

Degree programme	Type	Course
Psychology	FB	1

Contact lecturer

Name : Soleil Garcia Brito

Email : soleilcristina.garcia@uab.cat

Teaching staff

Silvia Garcia Capdevila

Elena Martin Garcia

Maria Pons Vizcarra

Margalida Coll Andreu

Roser Nadal Alemany

Jordi Silvestre Soto

Soleil Garcia Brito

Silvia Fuentes García

Group languages

You can consult this information at the [end](#) of the document.

Prerequisites

There are no prerequisites, but the knowledge acquired in the first semester (Foundations of Psychobiology I) is assumed.

Objectives

Psychology is an incredibly rich discipline, including aspects related to health, society, education, work, justice, etc. Knowledge of behaviour and the mind requires, among others, an understanding of the biological bases that support them. This is the aim of Psychobiology in general and of those compulsory subjects in the 2nd year (Physiological Psychology I and Physiological Psychology II), as well as several optional subjects in the 4th year. In order to be able to understand the biological substrate of behaviour and mental processes it is necessary to previously understand the components and functioning of the nervous and endocrine systems, as well as the fundamental genetic mechanisms.

Objectives

At the end of the course the student will:

- Understand how genes and environment act to influence the behaviour and the different psychopathologies.
- Recognize and distinguish between different types of inheritance. Interpret and draw conclusions from data provided through graphics, histograms, etc.
- Use the knowledge acquired to apply it to genetic counselling, justifying the actions in each case presented.
- Describe the main features of the organization of the nervous system in invertebrates and vertebrates.
- Understand the main aspects of the morphological and histological development of the nervous system.
- Demonstrate knowledge of the main milestones of nervous system maturation throughout childhood and adolescence, and their relationship with behavioural and mental capacities.
- Understand the significance of some aspects of the development of the nervous system being dependent on experience.
- Describe the main mechanisms of degeneration of the nervous system and explain the anatomical and functional regenerative capacities of the central and peripheral nervous system.
- Describe the structure and organization of the main subdivisions of the nervous system.
- Relate the different parts of the central and peripheral nervous system with the functional aspects more directly linked to each one of them.
- Locate, on maps, models, three-dimensional computer images, etc., the main regions of the brain and the spinal cord.

Learning outcomes

1. Identify molecular and cell bases of inheritance and the main chromosome anomalies.
2. Identify, discover and relate genetic bases of behaviour.
3. Explain the key features of the anatomical and functional organization of the human nervous and neuroendocrine systems and their phylogenetic and ontogenetic evolution of the person and his physical and social environment.
4. Explain the mutual interaction between the physical and social environment of the person and the genetic, hormonal and neural factors.
5. Relate the highlights of the development, maturation and aging of the nervous system with the main stages of psychological development system.
6. Use different ICTs for different purposes.
7. Work in a team.

Contents

SECTION A. GENETIC BASES OF BEHAVIOUR

Unit A1. What is Behavioural Genetics?

Unit A2. How do genes work?

Unit A3. How do environments exert their influence on behaviour?

Unit A4. How is genetic research on behaviour conducted?

Unit A5. How mental disorders emerge? (I) Mendelian or monogenic inheritance

Unit A6. How mental disorders emerge? (II) Multifactorial inheritance

Unit A7. How mental disorders emerge? (III) Chromosomal abnormalities

Unit A8. How can we apply all this information?: The case of genetic counselling

SECTION B. NEUROANATOMY

Unit B1. Phylogenetic development of the nervous system

Unit B2. Gross anatomy and systems of protection of the nervous system

Unit B3. Spinal cord

Unit B4. Brainstem

Unit B5. Cerebellum

Unit B6. Diencephalon

Unit B7. Nuclei of the cerebral hemispheres

Unit B8. Cerebral cortex

Unit B9. Sensomotor pathways and centers

Unit B10. Homeostasis control systems

Unit B11. Ontogenetic development of the nervous system

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
Study	70.5	2.82	1, 2, 3, 4, 5, 7
Section A Project	21	0.84	1, 2
Master classes (whole group)	48	1.92	2, 3, 4, 5
Workshops (¼ group)	6	0.24	2, 7
Unit B9 preparation	12	0.48	3, 6
Practical sessions	23	0.92	1, 2, 3, 4, 5, 6
Tutorials (on line and one-to-one)	15	0.6	1, 2, 3, 4, 5, 7
Documentation	13	0.52	1, 2, 5, 7
Software for nervous system visualization	13	0.52	2, 6

The teaching methodology is based on different types of learning activities. Depending on the case, master classes, seminars, laboratory practices, supervised and autonomous activities will be performed. Different activities based on students-focused active learning methodologies involving problem solving are also proposed.

With the aim of ensuring coherence and transparency in the use of artificial intelligence (AI) and specific assessable activities:

"In this subject, the use of artificial intelligence (AI) technologies is not allowed at any stage. Any work that includes AI-generated content will be considered a breach of academic integrity and may result in a partial or total penalty in the grade for the activity, or more serious sanctions in severe cases."

