

**COURSE DATA****DATA SUBJECT**

Code: 33310
Name: Physiological psychology II
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1319 - Degree in Psychology	Facultat de Psicologia i Logopèdia	2	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1319 - Degree in Psychology	Phicology Physiology II	COMPULSORY

COORDINATION

AGUILAR CALPE M ASUNCION

MORAGREGA VERGARA INES

SUMMARY

Physiological Psychology II is a basic course taught in the second year of the degree in Psychology. The course has five main areas covering the biological bases of emotion, aggression and stress, learning and memory, higher cognitive processes, language and mental disorders.

This program is related to the topics addressed in Foundations of Biopsychology as well as in Physiological Psychology I, which have provided the necessary knowledge to properly understand this course. It is also strongly connected to Psychopharmacology and Behavioural Endocrinology, in the fourth year, which will require previous knowledge about the above mentioned topics.

Although the basic nature of this subject makes it difficult to establish a direct connection to the professional fields, the course Physiological Psychology II is essential in the acquisition of a style of scientific thinking, which is central for the proper development of a professional activity in various fields such as clinical, evolutionary development, employment, social psychology as well as to be able to undertake research-related activities.

Gender perspective is included in order to improve scientific thinking and future work competencies.



PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

Students should have good English language skills and should have acquired basic knowledge and skills in Foundations of Biopsychology and in Physiological Psychology I.

COMPETENCES / LEARNING OUTCOMES

1319 - Degree in Psychology

Students must be able to apply their knowledge to their work or vocation in a professional manner and have acquired the competences required for the preparation and defence of arguments and for problem solving in their field of study.

Students must be able to communicate information, ideas, problems and solutions to both expert and lay audiences.

Students must have acquired knowledge and understanding in a specific field of study, on the basis of general secondary education and at a level that includes mainly knowledge drawn from advanced textbooks, but also some cutting-edge knowledge in their field of study.

Students must have developed the learning skills needed to undertake further study with a high degree of autonomy.

Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.

Understand the biological foundations of human behaviour and of psychological functions.

DESCRIPTION OF CONTENTS

1. BIOLOGICAL BASIS OF EMOTION, STRESS AND AGGRESSION

Topic 1. Emotion. Emotional response patterns. Biopsychological theories about emotions. Neural and biochemical mechanisms of emotions.

Topic 2. Stress. Physiology of stress response: Hypothalamic-Pituitary-Adrenal Axis and Autonomous Nervous System. Psychoneuroimmunology. Chronic stress-associated disorders.

Topic 3. Aggressive Behavior. Aggression from a biopsychological perspective. Classification of aggressive behavior



and violence. Neural structures of aggressive behavior. Biochemistry of aggression in animals and humans.

2. BIOLOGICAL BASIS OF LEARNING AND MEMORY

Topic 4. Implicit learning and memory. Definition of learning and memory. Classification and memory processes. Perceptual learning: Visual learning and recognition of faces. Stimulus-response learning: Classical conditioning and instrumental conditioning. Motor learning.

Topic 5. Explicit learning and memory. Hippocampal formation and explicit memory. Anterograde amnesia. Retrograde amnesia. Relational learning in animals. Working memory. Memory of the emotions.

Topic 6. Synaptic mechanisms of learning and memory. Effects of experience on the structure of the nervous system. Definition of synaptic plasticity. Learning in a simple nervous system. Long-term potentiation, long-term depression and memory. Neurochemistry of memory.

3. BIOLOGICAL BASIS OF HIGHER COGNITIVE PROCESSES

Topic 7. Biopsychological mechanisms of higher cognitive processes. Cerebral asymmetry. The split brain. Major cortical functions and their disorders.

4. BIOPSYCHOLOGY OF LANGUAGE

Topic 8. Neuroanatomy of language and language disorders. Introduction. Neuroanatomy of language processes. Disorders of language and other related functions.

5. BIOPSYCHOLOGY OF PSYCHIATRIC DISORDERS

Topic 9. Neural basis of psychiatric disorders. Introduction. Schizophrenia. Major Affective Disorders. Anxiety disorders. Obsessive-compulsive disorder. Posttraumatic stress disorder.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theoretical and practical classes	60,00
Total hours	60,00

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	5,00
Individual or group project	20,00
Independent study and work	20,00
Preparation of lessons	10,00
Preparation for assessment activities	20,00
Resolution of case studies	15,00



TEACHING METHODOLOGY

Lectures given by the teacher to develop the different contents of the field and promote the participation of students through the resolution of issues that may arise during the presentation.

