Information about the subject

Degree: Bachelor of Science Degree in Psychology

Faculty: Faculty of Psychology

Code: 291103 **Name:** Fundamentals of Neuroscience

Credits: 6,00 **ECTS Year:** 1 **Semester:** 2

Module: BIOLOGICAL BASIS OF BEHAVIOR

Subject Matter: PHYSIOLOGY **Type:** Basic Formation

Field of knowledge: Health Sciences

Department: -

Type of learning: Classroom-based learning / Online

Languages in which it is taught: Spanish

Lecturer/-s:

291A	Ana Perez Villalba **(Responsible Lecturer)**	anaperez@ucv.es
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Module organization

BIOLOGICAL BASIS OF BEHAVIOR

Subject Matter	ECTS	Subject	ECTS	Year/semester
PHYSIOLOGY	12,00	Fundamentals of Neuroscience	6,00	1/2
		Psychophysiology	6,00	2/1
BIOLOGY	6,00	Biology of Human Behaviour	6,00	1/1

Recommended knowledge

It is recommended to have a medium level of English B2 in order to have access to articles in English

Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

R1   Knowing the interactions between nervous system, cell communication and their relationship with human behavior.

R2   Using the specialized vocabulary of the field and expressing oneself adequately.

R3   Understanding the neuronal communication processes that support the processing of information of the Nervous System.

R4   Deducing, interpreting and critically assessing experimental results from scientific reading or informative science.

R5   Using the documental resources available for the training in scientific knowledge as well as maintaining a scientific attitude as regards the presentation of questions and the search for answers.

R6   Knowing and relating macroanatomy of the NS with its functionality and some physiological characteristics.

R7   Knowing and relating microanatomy and molecular biology of the NS with their functionality and some physiological characteristics.

Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

SPECIFIC		Weighting			
		1	2	3	4
CE4	Analyzing and measuring variables (personality, intelligence and other aptitudes) and cognitive, emotional, psychobiological and behavioral processes .				x

TRANSVERSAL		Weighting			
		1	2	3	4
CT1	Capacity to analyze and synthesize.				x
CT4	Command of a foreign language.		x		
CT7	Problem solving.				x
CT35	Being able to develop audio-visual presentations.			x	
CT36	Being able to collect information using different kinds of sources.				x

Assessment system for the acquisition of competencies and grading system

In-class teaching

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3, R4, R6, R7	60,00%	Oral and/or written tests employed in initial, training and/or summative student assessment.
R2, R5, R6, R7	30,00%	Presentation of practical activities.
R2, R5	10,00%	Attendance and active participation: lessons, group assignments and tutoring sessions. It will be monitored and registered by the teacher.

Observations

The presence is not mandatory in theoretical sessions but in practice, especially in those developed in the laboratory.

Online teaching

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3, R4, R6, R7	75,00%	Final evaluation consisting of essay questions and hypothetical scenarios.
R1, R3, R4, R6, R7	5,00%	Periodical assessment through questionnaires
R1, R2, R3, R4, R5, R6, R7	20,00%	Attendance and participation in synchronic communication activities.

Observations

Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

M1	Teacher presentation of contents, competency analysis, explanation and demonstration of capacities, abilities and knowledge in the classroom (presential modality).
M2	Teacher-supervised groupwork sessions: case studies, diagnostic tests, problems, fieldwork, IT room, visits, data searches, libraries, web, Internet, etc. Building knowledge significantly through interaction and student activities (presential modality).
M3	Supervised monographic sessions with shared participation.
M4	Application of interdisciplinary knowledge.
M5	Activities developed in spaces with specialized equipment.
M6	Personalized attention in small groups. Training and/or orientation period by a teacher aimed at revising and discussing the materials and topics presented in the lessons, seminars, lectures, assignments, etc.
M7	Set of oral and/or written tests employed in initial, training or summative assessment of the student.
M8	Group preparation of readings, essays, problem resolution, seminars, assignments, reports, etc. to be presented or handed in during theory lessons, practical lessons and/or tutoring sessions in small groups. Tasks done on the platform or other virtual spaces.
M9	Students' independent study: individual preparation of readings, essays, problem resolution, seminars, assignments, reports, etc. to be presented or handed in during theory lessons, practical lessons and /or small-group tutoring sessions. Tasks on the platform or other virtual spaces.
M11	Teacher presentation of contents, competencies analysis, explanation and demonstration of capacities, abilities and knowledge on the virtual classroom.
M12	Group work sessions via chat moderated by the teacher. Case studies –both real and fictional– aimed at building knowledge through interaction and students' activities. Critical analysis of values and social commitment.