Annotation: within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continuous assessment activities

Title	Weight	Hours	ECTS	Learning outcomes
Evidence 2b. Exam of the the contents of neuroanatomy (Individual, written, face to face) - first avaluation peiod	19%	1.25	0.05	3, 4, 5
Evidence 1a. Continuous Project in Behavioural Genetics (classroom)	17%	0	0	1, 2, 6, 7
Evidence 2c. Neuroanatomy exam (individual, written, face to face)	41%	1.25	0.05	3, 4, 5
Evidence 1b. Exam of the first block of Behavioral Genetics (Individual, written, face to face) - first avaluation period	8.5%	0.5	0.02	1, 2
Evidence 2a. Virtual Brain Construction. Groups, Moodle.	6%	0	0	3, 6, 7

Evidence 1c. Exam of the second block of Behavioral Genetics (Individual, written, face to face) - second evaluation period	8.5%	0.5	0.02	1, 2, 4
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Evidence of learning

The subject will be assessed based on the following evidence of learning:

EV1. Block A Genetics of behavior (34% of the final grade). It consists of the following three evidences:

- EV1a (17% of the final grade of the subject, 50% of Block A). Continuous work on resolving cases of Genetics of behavior. This work will be carried out both individually and in groups over several class sessions in split groups, as well as autonomously outside the classroom. Time of implementation: continuously throughout the semester. It involves a very close link between the large group classes and the ½ split group classes of this block.
- EV1b (8.5% of the final grade of the subject, 25% of Block A). Individual written test with multiple-choice and open-ended questions. It represents the first part of Block A. Time of implementation: first week of evaluation.
- EV1c (8.5% of the final grade of the subject, 25% of Block A). Individual written test with multiple choice questions and open questions. Represents the second part of Block A. Time of completion: second week of assessment.

The grade of EV1a of continuous work will only be incorporated into the calculation of the grade of Block A when a grade of at least 4.5 out of 10 has been obtained in the weighted sum of the grades of EV1b and EV1c. If this requirement is met, the overall grade of Block A will be calculated from the weighted sum of the grades obtained.

$$\text{Grade Block A} = \text{EV1a} \cdot 0.50 + \text{EV1b} \cdot 0.25 + \text{EV1c} \cdot 0.25$$

If this requirement is not met, the grade will be calculated without incorporating the grade of EV1a:

$$\text{Grade Block A} = \text{EV1b} \cdot 0.50 + \text{EV1c} \cdot 0.50$$

Evidence return:

EV1a: The return will be made continuously in the practical classes.

EV1b: Tutorials in the classroom. Week 10

EV1c: Tutorial. Week 21

EV2. Block B Neuroanatomy (66% of the final grade). It consists of the following three evidences:

- EV2a (6% of the final grade of the subject, 9.09% of Block B). Group work using neuroanatomy software for the virtual construction of a human brain. Students must add the different structures studied (Topics 2-8) and identify the different views according to the terms of reference studied in Topic 2. Time

of completion: Week 5. A PDF document will be delivered through the Virtual Campus (subject Moodle) where the images made with the software are collected.

- EV2b (19% of the final grade of the subject, 28.79% of Block B). Individual written test. The knowledge of Block B of the topics taught so far will be assessed through a written test with multiple choice questions and open questions. Time of implementation: first week of evaluation.
- EV2c (41% of the final grade of the subject, 62.12% of Block B). Individual written test. The integration of knowledge of all the material of Block B will be assessed through a written test with multiple choice questions and open questions. Time of implementation: second week of evaluation.

The overall grade of Block B is obtained from the weighted sum of the grades of the evidence EV2a, EV2b and EV2c.

Block B grade = $EV2a \cdot 0.0909 + EV2b \cdot 0.2879 + EV2c \cdot 0.6212$.

Return of evidence:

EV2a: Week 6, in the Moodle virtual classroom with corrections for each exercise.

EV2b: In the large group classroom, after having completed the evidence and once the teacher has finished correcting it. Week 9 or 10.

EV2c: In tutoring once the grades for this evidence have been published. Week 20 or 21.

Definition of a passed subject and calculation of the final grade. A student is considered to have passed the subject when they meet the following two conditions:

- a) They have obtained a minimum grade of 5 points (out of 10) in the subject.
- b) They have obtained a minimum score of 4 points (out of 10) in the evidence that represents an overall weight equal to or greater than 20% of the subject. This criterion only applies to EV2c.

In the case of achieving condition b), the final grade for the subject will be calculated based on the weighted sum of the grades of the two blocks.

Subject grade = $\text{Grade Block A} \cdot 0.34 + \text{Grade Block B} \cdot 0.66$

If condition b) is not achieved, the final grade will also be calculated based on the weighted sum of the grades of the two blocks, but the result will not exceed 4.5 points out of 10.

Definition of a student \"Not assessable\".

Students who have not taken any of the assessment tests, and those who have taken one or more tests, but whose total weight is less than 40%, in relation to the subject as a whole, will be classified as \"Not assessable\".

