

Neurology of Language

Code: 101710
ECTS Credits: 9

2024/2025

Degree	Type	Year
2500893 Speech therapy	OB	2

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Teaching groups languages

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

Prerequisites

There are no official prerequisites. It is recommended to pass the subject Anatomy and Physiology of the Nervous System.

Objectives and Contextualisation

The syllabus studies the main functional brain systems and the consequences of their disorganization due to injuries or diseases of the central nervous system, in order to prepare students for the systematic study of language pathology (aphasiology) caused by these injuries and also introduce them into the specific rehabilitation techniques of the corresponding disorders. Other subjects of the Degree deepen into specific aspects of the rehabilitation of speech, language and swallowing disturbances: Dysphagia and related disorders (101712), Neurodegenerative diseases and dementias (101711), Technological innovation applied (101694), Practicum III (101696).

At the end of the course the student must be able to:

- Describe and identify the semiology of the different disorders of language, speech and swallowing associated with brain injuries or diseases
- Know and be able to apply the bases of the cerebral functional reorganization

- Write diagnostic reports in accordance with the data obtained from the anamnesis and the examination
- Establish therapeutic plans based on the conclusions of a diagnostic report
- Develop therapeutic activities in accordance with a previously established therapeutic plan
- Communicate in a proper way during the oral presentations made throughout the course
- Communicate by writing correctly and in accordance with the code of practice in the documents they submit throughout the course

Skills

- Act in accordance with the code of ethics of the profession: respect professional confidence secrets , apply professional criteria for completion and referral of treatments
- Analyze and synthesize information.
- Understand, integrate and relate new knowledge as a result of autonomous learning.
- Demonstrate understanding of disorders of communication, language, speech, hearing, voice and non-verbal oral functions.
- Demonstrate an understanding of the operation of the profession and the legal status of the speech therapist.
- Explore, evaluate and diagnose communication and language disorders, and issue a prognosis of evolution, from a multidisciplinary standpoint.
- Use communication and information technologies.
- Critically evaluate the techniques and instruments of evaluation and diagnosis in speech and language therapy, as well as the procedures of speech and language therapeutics interventions.

Learning outcomes

- Act ethically in the cases of patients observed in the practical sessions, as well as in the interaction with the relatives of the patients.
- Analyze and synthesize.
- Understand, integrate and relate new knowledge as a result of autonomous learning.
- Describe and explain the theoretical basis of rehabilitation techniques for speech, language and swallowing disorders of neurological origin.
- Describe the main techniques for assessing and diagnosing disorders of language, speech and swallowing of neurological origin.
- Explicate the methodology of the patient referral system between speech and language therapy professionals and other health system professionals.
- Describe the origin and characteristics of language, speech and swallowing disorders caused by brain damage.
- Use communication and information technologies.
- Use the most appropriate assessment techniques to diagnose language, speech and swallowing disorders of neurological origin, and to issue a prognosis of evolution.
- Assess the usefulness of the main techniques for the evaluation and diagnosis of speech and language therapy for disorders of neurological origin and be able to interpret the results.

Competences

- Act appropriately with respect to the profession's ethical code: respect professional confidentiality, apply professional criteria in the completion and referral of treatment.
- Analyse and synthesise information.
- Critically evaluate the techniques and instruments of evaluation and diagnosis in speech therapy, as well as its procedures of intervention.
- Demonstrate an understanding of disorders in communication, language, speech, hearing, voice and non-verbal oral functions.
- Demonstrate an understanding of how the profession works, and the legal status of the speech therapist.
- Explore, evaluate, diagnose and produce a prognosis of development for disorders of communication and language, from a multidisciplinary perspective.

- Managing communication and information technologies.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Understand, integrate and relate new knowledge deriving from autonomous learning.

Learning Outcomes

1. Act ethically in cases of patients observed in practical sessions, as well as in interaction with the families of patients.
2. Analyse and synthesise.
3. Assess the usefulness of the main techniques of assessment and diagnosis of speech-therapy disorders of neurological origin and be able to interpret related results.
4. Describe and explain the theoretical basis of the techniques of rehabilitation for disorders of speech, language and deglutition, of neurological origin.
5. Describe the main techniques in the assessment and diagnosis of disorders in language, speech and deglutition of neurological origin.
6. Explain the origin and characteristics of language speech and deglutition disorders caused by brain damage.
7. Explain the patient-referral system between speech professionals and other health care professionals.
8. Managing communication and information technologies.
9. Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
10. Understand, integrate and relate new knowledge deriving from autonomous learning.
11. Use the most appropriate techniques to diagnose and issue a prognosis for the evolution of language, speech and deglutition disorders of neurological origin.

