

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

Code: 33345
Name: Psychobiology of stress
Cycle: Undergraduate Studies
ECTS Credits: 4.5
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
1319 - Degree in Psychology	Facultat de Psicologia i Logopèdia	4	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1319 - Degree in Psychology	Psychobiology of stress	ELECTIVES

COORDINATION

SERRANO ROSA MIGUEL ANGEL

SUMMARY

The course Psychobiology of Stress addresses the study of stress from an integrative, up-to-date and practical perspective, focusing on human responses to everyday life events, such as work, family and social networks.

Stress is currently considered one of the major challenges of the 21st century, and an adequate understanding of it requires the incorporation of a neuroscience-based approach. In this regard, the course will examine the general stress response, from its conceptualization to its assessment, with particular attention to how the organism responds to acute and chronic stressors at psychosocial, autonomic, endocrine and immunological levels.

The course will also explore a key aspect in the assessment and treatment of stress: individual differences. To this end, coping strategies and styles will be analysed, as well as their effects on health from a holistic perspective.

Finally, the course will address stress control, providing guidelines for stress management and tools that enable students to intervene in an applied manner. Throughout the course, practical exercises will be used to enhance students' competencies in stress treatment, including intervention programmes aimed at stress reduction.

All these contents will be linked to knowledge previously acquired in the courses **Psychoendocrinology**, **Physiological Psychology I and II**, and **Foundations of Psychobiology**.

PREVIOUS KNOWLEDGE**RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE**

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



COMPETENCES / LEARNING OUTCOMES

1319 - Degree in Psychology

Be able to describe and measure cognitive, emotional, psychobiological and behavioural variables and processes related to stress.

Be able to identify the different types of stress, as well as the main strategies for dealing with stressful situations. Identify the effects of stress on health and offer some tools to control them.

Be able to prepare oral and written reports.

Know and comply with professional ethics of Psychology.

Know how to provide appropriate feedback to patients.

Know the biological foundations of stress processes.

Promote and contribute to the health, quality of life and well-being of individuals, groups, communities and organisations.

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.

Value the contributions made by scientific research to knowledge and professional practice.

DESCRIPTION OF CONTENTS

1. CONCEPT OF STRESS. CLASSIFICATION

Concept of stress: From homeostasis to allostasis.



Models of work stress.
Types of job stressors.
Sources of information on stress.

2. PSYCHOBIOLOGICAL RESPONSE OF STRESS

The work stress psychobiology.
Psychological aspects: indicators and measurement.
Autonomic Nervous System: indicators and measurement.
Neuroendocrine System: indicators and measurement.
Immune system: indicators and measurement.
Integrated response to stress: overall evaluation of the response of organisms.
Metabolic syndrome.
Methodology: Field and laboratory.

3. INDIVIDUAL DIFFERENCES AND COPING STYLES

Introduction.
Styles and strategies of coping: evaluation.
Individual differences: perception of stress, emotions and learning.
Psychobiological indicators of stress in work context.

4. STRESS AND HEALTH IN SOCIAL CONTEXTS

Stress at work: key models.
Stress and occupational settings.
Biological rhythms and shift work.
Work and family.
Stress and unemployment.

5. STRESS MANAGEMENT

Stress and risk prevention.
Occupational health.
Stress control methods: from prevention to intervention.
Effects of techniques in the stress management on psychobiological variables.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theoretical and practical classes	45,00
Total hours	45,00

**NON PRESENCIAL ACTIVITIES**

Activity	Hours
Attendance at other activities	0,00
Individual or group project	15,00
Independent study and work	22,50
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	30,00
Total hours	67,50

TEACHING METHODOLOGY

Lectures given by the teacher to be developed in various issues, while promoting participatory involvement of students through the resolution of the issues that arise throughout the exhibition.

Theoretical and practical classes with audiovisual support, links to different websites with content related to this matter, textbooks and scientific articles and other readings and materials.

Scheduled tutoring individual or group to supervise practical work, guidance and resolution of doubts.

Practical sessions in laboratories and seminars aimed at applied aspects in which the student, individually or in groups, working with the material that is provided (tests, articles, scientific equipment to record variables) to achieve a goal.

EVALUATION**ASSESSMENT SYSTEMS**

Student Evaluation will be based on the following sections, both in the first and second examination:

AS1 - Assessment of theoretical and practical content through oral, written, or skills performance tests. It will be conducted through an objective exam based on the content taught in class and the mandatory bibliography. This section constitutes 90% of the final grade.