M13   Monographic sessions throughout the course, focused on current aspects and applications of the subject.

M14   Set of oral and/or written tests employed in initial, training or summative assessment of the student.

M15   Student's individual study: individual preparation of readings, essays, problem resolution, seminars, assignments, reports, etc. to be discussed or turned in in electronic format.

M16   Individualized attention for the monitoring and orientation in the learning process, performed by a tutor in order to revise and discuss the materials and topics, seminars, readings and assignments, etc.

M17   Group preparation of readings, essays, problem resolution, seminars, assignments, reports, etc. to be discussed or handed in.

M18   Participation and contributions to discussion forums related to the subject and moderated by the module's teacher.

M19   Problem resolution, comments, reports to be handed in according to the deadlines throughout the course.

IN-CLASS LEARNING

IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
ON-CAMPUS CLASS Teacher presentation of contents, analysis of competences, explanation and in-class display of skills, abilities and knowledge. M1, M2	R1, R2, R3, R4, R5	25,00	1,00
PRACTICAL CLASSES Group work sessions supervised by the professor. Case studies, diagnostic tests, problems, field work, computer room, visits, data search, libraries, on-line, Internet, etc. Meaningful construction of knowledge through interaction and student activity. M2, M5	R1, R2, R3, R6, R7	12,50	0,50
SEMINAR Supervised monographic sessions with shared participation. M3	R1, R2, R3, R5	5,00	0,20
GROUP WORK EXHIBITION Application of multidisciplinary knowledge. M3, M7, M13, M14, M18	R1, R2, R3, R4, R5	5,00	0,20
LABORATORY Activities carried out in spaces with specialized equipment. M1, M2, M5, M6	R1, R2, R3, R6, R7	5,00	0,20
OFFICE ASSISTANCE Personalized and small group attention. Period of instruction and/or orientation carried out by a tutor to review and discuss materials and topics presented in classes, seminars, papers, etc. M6	R1, R2, R3, R4, R5, R6, R7	5,00	0,20
ASSESSMENT Set of oral and/or written tests used in initial, formative or additive assessment of the student. M7	R1, R2, R3, R6, R7	2,50	0,10
TOTAL		**60,00**	**2,40**

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
GROUP WORK Group preparation of readings, essays, problem solving, seminars, papers, reports, etc. to be presented or submitted in theoretical lectures, practical and/or small-group tutoring sessions. Work done on the university e-learning platform M8, M12	R3, R4, R5	40,00	1,60
INDEPENDENT WORK Student study: Individual preparation of readings, essays, problem solving, seminars, papers, reports, etc. to be presented or submitted in theoretical lectures, practical and/or small-group tutoring sessions. Work done on the university e-learning platform. M9, M11	R1, R2, R3, R6, R7	50,00	2,00
TOTAL		**90,00**	**3,60**

ON-LINE LEARNING

SYNCHRONOUS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Virtual session (distance learning) M1, M4, M11	R1, R2, R3, R4, R5, R6, R7	25,00	1,00
Virtual practical session (distance learning) M3, M4, M5	R2, R3, R4, R5	12,50	0,50
In-person or virtual assessment (distance learning) M7	R1, R2, R3, R4, R5, R6, R7	2,50	0,10
Individual tutoring sessions (distance learning) M6	R1, R2, R3, R4, R6, R7	5,00	0,20
Discussion forums (distance learning) M18	R1, R2, R3, R4, R6, R7	5,00	0,20
Continuous assessment activities (distance learning) M14	R1, R2, R3, R4, R5, R6, R7	10,00	0,40
TOTAL		**60,00**	**2,40**