Content

Contents

1. History of the study of language
2. Neuropathology processes
3. Approach to neuropsychology of language
4. Cognitive functions
 - 4.1. Attention
 - 4.2. Memory
 - 4.3. Frontal Functions
5. Pathologies associated with language
 - 5.1 Agnosias
 - 5.2. Apraxias
 - 5.3. Alexias
6. Aphasia
- 6.1 Etiology and Semiology

- 6.2. Broca's aphasia
- 6.3. Wernicke's aphasia
- 6.4. Conduction aphasia
- 6.5. Global Aphasia
- 6.6. Sensory Transcortical Aphasia
- 6.7. Motor Transcortical Aphasia
- 5.8. Mixed Transcortical Aphasia
- 6.9. Anomic aphasia
7. Examination of the cognitive function of language
8. Neurological intervention in language
9. Neurodevelopment of language
10. Research in language neurology

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Practical classes in computer rooms	6	0.24	5, 8
Practical classes of critical analysis and discussion of practical cases	10	0.4	2, 3, 10, 11
Theory classes with TIC support	49	1.96	5, 6
Type: Supervised			
Tutorials scheduled with teachers for review of guided activities	21	0.84	10
Type: Autonomous			
Bibliographic and documentary consultations	22	0.88	5, 6
Carrying out summaries of scientific works in aphasia	35	1.4	5, 6, 8
Comprehensive reading of materials	20	0.8	6, 10
Making summaries, diagrams and concept maps	15	0.6	2
Participation in communication forums between peers	15	0.6	10
Training with computer programs based on tutorials prepared by teachers	32	1.28	8

Methodology

The course will consist of a theoretical module and a practical module with clinical case sessions and computerized sessions with self-learning materials. Training activities with an approximate number of hours of dedication and corresponding learning outcomes are those that are specified.

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

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
EV1. Theory exam II	25	0	0	2, 3, 4, 5, 6, 7, 10, 11
EV2. Theory exam II	25	0	0	2, 3, 4, 5, 6, 7, 10, 11
EV3. Oral presentation	10	0	0	2, 8, 10
EV4. Practice: Diagnostic report	15	0	0	2, 9
EV5. Practice: Therapeutic plan	15	0	0	1, 2, 9, 10
EV6. Practice: Motor Aphasia Semiology	5	0	0	1, 8, 10
EV7. Practice: Sensory Aphasia Semiology	5	0	0	1, 8, 10

Evaluation

Continued evaluation

It involves carrying out theoretical-practical assessments throughout the semester and presenting activities on the practical classes.

The theoretical exam I (EV1) and the theoretical exam II (EV2) correspond to partial test-type evaluations to evaluate the content studied in each semester.

The oral presentation (EV3) corresponds to a group presentation of part of the content of the subject.

In terms of practical activities, EV4, EV5, EV6 and EV7 are in groups and face-to-face. Activities EV6 and EV4 take place during the first evaluation period. Activities EV7 and EV5 take place during the second evaluation period.

Unique Assessment

The single evaluation implies giving up the continuous evaluation.

In the single assessment, all the assessable evidence will be carried out in a single session:

- Completion of partial exams EV1 and EV2.
- Delivery of activities EV3, EV4, EV5, EV6 and EV7.

The single assessment will take place on the same day as the EV2. The approximate duration of the single evaluation will be 3.5 hours.

It should be borne in mind that the single assessment does NOT imply that the student does not attend class or that he does not have to follow the course schedule.

Recovery

Students who have not reached the established criteria to pass the subject and who have been previously evaluated in a set of activities whose weight is equivalent to a minimum of two thirds of the total grade of the exam may choose to take any of the recovery activities.

- It is necessary to pass with a score equal to or greater than 5 points each of the learning evidences that the student presents in the recovery.

- In the weighted calculation of the final grade, a score of 5 points will be incorporated for each of the learning evidences recovered.

The same recovery system will be applied as for the continuous assessment.

Final qualification

The subject will always be approved when the weighted average grade is equal to or higher than 5 points and this average grade will be calculated from all the evidence of learning that has a grade equal to or greater than 4. In the event that these requirements are not met, the maximum grade will be 4, 5.

If a recovery is necessary, the student will have to repeat the suspended learning evidence with a grade of less than 4 as long as it has been previously evaluated in a set of activities whose weight is equivalent to a minimum of two thirds of the total grade for the subject.

