VNIVERSITAT DE VALÈNCIA

Course Guide
33345 Psychobiology of stress

COURSE DATA

Data Subject	
Code	33345
Name	Psychobiology of stress
Cycle	Grade
ECTS Credits	4.5
Academic year	2022 - 2023

Study (s)

Degree	Center	Acad. year	Period
1319 - Degree in Psychology	Faculty of Psychology and Speech Therapy	4	Second term

Subject-matter

Degree	Subject-matter	Character
1319 - Degree in Psychology	44 - Psychobiology of stress	Optional

Coordination

Name	Department
SERRANO ROSA, MIGUEL ANGEL	268 - Psychobiology

SUMMARY

The subject "psychobiology of stress" is focused on stress from an integrative perspective, analyzing the human response to stressful events. Here, we first address the general stress response, from conceptualization to evaluation. Thus, the subject treated extensively how our body reacts to acute or chronic stressors on the psychological level, autonomic, endocrine and immune systems. On the other hand, to examine the individual differences by analyzing the strategies and coping styles and their effects on general health issues. Finally, we address the issue of stress control and its effects on cardiovascular, endocrine and immune systems. All this issues will be related to previously acquired knowledge in the subjects of Psychoneuroendocrinology, Physiological Psychology I and II and Fundamentals of Psychobiology. This course is built into the itinerary of the Psychology of work and organizations, so that its content is always related to these contexts of human reality. In this regard, and considering that job stress is a major cause of cardiovascular disease according to WHO and to complement its therapy within the Law on Prevention of Occupational Risks, this course provides the student with work tools can use in their work as psychologists in organizations and for research.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

No previous knowledge is required, involving necessarily have passed one or more materials from previous courses.

COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

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.
- Know how to provide appropriate feedback to patients.
- Be able to prepare oral and written reports.
- Know and comply with professional ethics of Psychology.
- Value the contributions made by scientific research to knowledge and professional practice.
- Promote and contribute to the health, quality of life and well-being of individuals, groups, communities and organisations.
- Know the biological foundations of stress processes.
- 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.

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

Identify the components of psychobiological stress response
To assess the psychobiological stress response, including individual differences and coping styles.
Identify the implications of stress on health in social contexts
Identify the variables relevant to stress management

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

ACTIVITY	Hours	% To be attended
Theoretical and practical classes	45,00	100
Development of group work	35,00	0
Development of individual work	10,00	0
Study and independent work	22,50	0
TOTAL	**112,50**	

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

The evaluation of the subject (both attemps) will be the following:

The course will be assessed by means of an exam which will account for 50% of the mark. This exam will be based on the lectures and basic references.

The remaining 50% can be obtained through participation in group activities, class activities, assignments, participation and class attendance. This 50% is considered recoverable (that is, if the activities were not delivered during the course, they should be deliver the day of the official test).

In order to pass the course a 4 (out of 10) must be obtained in the exam and 2.5 (out of 5) in the class activities (assinements, participation and class attendance). Final qualification will be obtained adding both parts.

As indicated above, the evaluation of the first and second exams will follow the same format; that is to say, 50% of the total mark will be obtained by taking the exam. The remaining 50% will depend on whether the activities during the course.

Honours will be awarded according to the number of students enrolled and always to the best marks above 9. In the case that two or more students are in the same numerical conditions to obtain the honours degree, the tie will be broken in the following way: 1) the student with the highest mark in the exam will be awarded the honours degree 2) if the mark in the exam is the same, a test (a short question on the content of the subject) will be held to decide the tie-breaker. If the mark in this last test is the same, this honours degree will be declared void.

GRADING SCHEME

Grades shall be subject to the provisions of the University of Valencia Regulations on Marks (ACGUV 12/2004).

(http://www.uv.es/graus/normatives/Reglament_qualificacions.pdf)

According to this, subjects are graded on a scale of 0 to 10 points to one decimal place, followed by a qualitative equivalence:

- 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 distinction.

In the event of 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

The different elements of assessment will only count towards the final aggregate mark if the minimum requirements established for each element are met.

For both attemps, student records will include the mark obtained according to the following rules:

- If the test has not been assessed, the subject will be graded as ABSENT, irrespective of the rest.

- If the test has been assessed but it does not meet minimum requirements, the subject will be given a mark of FAIL and the numerical mark on the 0-10 scale for that element.

- If the test has been assessed and it does meet minimum requirements but any of the remaining elements does not, the subject will be given a mark of FAIL and the numerical mark on the 0-10 scale for the element failed.

REFERENCES

Basic

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

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

Sapolsky, R.M. (2008). ¿Por qué las cebras no tienen úlcera? Alianza.
Serrano, M.A., Moya-Albiol, L., y Salvador, A. (2008). Una perspectiva psicobiológica en el estudio del estrés. Revista de Psicología General y Aplicada, 61(4), 405-424.
Serrano, M.A., Moya-Albiol, L., y Salvador, A. (2009). Estrés laboral y salud: indicadores cardiovasculares y endocrinos. Anales de Psicología, 25(1), 150-159.
Chandola, T., Heraclides, A., & Kurami, M. (2010). Psychosocial biomarkers of workplace stressors. Neurosciencie and Biobehavioral Reviews, 35, 51-57.
Danhof-Pont, M., Van Heen, T., & Zitman, F.G. (2011). Biomarkers in burnout: a systematic review. Journal of Psychosomatic Research, 70(6), 505-524.
CONRAD CH D (ed) The Handbook of Stress. Wiley-Blackwell, 2011.