Theoretical and practical classes will also rely on animal models, behavioral and neuroanatomical models, audiovisual material, links to websites, related material, handbooks, articles and other specialized readings.

Individual or group tutorials may be scheduled in order to supervise the practical work, to provide individual guidance and solving questions.

Practical sessions aimed at applied aspects. Students - individually or in groups- will work with the provided materials (physiological and psychological tests, recorded physiological variables, articles ...) to reach a goal.

Make easier interaction between students (increase the number of speech and oral presentations, active involvement in debates, etc.), invigorate the relationship between students and professors and to potentiate the use of an inclusive language.

EVALUATION

Assessment systems:

- Assessment of theoretical and practical content by means of a written test on the level of theoretical and practical knowledge (resolution of questions and problems similar to those addressed in face-to-face classes) acquired by the students. This will constitute 70% of the final mark. If a "pass" is not obtained at the first sitting, the student will have to take the assessment at the second sitting.

- Oral or written presentation of reports or individual or group work, delivered throughout the course within the deadline established for each case, which implies that the student has developed knowledge, understanding and application of the contents of the subject. In the 1st call, this will constitute 20% of the final mark. Students who have passed this section in the 1st call will keep the mark obtained for the 2nd call. For those students who have not submitted these reports or papers during the course, in the 2nd call only half of this percentage will be recoverable (i. e., its maximum value will be 10% of the final grade), as deemed most appropriate by the teachers, either with an individual work or through an additional test to the test of theoretical and practical content described in the previous section.

- Active participation in class activities, seminars and workshops. The work carried out on these activities will be handed in at the end of the class session or within the deadline established by the teaching staff. In the 1st call it will constitute 10% of the final grade. This percentage will not be recoverable in the 2nd call and the mark obtained in the 1st call will be maintained.

Requirements



To pass the course, it will be necessary to achieve a minimum mastery of 50% in the first evaluation section (a minimum of 3.5 points out of 7 in the final test of assessment of practical theoretical knowledge). Likewise, in both exams, a minimum of 5 in the final grade (weight grade of the different sections) will be necessary to pass the course.

During tutoring hours, the teacher may request individual or group interviews to verify the degree of participation and achievement of the objectives set for any task carried out. Failure to accept such verification will mean failing the assignment or activity in question.

If the number of students with the maximum mark is greater than the number of honours available, students may be required to do additional work or take an exam in order to obtain this mark.

Warning

Evidence of copying or plagiarism in any of the assessable tasks will result in failure to pass the course and appropriate disciplinary actions will be initiated. Please note that, in accordance with article 13. d) of the Statute of the University Student (RD 1791/2010, of 30 December), it is the duty of students to refrain from using or participating in dishonest means in assessment tests, assignments or university official documents. In the event of any fraudulent practices, the Action Protocol for fraudulent practices at the University of Valencia will be applied (ACGUV 123/2020): <https://www.uv.es/sgeneral/Protocols/C83sp.pdf>

Grading system

Review of and appeals against assessment results shall be subject to the Regulations for Appealing against Grades (ACGUV 108/2017): http://www.uv.es/grausnormatives/2017_108_Reglament_avaluacio_qualificacio.pdf

Adjustments of examination period:

With regard to the possibility that a student may request to take the exam before the official examination period, according to the current normative, the assessment will consist of an exam about the theoretical and practical knowledge (which will represent a 100% of the final grade).

REFERENCES

Referencias Básicas:

- CARLSON, N.R. (2018). *Fisiología de la conducta* (12 ed.). Pearson Educación SA.
- BEAR, M.F., CONNORS, B.W. y PARADISO, M.A. (2016) *Neurociencia. La exploración del cerebro* (4ª edic.). LWW Lippincott Wolters Kluwer.
- PINEL, J.P.J., BARNES, S. (2021). *Biopsychology* (11th Edition). Pearson.

Referencias Complementarias:

- AUGUSTINE G.J., GROH J.M., HUETEL S.A., LAMANTIA A.S., WHITE L.E., PURVES D. (2024) *Neuroscience*. Editorial Oxford Univ.



- CARLSON, N.R. (2021). *Physiology of Behavior, Global Edition (13th Ed)*. Pearson Educación.
- COLLADO, P. et al. (2017). *Psicología Fisiológica*. UNED.
- CURTIS H., BARNES, N. S., SCHNEK, A., MASSARINI, A. (2015) *Invitación a la biología en contexto social*. Editorial Médica Panamericana.
- MOYA-ALBIOL, L. (2020). *Neurocriminología*. Pirámide.
- REDOLAR, D. (2021). *Psicobiología*. Médica Panamericana.