.

Efforts will be made to highlight the role and contributions of women and minority groups to the scientific and technological development of the subject.

Link to the webform to anonymously publicise situations of harassment on the website of the Unidad de Igualdad of the UGR https://unidadigualdad.ugr.es/pages/form_acoso

Información de interés para estudiantado con discapacidad y/o Necesidades Específicas de Apoyo Educativo (NEAE): [Gestión de servicios y apoyos](https://ve.ugr.es/servicios/atencion-social/estudiantes-con-discapacidad) (<https://ve.ugr.es/servicios/atencion-social/estudiantes-con-discapacidad>).