ASYNCHRONOUS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Individual work activities (distance learning) M15, M17, M19	R3, R4, R5	50,00	2,00
Teamwork (distance learning) M12, M17	R1, R2, R3, R4, R5, R6, R7	40,00	1,60
TOTAL		**90,00**	**3,60**

Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
DIDACTIC UNIT 1: General Organization of the Nervous System	Topic 1: General organization of the SNTopic 2: NeuronsTopic 3: NeurogliaTopic 4: Basic Anatomy of the Central SNTopic 5: The Blood-brain Barrier.
DIDACTIC UNIT 2: Electrophysiology and neuronal communication	Topic 6: The electrical activity of neuronsTopic 7: Neurotransmitters
DIDACTIC UNIT 3: Sensory perception	Topic 8: Visual System.

Temporary organization of learning:

Block of content	Number of sessions	Hours
DIDACTIC UNIT 1: General Organization of the Nervous System	20,00	40,00
DIDACTIC UNIT 2: Electrophysiology and neuronal communication	8,00	16,00
DIDACTIC UNIT 3: Sensory perception	2,00	4,00

References

Basic Bibliografy:

KANDEL, E.R., SCHWARTZ, J.H.y JESSELL, T.M. (2001 y siguientes) Principios de neurociencia. Madrid: Mcgraw Hill-Interamericana.

Supplementary Bibliografy:

Netter. Cuaderno de neurociencia para colorear. Elsevier

M.C. Diamond.The Human Brain Coloring Book. Diamond Books

Digital Supplementary material:

http://www.ncbi.nlm.nih.gov/pubmed/

Página de la biblioteca nacional de ciencias médicas de estados unidos donde se encuentran los principales artículos científicos y revistas de prestigio.

http://www.ncbi.nlm.nih.gov/sites/entrez?db=Books&itool=toolbar

página de acceso a libros científicos con formato electrónico.

Addendum to the Course Guide of the Subject

Due to the exceptional situation caused by the health crisis of the COVID-19 and taking into account the security measures related to the development of the educational activity in the Higher Education Institution teaching area, the following changes have been made in the guide of the subject to ensure that Students achieve their learning outcomes of the Subject.

Situation 1: Teaching without limited capacity (when the number of enrolled students is lower than the allowed capacity in classroom, according to the security measures taken).

In this case, no changes are made in the guide of the subject.

Situation 2: Teaching with limited capacity (when the number of enrolled students is higher than the allowed capacity in classroom, according to the security measures taken).

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject will be made through a simultaneous teaching method combining onsite teaching in the classroom and synchronous online teaching. Students will be able to attend classes onsite or to attend them online through the telematic tools provided by the university (videoconferences). In any case, students who attend classes onsite and who attend them by videoconference will rotate periodically.

In the particular case of this subject, these videoconferences will be made through:

| X | Microsoft Teams |

| X | Kaltura |

Situation 3: Confinement due to a new State of Alarm.

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject, as well as the group and personalized tutoring, will be done with the telematic tools provided by the University, through:

| X | Microsoft Teams |

| X | Kaltura |

Explanation about the practical sessions:

2. System for Assessing the Acquisition of the competences and Assessment System

ONSITE WORK

Regarding the Assessment Tools:

	The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus.

X	The following changes will be made to adapt the subject's assessment to the online teaching.

Course guide		Adaptation	
Assessment tool	Allocated percentage	Description of the suggested changes	Platform to be used
Examen teorico	60	Examen oral de parte del contenido	Blackboard Collaborate Ultra

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

Comments to the Assessment System:

ONLINE WORK

Regarding the Assessment Tools:

| | The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus. |

| X | The following changes will be made to adapt the subject's assessment to the online teaching. |

Course guide		Adaptation	
Assessment tool	Allocated percentage	Description of the suggested changes	Platform to be used
Examen teorico	75	Examen oral de parte del contenido	Blackboard Collaborate Ultra

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

Comments to the Assessment System: