UAB
Universitat Autònoma de Barcelona

# Progress in the Neurobiology of Communication and Language

2026/2027

Code: 45529
Credits: 6

| Degree programme | Type | Course |
|---|---|---|
| Communication and Language Disorders | OB | 1 |

## Contact lecturer

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## Teaching staff

Margalida Coll Andreu

Sonia Darbra Marges

## Group languages

You can consult this information at the end of the document.

## Prerequisites

No prerequisites are needed.

## Objectives

The objective of the subject is to provide current knowledge to students about functional neuroanatomy and neurochemistry of communication and language disorders. The students will work on questions that require understanding the nature of the genetic and epigenetic mechanisms of various disorders and analyzing the importance of the relationship between the genetic factors and the protective and risk environmental factors. Furthermore, it is intended that students understand the characteristics of of brain development throughout the life span and experience-dependent functional reorganization of the brain. The students will also acquire skills and competences related to the critical reading of scientific publications and to the communication of information about the neurobiology of communication and language.

## Learning outcomes

- CA02 (Critically analyse research data in the neurobiology of communication and language disorders.) Critically analyse research data in the neurobiology of communication and language disorders.
- CA03 (Clearly communicate information about the neurobiology of communication and language

disorders to the specialist public and the general public.) Clearly communicate information about the neurobiology of communication and language disorders to the specialist public and the general public.
- CA04 (Make decisions autonomously in the context of the neurobiology of communication and language.) Make decisions autonomously in the context of the neurobiology of communication and language.
- KA04 (Distinguish between the relevance and adequacy of research methods and designs in the context of the neurobiology of communication and language disorders.) Distinguish between the relevance and adequacy of research methods and designs in the context of the neurobiology of communication and language disorders.
- KA05 (Scientifically analyse the limitations and biases of theories in the field of neurobiology of communication and language disorders.) Scientifically analyse the limitations and biases of theories in the field of neurobiology of communication and language disorders.
- SA04 (Critically interpret scientific publications in the field of neurobiology of language and communication.) Critically interpret scientific publications in the field of neurobiology of language and communication.
- SA05 (Write scientific reports in the field of neurobiology of communication and language disorders.) Write scientific reports in the field of neurobiology of communication and language disorders.
- SA06 (Use documentary sources to obtain relevant information in the field of neurobiology of communication and language.) Use documentary sources to obtain relevant information in the field of neurobiology of communication and language.

## Contents

• Functional Neuroanatomy of Language and Communication

• Genes, Language and Communication

• Brain Development and Plasticity

• Neurochemical Alterations in Language and Communication Disorders

## Learning activities and methodology

| Title | Hours | ECTS | Learning outcomes |
|---|---|---|---|
| Reading articles and other scientific documents | 40.5 | 1.62 | CA02, KA04, SA04, SA06 |
| Search for documentation in journals, books and other documentation sources | 8 | 0.32 | CA02, SA04, SA06 |
| Personal study | 40.5 | 1.62 | CA02, KA04, KA05, SA04, SA06 |
| Tutorial | 7.5 | 0.3 | |

| | | | |
|---|---|---|---|
| Preparation of oral presentation | 7 | 0.28 | CA03, CA04 |
| Preparation of written works | 15 | 0.6 | CA02, CA03, CA04, KA04, KA05, SA04, SA05, SA06 |
| Expository classes | 30 | 1.2 | CA02, KA04, KA05, SA04, SA06 |
| Oral presentations | 1.5 | 0.06 | CA03, CA04 |

The teaching methodology is based on different activities. Depending on the situation, active

lectures or seminars will be held and supervised independent activities will be carried out:
Use of artificial intelligence:

In this subject, the use of Artificial Intelligence (AI) technologies is allowed as an integral part

of the development of the work, provided that the final result reflects a significant contribution

of the student in the analysis and personal reflection. The student must clearly identify which parts

have been generated with this technology, specify the tools used and include a critical consideration on

how these have influenced the process and the final result of the activity. The lack of transparency

in the use of AI will be considered a lack of academic honesty and may lead to a penalization in the

grade of the activity, or greater sanctions in serious 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 |
|---|---|---|---|---|
| EV1: Critical analysis of bibliographic sources | 25 | 0 | 0 | CA02, KA04, KA05, SA04 |
| EV2a: Bibliographic search results | 15 | 0 | 0 | CA02, CA04, SA04, SA06 |
| EV3: Oral presentation and defense of the revision work | 30 | 0 | 0 | CA03, CA04 |

| | | | | |
|---|---|---|---|---|
| EV2b: Written review work (maximum 5 pages) | 30 | 0 | 0 | CA02, CA03, CA04, KA04, KA05, SA04, SA05, SA06 |

The evaluation of the subject will be carried out following the \"Evaluation Guidelines for the Degrees of the Faculty of Psychology\", which can be found at https://www.uab.cat/web/estudiar/graus/graus/avaluacions-1345722525858.html, and based on various evidence of learning:

EV1: Critical analysis of scientific bibliographic sources (25% of the final grade). Written and in group. Submission: week 7. Feedback: week 8 in a specific rubric format.

EV2: Dissertation about a relevant issue on the Neurobiology of Hearing, Language and Communication (40% of the final grade): Written and Individual.

EV2a: Results of the bibliographic search (4 articles) (10%) Submission: Week 9. This evidence may require more than one feedback, depending on the initial selection of papers. The first feedback will be done on week 9. If required, a second feedback will be done on week 10 in written format.

EV2b: Preparation and submission of a written report on the chosen topic about the Neurobiology of Hearing, Language and Communication (30%). Submission: week 15. Feedback on week 19 in a tutorial format.

EV3 Oral presentation and defense of the chosen topic (30%). Feedback on week 19 in a tutorial format

Overall grade

The overall grade for the subject will be the weighted average of the scores obtained in each of the learning evidences, provided that the grade of EV2b is equal to or greater than 4.

In the event that these requirements are not met, the grade on the academic transcript will be the lower value between 4.5 points and the weighted average of the grades of the continuous assessment.

| Kind of feedback | EVIDENCE | WEEK |
|---|---|---|
| Written | EV1 | 8 |
| Written | EV2a | 9-10 (depending on whether changes in the initial selections have to be done after the first feedback) |
| Tutoring | EV2b | 20 |
| Tutoring | EV3 | 20 |

Recovery

Due to its nature, EV3 cannot be recovered.

If the final grade of the Module does not reach 5 and/or the EV2b grade is lower than 4, it will be necessary to recover. Recovery consists of re-elaborating EV2 (Ev2a and EV2b).

The maximum grade that can be obtained after recovery is 5 (out of 10).

Definition of \"Non evaluable\"

Students who have not submitted either of the two pieces of evidence related to the Review Work (EV2a and EV2b) or who have submitted several pieces of evidence but the total weight of these is less than 40.5 of the final grade will receive the grade of \"Non evaluable\"

Synthesis test

For students in their 2nd year or later, the same continuous assessment will be followed, therefore it is NOT expected that there will be an assessment through a single non-recoverable synthesis test.

## Bibliography

BASIC BIBLIOGRAPHY


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COMPLEMENTARY BIBLIOGRAPHY

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## Software

Search Engine (Edge, Google, ...)

Text Editor (Word, ...)

Presentation Designer (PowerPoint, ...)

Online Teaching (Teams, ...)

UAB Virtual Campus (Moodle): Basic communication tool and material repository.

### 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 |
|---|---|---|---|---|
| (TEm) Theory (master) | 1 | Catalan/Spanish | first semester | afternoon |