AS2 - The remaining 10% can be obtained through participation in work and class activities and active participation. This 10% is recoverable by means of questions on the official day of the exam.

Minimum Requirements:

To pass the course, both in the first and second examination, a minimum of:



4.5 points (out of 9) in SE1

However, to pass the course, a minimum of 5 out of 10 must be obtained in the final grade.

WARNING ABOUT PLAGIARISM:

Blatant copying or plagiarism of any evaluation task will result in the impossibility of passing the course, followed by appropriate disciplinary procedures. Please note that, in accordance with Article 13(d) of the Statute of University Students (RD 1791/2010, December 30), it is the student's duty to refrain from using or cooperating in fraudulent procedures in evaluation tests, assignments, or official university documents.

During office hours, the faculty may request individual or group interviews to verify the degree of participation and achievement in the objectives set for any task performed. Failure to accept such verification will result in not passing the task or activity in question.

In case of fraudulent practices, actions will be taken as determined by the Protocol for Dealing with Fraudulent Practices at the University of Valencia (ACGUV 123/2020): <https://www.uv.es/sgeneral/Protocols/C83sp.pdf>

GRADING SYSTEM

The grading of the course will be subject to the provisions of the Grading Regulations of the University of Valencia (ACGUV 12/2004): http://www.uv.es/graus/normatives/Reglament_qualificacions.pdf

According to this regulation, the grade will be expressed on a numerical scale from 0 to 10 with one decimal place, using the following grading scale:

- From 0 to 4.9: Fail
- From 5 to 6.9: Pass
- From 7 to 8.9: Good
- From 9 to 10: Excellent or Excellent with honors

Only when the minimum requirements are met for each section, the respective grades will be added up.

Honors will be awarded based on the number of enrolled students and only to the highest grades that exceed 9. In the event that two or more students are in the same numerical conditions to obtain honors, the tie-breaker will be determined as follows: 1) the student with the highest exam grade will receive honors, and 2) if the exam grade is the same, a test (a short question on the subject matter) will be conducted for the tie-breaker. If the grade of this last test is also the same, the honors will be declared vacant.

In both examination periods, the grade obtained will be included in the record of the course according to the following rules:



- If there is no grade for the exam section, the grade will be recorded as "NOT SUBMITTED", regardless of the rest.
- If there is a grade for the exam section, and it does not meet the minimum requirements, it will be recorded as "FAIL" with a numeric grade on a scale of 0 to 10 for that section.
- If there is a grade for the exam section, and it exceeds the minimum requirements, but the requirements are not met in one or more of the remaining sections, it will be recorded as "FAIL" with a numeric grade on a scale of 0 to 10 for the section in which the course was not passed.

REFERENCES

Basic References:

Serrano, M. A. & Salvador, A. (2015). *Psicobiología del Estrés*. Pearson Custom.

Serrano, M. Á., Costa, R., & San Miguel, N. (Coords.). (2024). *Psicobiología del estrés: Libro de casos clínicos*. Tirant Lo Blanch.

Serrano, M.A., Alacreu-Crespo, A. & Abad-Tortosa, D. (2016). *Prácticas de Psicobiología del Estrés*. Tirant Lo Blanch.

Sapolsky, R.M. (2008). *¿Por qué las cebras no tienen úlcera?* Alianza Editorial.

Supplementary References:

Conrad, C. D. (Ed.). (2011). *The handbook of stress: Neuropsychological effects on the brain*. Wiley-Blackwell.

Everly, G. S., Jr., & Lating, J. M. (2019). *A clinical guide to the treatment of the human stress response*. Springer.

Fink, G. (Ed.). (2019). *Handbook of stress* (Vols. 1–4). Elsevier Science & Technology.

McEwen, B. S., & Wingfield, J. C. (2003). The concept of allostasis in biology and biomedicine. *Hormones and Behavior*, 43(1), 2–15.

Sanacora, G., Yan, Z., & Popoli, M. (2022). The stressed synapse 2.0: Pathophysiological mechanisms in stress-related neuropsychiatric disorders. *Nature Reviews Neuroscience*, 23, 86–103.

Sandi, C., Venero, C., & Cordero, M. I. (2001). *Estrés, memoria y trastornos asociados*. Ariel Neurociencia.

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