

1. BASIC INFORMATION

Course	Physiology
Degree Program	Degree in Psychology
School	Facultad de Ciencias Biomédicas y Deporte
Year	First
Credits (ECTS)	6 ECTS
Credit type	Basic
Language(s)	English and Spanish
Delivery mode	On campus
Semester	S2
Academic year	2025-2026
Coordinating professor	

2. PRESENTATION OF THE COURSE

Within the importance of Psychology in the field of neurosciences, this subject aims to provide students with the necessary knowledge to understand the functions of the human body, and acquire a complete and comprehensive vision of it. The nervous system will be studied, including the physiological characteristics that allow neurons to receive, process and transmit information. The interaction between the nervous system and the multiple effector systems will be approached from a holistic point of view (motor system, neuroendocrine system and immune system).

3. LEARNING OUTCOMES

Knowledge:

CON05. Describe the basic laws, biological foundations, brain or neuroendocrine substrates of behaviour, functions and psychological processes.

- Describe the cellular physiology of nerve cells and the principles of cell excitability.
- Describe the neurophysiological and neurochemical mechanisms involved in nerve communication and their modulation.
- Identify the physiological mechanisms of sensory coding, motor response and higher cognitive functions and their integration in the central nervous system.
- Identify the different cells that make up the nervous system and their function.

Skills:

HAB03. Apply appropriate principles, techniques and knowledge to assess, diagnose, explain, treat, modify and prevent mental disorders or any other behaviour relevant to health and disease processes based on the needs and demands of the recipients.

- Analyse the mechanisms of neuroendocrine communication and their role in the regulation of homeostasis in the human body.
- Relate the sensory, integrative and effector function of the nervous and endocrine systems to the development of behaviour.

Competences:

CP03. Design, implement and evaluate psychological interventions aimed at health promotion, disease prevention and improvement of well-being, through the understanding and modification of psychological, behavioral and social factors that affect health and disease processes from a biopsychosocial perspective.

CP04. Describe and measure variables (personality, intelligence and other aptitudes, attitudes, etc.) and cognitive, emotional, psychobiological and behavioural processes.

CP19. Use information and communication technology to search for and analyse data, as well as to research, communicate and learn.

CP21. Work with others to achieve a shared academic or professional objective, making active, empathetic contributions while demonstrating active listening and respect for all involved.

CP22. Combine analysis with critical thinking in the evaluation of different professional ideas or opportunities and their potential for error, based on objective evidence and data leading to effective and valid decision-making.

4. CONTENTS

The contents of the course are listed below:

- Block I: Neurobiology of the nervous system: Organisation of the nervous system and cells of the nervous system. Synaptic transmission.
- Block II: Introduction to the physiology of the CNS. Classification of psychophysiological techniques according to the organisation of the nervous system.
- Block III: Afferent division: somatosensory system. Efferent division: somatic-autonomic nervous system and reflexes.
- Block IV: Motor control: motor pathways and motor control. Motor unit and neuromuscular synapses.
- Block V: Higher functions: memory, learning, emotion. Reward and addiction system.
- Block VI: Other systems: Neuroendocrine system, Immune system, Cardiorespiratory system.

This subject will be complemented by practical work in the Health Sciences laboratories. The ratio profesor/student will be 1/20 for workshop/laboratory activities.

5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Lecture
- Case method
- Collaborative learning

- Problem-based learning
- Learning based on workshop teaching

6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

Campus-based mode:

Learning activity	Number of hours
Lectures	12
Practical seminars	18
Case studies	10
Report writing	10
Research work and projects	10
Workshops/lab work	12
Independent working	68
Debates and discussions	8
In-person assessment tests	2
TOTAL	150

7. CONTINUOUS ASSESSMENT

Each assessable learning activity represents an opportunity for the student to make progress, receive feedback, and consolidate knowledge, skills, and competences. The Learning Outcomes outlined in this guide provide direction for this process and serve as benchmarks for their achievement.

Listed below are the assessment systems used and the weight each one carries towards the final course/module grade:

Campus-based mode:

Assessment Systems	Weight (%)
In-person assessment tests	30-50%
Case study/problem scenario	10-20%
Learning portfolio	10-20%
Research work and projects	10-20%
Workshops/lab work	10-20%

When you access the course on the Campus Virtual, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

7.1. Ordinary exam call

In order to pass the course/module in the ordinary call, the student must obtain a grade greater than or equal to 5.0 (out of 10), in all the evaluation systems proposed in this guide. The final grade will be calculated from the weighted average of all the evaluation systems described.

If in any of the evaluation systems proposed in this guide, a grade lower than 5.0 (out of 10) is obtained, the final grade of the course/module will be "fail" even if, in the result of the weighted average, a value higher than 5.0 (out of 10) is obtained. In the latter case, the course/module would still be "failed" obtaining a final grade of 4.0 (out of 10).

Delivery of activities

Compliance with deadlines is essential to ensure the fairness and planning of the training process.

In case of not submitting an evaluable formative activity in due time and form, and without prior justification, it will not be evaluated and, therefore, will be recorded as "not submitted".

The student is encouraged to communicate with sufficient time in advance to the teacher of the course/module, any difficulty that may affect their participation in any activity.

Attendance

Active participation in the training sessions is a key component of learning. In order to pass the course/module, at least 50% attendance is required. If this minimum percentage is not reached, the teacher may consider the course/module as "failed", according to the evaluation regulations of the Universidad Europea de Andalucía.

7.2. Extraordinary exam call

The extraordinary exam offers a new opportunity for students to demonstrate their learning. To pass it, it will be necessary to obtain a final grade (weighted average) equal to or higher than 5.0 (out of 10.0).

Delivery of activities

The student must submit and pass those mandatory training activities not delivered or not passed in the ordinary call, respecting the new deadlines established. In case of failure to comply with these new deadlines, the activity will not be evaluated and, therefore, will be recorded as "not presented".

8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Assessable activities	Date
In-person assessment tests	Week 17
Case study/problem scenario	Assignments will be requested during the semester; dates will be specified in CANVAS

Learning portfolio	Weeks 10, 17
Research work and projects	Week 11
Workshops/lab work	Week 16

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

9. REFERENCES

Recommended references are listed below:

NEUROPHYSIOLOGY

- Purves, D. (2016). *Neurociencia*. Ed. Médica Panamericana.
- Redolar, D. (2014). *Neurociencia Cognitiva*. Ed. Médica Panamericana.
- Kolb & Whishaw. (2017). *Neuropsicología Humana*. Ed. Médica Panamericana.

GENERAL PHYSIOLOGY

- Gal B. (2007). *Bases de Fisiología* (2ª ed.) Tebar.
- Silverthorn D.U (2014). *Fisiología Humana, un enfoque integrado*, Ed. Médica Panamericana.
- Tortora, J., Derrickson, B. (2018). *Principios de Anatomía y Fisiología*. Ed. Médica Panamericana.

10. AREA OF GUIDANCE, DIVERSITY AND INCLUSION

The Area of Guidance, Diversity and Inclusion (ODI) offers support to students throughout their university career, with the aim of facilitating their academic and personal development and supporting them in achieving their goals. This Area focuses its work on three Core pillars: the inclusion of students with specific educational support needs, the promotion of universal accessibility in the educational community and the guarantee of equal opportunities for all.

Among the services offered are:

- **Academic accompaniment and monitoring**, through counselling and the development of personalised plans aimed at those who need to improve their academic performance.
- **Attention to diversity**, through the implementation of non-significant curricular adjustments - in methodological and Assessment aspects - for students with specific educational support needs, in order to guarantee equal opportunities.
- **Extracurricular training resources**, aimed at developing personal and professional Competencies that contribute to the integral growth of students.
- **Vocational guidance**, through the provision of tools and advice to those who have concerns about their choice of Degree or are considering a change in their educational path.

Students in need of educational support can contact the Area via the following email address: orientacioneducativa@universidadeuropea.es

11. ONLINE SURVEYS

Participating in the Satisfaction Surveys is an enriching opportunity to contribute to the continuous improvement of the Degree as well as the institution. Thanks to them, it is possible to identify which aspects

of academics, teaching staff and the teaching-learning process are working well and which can be further improved.

With the aim of encouraging active participation in the completion of surveys among students, various channels of dissemination have been set up. The surveys are available in the space provided on the Virtual Campus and are also sent by email to facilitate access.

The responses collected allow decisions to be made that have a direct impact on the quality of the learning experience and on the day-to-day life of the university community.