Students who have NOT submitted evidence of learning with a weight of at least 40% will be considered NOT evaluable.

Apart from the specific content of each class, it will be sought that students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include reflection on outstanding issues of a social, scientific or ethical nature.

It is not foreseen that the students of 2nd or later registration will be evaluated by means of a single non-retrievable synthesis test.

Faculty Evaluation Guidelines:

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

Bibliography

Basic references

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Diéguez-Vide, F. y Peña-Casanova, J. (2012). Cerebro y lenguaje. Madrid: Editorial Médica Panamericana.

Complementary References

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Recent Publications

Recent books

1. "Neurociencia de las afasias" de Ricardo Insausti y Pedro C. Marijuán (2019) - Este libro proporciona una visión general de las afasias desde una perspectiva neurocientífica, abarcando los fundamentos teóricos y las bases neurológicas de los trastornos del lenguaje.
2. "Afasias: Evaluación y tratamiento desde la logopedia" de José Luis Castillo y Ana Belén Salamanca (2020) - Esta obra se enfoca en la evaluación y el tratamiento de las afasias desde una perspectiva logopédica, ofreciendo estrategias y herramientas prácticas para el trabajo clínico.
3. "Afasias. De la teoría a la práctica" de Ignacio Moreno-Torres y María Sotillo-Díaz (2021) - Este libro combina aspectos teóricos y prácticos de las afasias, ofreciendo una guía detallada para la evaluación, el diagnóstico y el tratamiento de estos trastornos.
4. "Trastornos del lenguaje y la comunicación: Guía para logopedas" de David Howard y Elaine H. Smith (2021) - Aunque aborda diversos trastornos del lenguaje, este libro incluye un capítulo dedicado específicamente a las afasias, proporcionando información actualizada sobre los aspectos clínicos y terapéuticos.
5. "Afasias y trastornos relacionados: Evaluación y tratamiento" de Alfonso García-Pérez y Pilar Salguero-Villadiego (2022) - Este manual ofrece una revisión exhaustiva de las afasias y trastornos relacionados, presentando herramientas de evaluación y estrategias de intervención específicas para cada tipo de afasia.
6. Gonzalez Lazaro, P. y Gonzalez Ortúñoz B. (2024). "Afasia. De la teoría a la Práctica. Editorial Médica Panamericana."They include a series of complementary materials with great educational value:

Recent Papers

(students are recommended to use public data bases to search for publications, such as Pubmed).

Tratamientos para la afasia en hispanohablantes. Forero García, Laura Valentina ; Bernal Castilla, María Paula ; Aguilar Mejía, Oscar Mauricio ; Quique Buitrago, Yina Magally. Revista de investigación en logopedia, 2023, Vol.13 (1), p.e81535

Current methods in treatment of aphasia (Métodos actuales en el tratamiento de la afasia). Vuković, Mile ; Milovanović, Tanja ; Jerkić, Lana. Estudios de psicología, 2022, Vol.43 (1), p.55-87

Caracterización de pacientes con afasia secundaria a enfermedades cerebrovasculares. Rosa Santana, Jesús Daniel de la ; Santiesteban Ferrales, Yarisel ; Castresano García, Gabriel ; Morales Rodríguez, Jeniffer de la C ; Morales Rodríguez, Amarilis ; Calás Torres, Jimmy Javier. Universidad Médica Pinareña, 2021, Vol.17 (2)

Peña-Casanova J, Vinaixa L, Diéguez-Vide F, Gramunt-Fombuena N, Soler-Campillo A. Assessment of aphasia: dialectal and cultural considerations in neurology. Neurologia (Engl Ed). 2022 Sep;37(7):596-603.

Adikari A, Hernandez N, Alahakoon D, Rose ML, Pierce JE. From concept to practice: a scoping review of the application of AI to aphasia diagnosis and management. Disabil Rehabil. 2023 May 12:1-10.

Software

No specific software is required

Language list

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	11	Catalan	annual	morning-mixed
(PAUL) Classroom practices	12	Catalan	annual	morning-mixed
(SCC) Clinical case seminars	111	Catalan	annual	morning-mixed
(SCC) Clinical case seminars	112	Catalan	annual	morning-mixed
(SCC) Clinical case seminars	113	Catalan	annual	morning-mixed
(SCC) Clinical case seminars	114	Catalan	annual	morning-mixed
(SCC) Clinical case seminars	115	Catalan	annual	morning-mixed
(TE) Theory	1	Catalan	annual	morning-mixed