

**COURSE DATA****Data Subject**

Code	35284
Name	Clinical Neurology Applied to Speech Therapy
Cycle	Grade
ECTS Credits	6.0
Academic year	2023 - 2024

Study (s)

Degree	Center	Acad. year	Period
1203 - Degree in Speech Therapy	Faculty of Psychology and Speech Therapy	2	First term

Subject-matter

Degree	Subject-matter	Character
1203 - Degree in Speech Therapy	11 - Clinical neurology applied to speech therapy	Obligatory

Coordination

Name	Department
ORTIZ MASIA, MARIA DOLORES	260 - Medicine

SUMMARY

The course of Clinical Neurology Applied to Speech Therapy allows the student to access the elementary knowledge of Clinical Neurology needed in their performance. Neurology is the branch of medicine that deals with the study of diseases of the nervous system, both central and peripheral. A good number of nervous system disorders, especially those of the central nervous system, are capable of producing language disorders, commonly linked to some degree of compromise of the rest of the brain functions, both cognitive and behavioral, motor, sensory or vegetative. This course provides information on the pathogenesis of nervous system disorders by reviewing their mechanisms of involvement, clinical syndromes (sets of signs and symptoms) and nosological entities (firm correlations between clinical appearance and organic alteration) that cause language disorders due to nervous system involvement. A good number of people with some type of affection of the nervous system are susceptible to benefit from the work of a person titled in speech therapy, being thus essential a minimum of knowledge in this respect. As if this were not enough, the actions in the context of multidisciplinary teams in which speech therapy practice takes place require knowledge not only of the terminology of other disciplines but also of their own set of concepts and abstractions.



The subject maintains relationships with many other subjects, sharing anatomical, physiological, clinical, neuropsychological and other types of knowledge with numerous other subjects. However, its interest lies in being the subject that explains, more than others, the different ways in which the brain is affected, the clinical syndromes or ways in which this affectation is shown and the entities that produce these affectations.

With the knowledge acquired in this subject, the student will be able to evaluate, diagnose, prognosticate, rehabilitate and prevent disorders of human communication whose cause lies in a cerebral affectation, participate in the elaboration, execution and evaluation of educational or health programs aimed at people with this type of alterations, understand and adapt their practice or the design of the practice of others to the existence of alterations of the nervous system and communicate correctly with all types of professionals involved in the care of people affected by processes that may damage the brain.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

Having passed the subject "Neurology and General and Language Neuropsychology".

OUTCOMES

1203 - Degree in Speech Therapy

- Students must have acquired knowledge and understanding in a specific field of study, on the basis of general secondary education and at a level that includes mainly knowledge drawn from advanced textbooks, but also some cutting-edge knowledge in their field of study.
- Students must be able to apply their knowledge to their work or vocation in a professional manner and have acquired the competences required for the preparation and defence of arguments and for problem solving in their field of study.
- Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.
- Students must be able to communicate information, ideas, problems and solutions to both expert and lay audiences.
- Students must have developed the learning skills needed to undertake further study with a high degree of autonomy.
- Explore, evaluate, diagnose and predict the evolution of communication and language disorders from a multidisciplinary perspective.



- Design and conduct speech therapy treatments, both individual and collective, by setting targets and stages, with the most effective and adequate methods, techniques and resources, and bearing in mind the different life developmental stages as well as gender perspective.
- Know the limits of their field of activity and learn to identify when an interdisciplinary treatment is necessary.
- Develop communication skills in the general population.
- Understand and critically evaluate the terminology and research methodology of speech therapy.
- Be familiar with labyrinthine semiology: hearing loss and its symptoms associated with otologic pathology.

LEARNING OUTCOMES

- To be able to differentiate between diagnoses of cases of neurological disorders of childhood: mental deficiency, infantile cerebral palsy and related disorders.
- To be able to interpret clinical data from other professionals in the evaluation of adult language disorders: acquired brain damage from traumatic, vascular, inflammatory, infectious and other causes.
- To be able to identify communication disorders in epilepsies and in neurological disorders of metabolic and degenerative origin.

DESCRIPTION OF CONTENTS

1. Generalities

- Topic 1. Etiopathogenic and Semiological Bases in Neurology.
Topic 2. Neurological diagnostic tests and procedures.
Topic 3. Medical therapeutics in neurology.

2. Semiology of communication associated with disorders of motility and sensitivity.

- Topic 4 | Speech therapy consequences of motor neuron diseases.
Topic 5 | Speech therapy semiology in alterations of the cranial pairs.
Topic 6 | Speech therapy semiology associated with hyperkinetic extrapyramidal diseases.
Topic 7 | Speech therapy semiology associated with hypokinetic extrapyramidal diseases.
Topic 8 | Speech therapy Implications in the cerebellar semiology disorders.
Topic 9 | Speech therapy implications in neuropathies, myopathies and the neuromuscular junction.
Topic 10 | Speech disorders of neurological cause: dysarthria.

