

PHYSIOLOGICAL PSYCHOLOGY – Code 800159

Academic Year 2016-17

COURSE INFORMATION

Undergraduate Studies: 0812 – Degree in Psychology (Studies Plan 2009-10)

Type: Compulsory

ECTS: 6.0

Module: Compulsory psychological training

Area: Biological bases of behaviour

Year: Second

Semester: 2

INSTRUCTOR INFORMATION

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SYNOPSIS

COMPETENCIES

General competencies

GC4: Know and understand the biological foundations of human behaviour and psychological functions

Transversal competencies

TC1: Analysis and synthesis.

TC2: Preparation and defence of properly reasoned arguments.

Specific competencies

SC4: Be able to describe and measure variables (personality, intelligence and other aptitudes, attitudes, etc.) and cognitive, emotional, psychobiological and behavioural processes).

TEACHING ACTIVITIES

ECTs break-down

TEACHING ACTIVITIES	Hours	% of total credits	Attendance
Class sessions	45	30%	100%
Lab sessions	7.5	0.5%	100%
Tutorials	10	6.6 %	50%
Students' work (class assignments and time of study)	77.5	51.2%	0%
Assessment activities	10	6.6%	100%

BRIEF DESCRIPTION:

KEYWORDS. Visual and auditory systems; sensorimotor integration; sleep/wake behaviour; homeostasis and ingestive behaviour; reward and addiction; neurobiology of language; attention and consciousness; learning and memory.

PRE-REQUISITES

The subjects Foundations of Psychobiology I and Foundations of Psychobiology II will help the student to understand better the contents of this subject.

OBJECTIVES

1. To learn the conceptual and historical framework of Physiological Psychology
2. Interpretation of experimental results obtained by using psychobiological techniques.
3. Analysis of human behaviour as a result of different levels of organization in the nervous system (NS)
4. Analysis of the processing and integration of information by the NS and the response and adaptation of different brain mechanisms to the environment.
5. Understanding of visual and auditory processing of information by the NS as a general model of complex sensory processing.
6. Fundamentals of brain lateralization, speech, attention and consciousness.
7. To know the mechanisms of sleep/wake behaviour and other biological rhythms.
8. The knowledge of the biological mechanisms underlying the homeostasis in relation with the ingestive behaviour and the understanding of the mechanisms that regulate sexual, parental and social behaviours.
9. To know the reinforcement process, the brain reward systems and the neurobiological basis of the addictive behaviour.
10. Understanding of the physiological systems that regulate normal and altered emotional responses as well as the stress response.
11. Understanding of the neurobiological mechanisms underlying learning and memory.

TOPICS

1. The Nature of Physiological Psychology
2. Visual integration, attention and consciousness
3. Auditory integration and speech
4. Sensorimotor integration.
5. Biological rhythms. Sleep and wakefulness
6. Homeostasis. Ingestive behaviour.
7. Reward and drug addiction.
8. Sexual, parental and social behaviours.
9. Emotional behaviour and stress.
10. Learning and memory

ASSESSMENT

The subject Physiological Psychology comprises lectures, practical classes, seminars, student presentations, on-line activities and homework. There will be also complementary face-to-face and on-line tutorials available.

The evaluation of the above mentioned activities will be distributed as follows:

- a) The acquired knowledge (lectures, practical classes and seminars) will be evaluated by multiple-choice exams. The exams will score 70-80% of the total mark.
- b) The attendance to the practices, the participation in seminars and other activities, and the elaboration (originality, synthetic and analytical abilities) and presentation of the materials (student presentations, on-line activities and homework) will be positively evaluated. Such activities will score 20-30% of the final mark..

RESOURCES

Recommended manuals:

- Carlson, N. R. Physiology of Behavior. Pearson International Edition (2010, 8th edition).
Kolb B. & Whishaw I.Q. An introduction to Brain and Behavior. Worth publishers. New York. (2011, 3rd edition)
Pinel J. Biopsychology. Allyn & Bacon. Boston (2011; 8th edition)
Breedlove, Watson and Rosenzweig. Biological Psychology: an introduction to behavioural, cognitive, and clinical neuroscience.. Sinauer Associates, Inc. Publishers, Sunderland, Massachusetts (2010, 6th edition)

Other manuals:

Bear, M.F., Connors, B.W. & Paradiso, M.A. Neuroscience: exploring the brain. Lippincott, Williams and Wilkins, Maryland (2007, 3rd edition)

Kalat, J.W. Biological Psychology. Wadsworth Cengage Learning. Belmont, CA (2009, 10th edition)

Kandel, E.; Schwartz, J.H.; Jessell, T.M. Principles of Neural Science. McGraw Hill. New York (2007)

Kolb B. & Whishaw I.Q. Fundamentals of Human Neuropsychology. Worth Publishers, New York and Basingstore (2003, 5th edition)

Purves, D. et al. Neuroscience. Sinauer Associates, Inc., MA (2004, 3th edition)