

COURSE DATA

Data Subject			
Code	33310		
Name	Physiological ps	ychology II	1
Cycle	Grade		
ECTS Credits	6.0		
Academic year	2023 - 2024		
Study (s)			
Degree		Center	Acad. Period year
1319 - Degree in Ps	sychology	Faculty of Psychology and Spee Therapy	ch 2 First term
Subject-matter			
Degree		Subject-matter	Character
319 - Degree in Psychology		11 - Phicology Physiology II	Obligatory
Coordination			
Name		Department	
AGUILAR CALPE, I	M.ASUNCION	268 - Psychobiology	

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 (sexual dimorphism of structures and functions) 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

There are no specified enrolment restrictions with other subjects of the curriculum. Students should have good English language skills and should have acquired basic knowledge and skills in Foundations of Biopsychology and in Physiological Psychology I.

OUTCOMES

1319 - Degree in Psychology

- 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 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 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.
- Students must be able to communicate information, ideas, problems and solutions to both expert and lay audiences.
- Students must have developed the learning skills needed to undertake further study with a high degree of autonomy.
- Understand the biological foundations of human behaviour and of psychological functions.

LEARNING OUTCOMES

Students should be able to:

- Identify and describe the biopsychological mechanisms of emotions, aggression and stress.

- Explain the neurobiological mechanisms of learning and memory, by identifying the neural and neurochemical bases involved.



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- Describe the main functions of cortical and brain asymmetries, and identify the biological mechanisms of language.

- Describe the biopsychological mechanisms of major psychiatric disorders.

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.

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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. 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

ACTIVITY	Hours	% To be attended
Theoretical and practical classes	60,00	100
Development of group work	10,00	0
Development of individual work	10,00	0
Study and independent work	25,00	0
Readings supplementary material	5,00	0
Preparation of evaluation activities	5,00	0
Preparing lectures	15,00	0
Preparation of practical classes and problem	15,00	0
Resolution of case studies	5,00	0
TOTAL	150,00	

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 solve 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.



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EVALUATION

Assessment systems:

• 1st and 2nd examination period: Assessment of theoretical and practical contents by means of a written test (questions and problem-solving similar to those having been addressed during the classes) about the level of practical and theoretical knowledge acquired by the student (it will account for 70% of the final mark).

• 1st examination period: Oral or written presentation of reports, individually and/or in groups, which will show that the student has achieved knowledge, skills, comprehension and application of the contents in the course. These will be handed in or presented throughout the course, within the deadlines in every case (20% of the final mark). 2nd call: The mark obtained in this block in the 1st call will be carried onto the 2nd call. Those students who did not complete this task will only be able to reach half of the mark percentage (that is, the maximum score will be a 10% of the final mark) by writing an individual project or by sitting a test, in addition to the exam of theoretical and practical contents described in the previous block.

• 1st examination period: Active participation in class activities, seminars and workshops (weighing 10% of the final mark). The works related to these activities will be handed in at the end of the session or within the deadline established by the professor. This 10% of the mark cannot be applied to the 2nd examination period and the mark obtained in the 1st call will be maintained. As part of the continuous assessment, the instructor will give individual or collective feedback to the students about the reports, activities or works carried out throughout the course. If the number of students with the maximal mark is higher than the number of First Honors (A+) available, it can be required to the students to write an additional work or sit an additional exam to obtain this mark.

Requirements:

• To pass the course, students must achieve a minimum score of 50% in the first block of assessment (a minimum of 3.5 points out of 7 in the final written test. In addition, in both calls students must achieve a minimum final score of 5 points (weighted average of the blocks) to pass the course.

• During tutoring hours, the instructor may require individual or collective interviews to verify the degree of participation and achievements in the aims set for any given task. Refusing this verification would entail failing the task or activity in question.

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



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Grading system:

0 to 4.9: Unsatisfactory/Fail

from 5 to 6.9: Satisfactory

- from 7 to 8.9: Good

- from 9 to 10: Outstanding/Very Good-Outstanding With Honours (MH)

- If there is no qualification of the evaluation section with the highest weighting, the qualification will be NOT PRESENTED.

- If there is a rating in the evaluation section with the highest weighting, and it does not meet the requirements, UNSATISFACTORY/FAIL and a numerical score out of 10 points will be recorded.

- If there is a grade in the evaluation section with the highest weighting, and it meets the established requirements, but these requirements are not met in any of the remaining sections, UNSATISFACTORY/FAIL and a numerical score out of 10 points will be recorded.

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 70% of the final grade) and a final report (which will represent a 30% of the final grade).

REFERENCES

Basic

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



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Additional

- COLLADO, P. et al. (2017). Psicología Fisiológica. UNED, Madrid.
- CURTIS H., BARNES, N. S., SCHNEK, A., MASSARINI, A. (2015) Invitación a la biología en contexto social. Editorial Médica Panamericana, Madrid.
- MORGADO, I. (2014). Aprender, recordar y olvidar. Claves cerebrales de la memoria y la educación. Ariel, Barcelona.
- MOYA-ALBIOL, L. (2020). Neurocriminología. Pirámide., Madrid
- REDOLAR, D. (2021). Psicobiología. Médica Panamericana, Madrid.

