

**COURSE DATA****Data Subject**

<b>Code</b>	33324
<b>Name</b>	Psychoendocrinology
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	4.5
<b>Academic year</b>	2019 - 2020

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
1319 - Degree in Psychology	Faculty of Psychology and Speech Therapy	4	First term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1319 - Degree in Psychology	23 - Psychoendocrinology	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
SUAY LERMA, FERRAN	268 - Psychobiology

**SUMMARY**

Behavioral Endocrinology is a biopsychological discipline which focuses on the bidirectional relationship between activity of the neuroendocrine system and behavior, considered at observable, private, cognitive or emotional levels. This relationship is described in thematic blocks combining metabolic, developmental, social and experiential aspects of the individual.

The knowledge and skills acquired in this course are essential along scientific training and research in Psychology, especially in the field of Neuroscience. Additionally, this course will provide a better understanding of the neuroendocrine substrate of human behavior in the different fields of applied Psychology, that will be helpful in order to improve the overall health of the individual. To achieve this goal, both social context of the individual (bonding, group dynamics) and its own individual development (issues of development, feeding behavior, sexual behavior, mood, cognitive function and stress management) will be considered. Finally, the course will allow students to acquire some skills that will be needed to work in multidisciplinary teams in the fields of health care and human resources management.



## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

#### 1319 - Bachelors Degree in Psychology :

R4-OBLIGATION TO HAVE SUCCESSFULLY COMPLETED THE COURSE

33296 - Foundations of biopsychology

### Other requirements

It is recommended to have knowledge and skills acquired in previous courses taught by the Department of Psychobiology, in which the general structure of the endocrine system, the relationship between hormones and aggression and the involvement of hormones in sexual development have been addressed. It is also recommended to have knowledge and skills of basic software running, at least, at user level.

## OUTCOMES

### 1319 - Degree in Psychology

- Be able to describe and measure variables (personality, intelligence, attitudes, aptitudes, etc.) and cognitive, emotional, psychobiological and behavioural processes.
- Know how to provide appropriate feedback to patients.
- Be able to prepare oral and written reports.
- Know and comply with professional ethics of Psychology.
- Know the main processes and stages of development throughout the life cycle within contexts of normality and abnormality.
- Understand the biological foundations of human behaviour and of the psychological functions related to the processes of thinking and language.

## LEARNING OUTCOMES

Students should be able to:

Describe the hormonal processes throughout the life cycle.

Identify and describe the hormonal patterns associated with sexual dimorphism, stress, mood, social behavior and cognitive function.

Discriminate between primary psychological disruption and psychological alterations, secondary to endocrine alterations to establish differential diagnosis.



## DESCRIPTION OF CONTENTS

### 1. Introduction to Behavioral Endocrinology

Concept of Behavioral Endocrinology. Brief historical notes of the discipline. Techniques. General organization of the endocrine system.

### 2. Hormones and metabolism

Introduction. The thyroid axis and metabolic aspects. Behavioral aspects and imbalances of the thyroid axis. Glucose metabolism and behavior. Anabolism, catabolism and hormones involved.

### 3. Hormones, development and life cycle

Introduction. Hormonal profiles during pregnancy and lactation. Dymorphism, prenatal development and birth. Sexual orientation and sexual identity. Thyroid hormones and brain development. Growth hormone, functions and alterations. Puberty and adolescence. Aging and hormonal imbalances.

### 4. Hormones and social behavior

Social interaction and hormones. Status and dominance. Hormones and interpersonal conflict. Anabolic and aggressive behavior

### 5. Stress and adaptation

The adaptive response to stress: adrenal medullary system and hypothalamus-pituitary-adrenal axis. Modulating factors of the stress response. Chronic stress and health. Psychobiological indicators of stress.

### 6. Hormones and mood

Endocrine disorders and mood: glucocorticoids and thyroid hormones. Hormonal correlates of mood.

### 7. Hormones and cognition

Sex hormones and cognitive aspects. Adrenal hormones and cognition



## WORKLOAD

ACTIVITY	Hours	% To be attended
Theoretical and practical classes	45,00	100
Attendance at events and external activities	5,00	0
Development of group work	10,00	0
Development of individual work	10,00	0
Study and independent work	5,00	0
Readings supplementary material	2,50	0
Preparation of evaluation activities	15,00	0
Preparing lectures	10,00	0
Preparation of practical classes and problem	10,00	0
<b>TOTAL</b>	<b>112,50</b>	

## TEACHING METHODOLOGY

Lectures given by the teacher in order to developed the contents. Participatory involvement of students through the resolution of the proposed issues will be promoted throughout the lecture.

