<table>
<thead>
<tr>
<th>MÓDULO</th>
<th>MATERIA</th>
<th>ASIGNATURA</th>
<th>CURSO</th>
<th>SEMESTRE</th>
<th>CRÉDITOS</th>
<th>CARÁCTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive and Behavioural Neuroscience</td>
<td>Neurobehavioural Plasticity</td>
<td>Neurobehavioural Plasticity</td>
<td>2018.19</td>
<td>1</td>
<td>4</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**PROFESOR(ES)**

Milagros Gallo Torre (a)  
Isabel de Brugada Sauras (b)

**DIRECCIÓN COMPLETA DE CONTACTO PARA TUTORÍAS**  
(Dirección postal, teléfono, correo electrónico, etc.)

(a) Facultad de Psicología, Campus Cartuja, s/n, 18071. Granada. mgallo@ugr.es  
(b) Facultad de Psicología, Campus Cartuja, s/n, 18071. Granada. dbrugada@ugr.es

**HORARIO DE TUTORÍAS**

(a) Office 330. First quarter: W: 8:00-10:00 and 11-12; second quarter: W: 10-13.  
(b) Office 211. First quarter: Tu: 10:00-13:00; second quarter: W: 10-13.

**MÁSTER EN EL QUE SE IMPARTE**

Cognitive and Behavioural Neuroscience

**OTROS MÁSTERES A LOS QUE SE PODRÍA OFERTAR**

**PRERREQUISITOS Y/O RECOMENDACIONES (si procede)**

Basic knowledge (Graduate level) on Conditioning, Learning, Psychobiology  
Ability to read and understand scientific texts in English  
Basic IT knowledge

**BREVE DESCRIPCIÓN DE CONTENIDOS (SEGÚN MEMORIA DE VERIFICACIÓN DEL MÁSTER)**

2. Neurobiology of learning (2.1. Neural plasticity and learning 2.2. Neurobiology of extinction and context modulation 2.3. Cortical plasticity and perceptual learning)

**COMPETENCIAS GENERALES Y ESPECÍFICAS DEL MÓDULO**
General:

To gain knowledge on the psychological processes and their neural bases
To gain knowledge on the main methodology in cognitive, emotional, and behavioural neuroscience
To promote skills to apply knowledge on psychological processes and their neural bases to professional environments (Neuropsychology, Neuroscience, Ergonomic, Education, etc)
To gain knowledge about the deficits in of human cognitive processes and their neural substrates, assessment, and rehabilitation

Specific:

To gain advanced knowledge of the explicative processes relating to associative learning and the plastic properties of the nervous system which make the learning process possible, from the molecular level up to the system level.
To analyze the main concepts and notions relating to this field of study, thus enabling the student to understand current problems in the fields of associative learning and the neurobiology of learning.
To use and become familiar with the main basic methodology and design used in psychology and the psychobiology of learning

OBJETIVOS (EXPRESADOS COMO RESULTADOS ESPERABLES DE LA ENSEÑANZA)

The student will know:
The cellular and molecular mechanisms of neural plasticity involved in learning and memory
The principles of reorganization of the neural systems induced by the experience
The theoretical foundations and the current models of associative learning
Advanced knowledge on complex learning phenomena: conditional and perceptual learning
Behavioural techniques to distinguish goal-directed action and habits, and their neural substrates

The student will be able to:
Identify the underlying neural-plasticity mechanisms involved in different kinds of behavioural changes
Apply and deduce hypothesis from the theoretical models of associative learning
Analyze advanced experimental designs of complex learning phenomena and their neural mechanisms
Acquire precise academic standards thus enabling the student to develop and discuss in group scientific work on specific topics relating to the course contents.
Use basic IT and information tools for the purpose of research.

TEMARIO DETALLADO DE LA ASIGNATURA

1. Introduction to associative learning
2. Introduction to neural plasticity
3. Extinction and context modulation
4. Neurobiology of the extinction and context modulation
5. Stimuli-exposure phenomena: Latent inhibition and perceptual learning
6. Cortical plasticity and perceptual learning
BIBLIOGRAFÍA

Required readings:


Reference readings:

Neural plasticity


Behavioural plasticity:


ENLACES RECOMENDADOS

http://www.wellesley.edu/Biology/Concepts/Html/neurogenesis.html
http://www.ddnal.org/ddnalc/cell_signals/index.html
http://www.genome.gov/27532724

METODOLOGÍA DOCENTE

Compulsory attendance to classes (25 hours, 1 credit)
Lectures
Critical analysis and discussion of articles in the classroom
Oral presentation of pieces of work
Supervised lab training
Final exam covering the entire course syllabus
Work project (75 hours, 3 credits)
Bibliographic search on specific topics

Critical reading of scientific papers
Required work on specific topics
Preparation of oral presentations of specific topics
Web tutorials (email, moodle, etc)

EVALUACIÓN (INSTRUMENTOS DE EVALUACIÓN, CRITERIOS DE EVALUACIÓN Y PORCENTAJE SOBRE LA CALIFICACIÓN FINAL, ETC.)

Active participation in class: 10%
Oral presentation of a specific topic: 30%
Exam covering the entire course syllabus: 60%

INFORMACIÓN ADICIONAL