Retake tests

The subject will have a retake test for EV2c. Evidence 1a, 1b, 1c, 2a, and 2b are not retaken.

Students who meet the following two conditions are entitled to take the EV2c retake test:

- They have completed evidence with a weight equal to or greater than 66.7% of the total grade. Students who present between 40% and 66.6% of the evidence will be assessable, but will not be entitled to retake.
- They have not met the conditions defined to pass the subject, and who have a grade equal to or greater than 3.5 and less than 5 points (out of 10) in the subject as a whole.

The EV2c retake test may be taken by both students who have not met requirement b) (i.e., who have obtained a grade in the EV2c lower than 4 out of 10) and those who have not met requirement a) (i.e., who have obtained a final grade lower than 5 out of 10), provided that they meet the previous conditions.

- Retake test. It will consist of a written exam with multiple-choice questions and open-ended questions on the content of the entire Block B. Time of taking the test: during the established retake period.

The retake grade will replace the EV2c grade. The requirements for passing the subject and the calculation of the final grade after the retake test are the same as those indicated in the section "Definition of the subject passed and calculation of the final grade", with the difference that in the case of passing the subject, the grade that will be recorded in the academic record will be a 5.

SINGLE EVALUATION

Requesting a single evaluation means waiving continuous evaluation.

The single evaluation will be carried out on the same day and place as the test of the second evaluation period of the subject and all the contents of the subject will be evaluated. It will consist of two written tests; one of them will include all the contents of Block A (EV1; 34% of the final grade) and the other all the contents of Block B (EV; 66% of the final grade). Duration 3 hours and 30 minutes, with a 15-minute break between the two tests.

The requirements for passing the subject and the calculation of the final grade after the retake test are the same as those indicated in the section "Definition of the subject passed and calculation of the final grade".

In the event of not achieving condition a) described in the section "Definition of the subject passed and calculation of the final grade", and having achieved a minimum of 3.5 points out of 10, students will have the right to take a retake test, which will consist of a written exam with multiple choice questions and open questions on the content of the entire Block B (same retake test as EV2c).

The retake grade will replace the grade for Block B. The requirements for passing the subject and the calculation of the final grade after the retake exam are the same as those indicated in the section "Definition of the subject passed and calculation of the final grade", with the difference that in the case of passing the subject, the grade that will be recorded in the academic record will be a 5.

The single assessment is requested electronically during the specific period (see information: <https://www.uab.cat/web/estudiar/graus/graus/avaluacions-1345722525858.html>).

It is recommended that students contact the subject coordination two weeks before the single assessment is carried out.

Students of second or subsequent enrollments

It is not expected that students of second or subsequent enrollment will be evaluated through a single non-recoverable synthesis test.

Fraud in assessment activities

The detection of any attempt at copying, plagiarism, unauthorized communication between students, use of unauthorized electronic devices or any other fraudulent conduct in an assessment activity will result in a grade of 0 for the subject. If the fraudulent behavior takes place on EV2c, the student will lose the right to resit this evidence.

In addition, the corresponding disciplinary procedures may be initiated, including the opening of a disciplinary file, in accordance with current institutional regulations.

Note on language

The written tests will in principle be carried out in Catalan. The delivery of the translation of the face-to-face assessment tests will be carried out if the requirements established in article 263 are met and the request is made electronically in week 4 (consult information:

<https://www.uab.cat/web/estudiar/graus/graus/avaluacions-1345722525858.html>).

In this link you can consult the evaluation guidelines of the Faculty of Psychology for the 2026-2027 academic year: <https://www.uab.cat/web/estudiar/graus/graus/avaluacions-1345722525858.html>

Bibliography

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In Spanish:

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Crossman, Alan R. i Neary, David (2019). Neuroanatomía: texto y atlas en color. Elsevier. (online: <https://www-clinicalkey-com.are.uab.cat/student/content/toc/3-s2.0-C2019000684X>) (en paper, edició del 2015)

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Bear, Mark F.; Barry W. Connors; Paradiso, Michael A. (2016) Neuroscience: exploring the brain (4th edition). Philadelphia: Wolters Kluwer.

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Software

N/A

Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through this [link](#). To access the information, you will need to enter the course CODE

Type of teaching	Group	Language	Semester	Shift
(TE) Theory	1	Catalan	second semester	morning-mixed
(TE) Theory	2	Catalan	second semester	morning-mixed
(TE) Theory	3	Catalan	second semester	morning-mixed
(TE) Theory	4	Catalan	second semester	morning-mixed
(TE) Theory	5	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	11	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	12	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	21	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	22	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	31	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	32	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	41	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	42	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	51	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	52	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	111	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	112	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	113	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	114	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	211	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	212	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	213	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	214	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	311	Catalan	second semester	morning-mixed

(PLAB) Practical laboratories	312	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	313	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	314	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	411	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	412	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	413	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	414	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	511	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	512	Catalan	second semester	morning-mixed
(PLAB) Practical laboratories	513	Catalan	second semester	morning-mixed