**3. Medical conditions related to communication****Communication**

Topic 11| Language consequences associated with congenital CNS malformations.

Topic 12 | Communicative implications of chromosomopathies and genetic diseases.

Topic 13| Speech Therapy Implications in Cerebral Palsy.

Topic 14 | Speech therapy implications in dementias.

Topic 15 | Speech therapy Implications in Central Nervous System Infections.

Topic 16 | Symptoms of communication associated with cerebrovascular diseases: ischemic strokes.

Topic 17 | Symptoms of communication associated with cerebrovascular diseases: hemorrhagic stroke.

Topic 18 | Consequences in the area of communication in brain tumors.

Topic 19 | Consequences in the area of communication in traumatic brain injury.

Topic 20 | Speech therapy implications in epilepsy.

Topic 21 | Speech therapy consequences in demyelinating diseases. Multiple sclerosis.

Topic 22 | Speech therapy consequences in systemic diseases.

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	45,00	100
Classroom practices	15,00	100
Development of group work	5,00	0
Development of individual work	5,00	0
Study and independent work	10,00	0
Readings supplementary material	5,00	0
Preparation of evaluation activities	25,00	0
Preparing lectures	10,00	0
Preparation of practical classes and problem	10,00	0
Resolution of case studies	5,00	0
Resolution of online questionnaires	5,00	0
TOTAL	140,00	

TEACHING METHODOLOGY

Individualized and group tutorials in which students will be supervised so that they can adequately monitor the training activities.

Study of the student for the preparation and realization of the evaluation tests.



Theoretical classes and exposition of contents; practical classes, seminars and case studies.

Student work: preparation of works, bibliographic consultations, case studies, preparation of reports, etc.).

EVALUATION

Minimum requirements

- Get 50% of the maximum mark of the theoretical-practical exam.
- Have passed the Neurological examination test (point 2.2) of the practical sessions.

Assessment

1.- **Theoretical-practical** exam (70% of the overall grade for the subject). Oral or written test. It will consist of two tests (theoretical and practical) recoverable in the second call. You have to pass both parts (theoretical and practical) to pass the course. The two parts are not compensable. The mark of each part (theoretical and practical) is kept until June of the same academic year.

1.1 An objective **theoretical** test through multiple choice questions. This part of the test is considered passed with 50% of the maximum mark. The maximum grade for this section will be 50% of the overall grade for the subject.

1.2. A **practical** test that will consist of solving two clinical cases where the semiology of the different language and speech disorders associated with brain injuries or diseases must be identified. This part of the test is considered passed with 50% of the maximum mark. The maximum grade for this section will be 20% of the overall grade for the subject.

2- **Continuous** assessment (30% of the overall grade for the subject). The note in sections 2.1 and 2.2 is saved for two academic years.

2.1 Group work on a research project and evaluation by the project partners (10% of the overall mark). Non-recoverable activity on second call.

2.2 Neurological examination (15% of the overall grade for the subject). Activity recoverable in second call (oral exam).

2.3 Classroom activities evaluated by taking a test at the end of the topics (5% of the overall grade for the subject). Non-recoverable activity on second call.

In order to obtain an Honors Degree, it is necessary to obtain a minimum of 9 out of 10 in the final grade of the subject, in the event of a tie, the highest grade in the theoretical-practical exam will be taken into account.



In the event of fraudulent practices, the procedure determined by the Protocol for action against fraudulent practices at the University of Valencia (ACGUV 123/2020) will be followed:

<https://www.uv.es/sgeneral/Protocols/C83sp.pdf>

REFERENCES

Basic

- Webb W, Adler RK. (2010). Neurología para el logopeda. Editorial Elsevier-Masson.
- Weiner WJ, Goetz CG, Shin RK, Lewis SL. (2010). Neurology for the non neurologist 6th edition Editorial Lippincott. EN LINEA
- Vazquez Sánchez, F. y García López, B. (2023). Manual de Neurología para Terapia Ocupacional (2023). Paramericana.
- Wilson-Pauwels, L., Akesson, E.J. y Stewart, P.A. (2021). Nervios Craneales. En la salud y la enfermedad. Paramericana.

Additional

- Martí-Massó J. (2011). Neurología para médicos de atención primaria. Editorial Ergon.
- Modo M, Bulte J. Magnetic Resonance Neuroimaging. Methods and Protocols. Editorial Humana Press, 2011
- Vinson B.(2011) Language disorders across the lifespan (3rd edition). Editorial Delmar.