Theoretical and practical classes will be carried out employing audiovisual support, links to different websites, textbooks and scientific articles, as well as other readings and materials.

Individual or group scheduled tutoring will be performed to supervise practical work, guidance and resolution of doubts.

Practical sessions in laboratories and seminars are focused on applied aspects in which the student, individually or in groups, has to work with the materials provided (tests, articles, scientific equipment to record variables) in order to achieve specific goals.

## EVALUATION

### EVALUATION AND WEIGHING SYSTEM

It consists of two sections

1.- Assessment of theoretical and practical contents through written tests including multiple-answer as well as short questions, or questions related to skills achievement (70%).



2.- Evaluation of works that imply that the student has developed competences of knowledge, understanding and application of the contents of the subject, which will constitute 30% of the final grade. This percentage may include reports delivered in class, at the end of the face-to-face session, assignments delivered during the course, within the deadlines established for each case, and public presentations performed individually or in groups. Some of these activities, as previously announced, will be non-recoverable, and may only be overcome if the student completes them the day and time they are performed.

### MINIMUM REQUIREMENTS

- To pass the subject, it is essential to obtain a minimum of 50% of the maximum possible score in the theoretical-practical examination (first section of the evaluation).

### WARNING

Evidence of copying or plagiarism in any of the assessable tasks will result in failure to pass the subject and in appropriate disciplinary action being taken.

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.

During tutorials, lecturers may require individual or group interviews in order to verify the degree of participation and achievement of goals for any given task. Failure to accept the verification will result in such task or activity being failed.

### GRADING SYSTEM

The qualification of the subject as well as the review of and appeal to the allotted grades will abide to what is stipulated in the *Reglament d'Avaluació i Qualificació de la Universitat de València per a títols de Grau i Màster* (ACGUV 108/2017 of May 30, 2017).

[http://www.uv.es/graus/normatives/2017\\_108\\_reglament\\_avaluacio\\_qualificacio.pdf](http://www.uv.es/graus/normatives/2017_108_reglament_avaluacio_qualificacio.pdf)

According to this, it is specified on a numerical scale from 0 to 10, with the expression of a decimal, to which is added a qualitative rating as indicated below:

- 0 > FAIL < 5
- 5 > PASS (C) < 7
- 7 > REMARKABLE (B) < 9





- 9 > EXCELLENT AND FIRST HONORS (A and A+) ≤ 10

The different sections considered in the evaluation will only be added up if the minimum requirements established for each one (if they have indeed been established) are exceeded.

The grade obtained in the first call will be incorporated in the proceedings of the course, according to the following rules:

- FAIL:
  - If, having covered all the assessment sections, recoverable and not, the total does not reach 5.0
  - If the established minimum score for a required section has not been reached, the numerical score achieved (out of 10 points) and the grade FAIL will be recorded.
- NOT PRESENTED:
  - If there are no scores for any evaluation section.
  - If there is no qualification in one or more of the recoverable sections and the rest has been completed.

In the second call, the following rules will be followed:

- NOT PRESENTED:
  - If there are no grades for any evaluation section.
- FAIL:
  - Possibility 1 (Minimum requirements have not been set in any section). When the sum of the different weighted sections does not reach a minimum of 5.0, the reached score will be recorded.
  - Possibility 2 (There are minimums fixed in some or all of the sections). When the minimum to pass has not been achieved for any one of the sections that had been set as an essential requirement to pass the subject, the numerical score (out of 10 points) of the failed section will be recorded. If there is more than one, the higher one will be recorded.

## REFERENCES

### Basic

- Nelson, R.J. & Kriegsfeld, L.L. (2017): An Introduction to Behavioral Endocrinology, Fifth Edition. Sinauer Associates: Sunderland



### **Additional**

- Brizendine, L. (2010). The male brain. Broadway Books.
- Brizendine, L. (2007) The female brain. Transworld Books.
- Brizendine, L. (2010). El cervell masculí. Barcelona: La Magrana.
- Brizendine, L. (2007). El cerebro femenino. Barcelona: RBA Libros.
- Ehrlenspiel, F. & Strahler, K.: Psychoneuroendocrinology of Sport and Exercise, Routledge, 2012
- Martínez-Sanchis, S. (Coord.) (2006). Hormonas, estado de ánimo y función cognitiva. Madrid: Delta Publicaciones.
- Neave, N. (2008). Hormones and Behavior: a psychological approach. New York: Cambridge University Press.

### **ADDENDUM COVID-19**

**This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council**

**English version is not available**