

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

<b>Code</b>	35299
<b>Name</b>	Speech Therapy Intervention in Neurodegenerative Disorders
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	6.0
<b>Academic year</b>	2021 - 2022

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
1203 - Degree in Speech Therapy	Faculty of Psychology and Speech Therapy	3	First term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1203 - Degree in Speech Therapy	26 - Speech therapy intervention in neurodegenerative disorders	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
BRINES BENLLIURE, LOURDES	268 - Psychobiology
ESPERT TORTAJADA, RAUL	268 - Psychobiology

**SUMMARY**

The subject "Intervention speech therapy in neurodegenerative disorders" will provide students with the basic and applied knowledge about non-pharmacological therapeutic treatment used today with patients suffering from neurodegenerative diseases of the central nervous system. This is a topic of great depth in our society given the amount of dementia cases that are diagnosed every day and the large impact on the daily life of these patients, both in language as in other areas of cognition. This subject matter is connected with the second course "Neurodegenerative disorders" subject, in which students have acquired the necessary theoretical knowledge and practical skills sufficient to diagnose a patient with dementia and to do their neuropsychological profile and to quantify their need of speech therapy. This course consists of a definition of the concept of cognitive stimulation, focusing on the section dealing with language and its possibilities for stimulation / rehabilitation in dementia, and a brief history of it. Then we will refer to the neurobiological basis that enable the very existence of the treatment of cognition, understood this as the brain and physiological processes that make possible the act of



observing improvement in the performance of a given cognitive function. The next block will deepen the variables related to cognitive training that help to successful treatment, such as exercise or healthy eating. Then the students will receive training on the specific action protocols concerning the main cognitive areas and specific cognitive stimulation programs commonly used at present (ROT, TRG, PECA etc) to finish with a specific workshops on language, memory, and executive functions.

## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

#### 1203 - Degree in Speech Therapy :

R4-OBLIGATION TO HAVE SUCCESSFULLY COMPLETED THE COURSE

35272 - Anatomy of Language and Hearing Organs

35273 - Physiology of Language and Hearing Organs

35291 - Neurodegenerative Disorders

### Other requirements

It is highly recommended to have acquired fluency when conducting a neuropsychological evaluation and speech therapy to people over 65 years, including patients with a neurodegenerative disorder, since it is part of the basis for the intervention under this subject.

## COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

### 1203 - Degree in Speech Therapy

- 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.
- 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.



- Have an adequate speech production, language structure and voice quality.
- Know the different techniques of intervention in neurodegenerative disorders.
- Be able to plan an intervention in a clinical case of neurodegeneration.

## **LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)**

Design rehabilitation programs tailored to the cognitive stimulation in neurodegenerative disorders required. Apply and adapt the techniques of speech therapy in neurodegenerative disorders

## **DESCRIPTION OF CONTENTS**

### **1. Aging and communication**

Aging: characterization and reflections. Biological changes in the aging related to communication.

### **2. Neurodegenerative disorders and speech therapy**

Neurodegenerative diseases and its major disturbances in the areas of swallowing and communication.

### **3. Cognitive Stimulation**

Conceptual definition. It defines the meaning of the Cognitive Stimulation and Cognitive Rehabilitation difference with reference to the type of target patients and expectations to weigh in therapy. Variables related to cognitive training.

### **4. Protocols in Cognitive Stimulation and specific programs of Cognitive Stimulation**

We review the general dynamics to apply to the protocols in terms of the Cognitive Stimulation of different areas of cognition: language, memory, orientation, praxis, gnosis, arithmetic and calculation, body image and executive functions, and the Cognitive Stimulation programs most commonly used today: ROT (reality orientation), Reminiscence, TRG (global recovery therapy), PECA (Adesma Cognitive Stimulation Program), PPI (psychostimulation Integral Program), Stimulation by Snoezelen.

### **5. Speech therapy intervention in the disorders of language and communication in the neurodegenerative diseases.**

The communication and the dementias: characterization and therapeutic approaches. The functional approach in the speech disorders. Speech therapy intervention programs in the alterations of the communication in the neurodegenerative disorders.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	45,00	100
Laboratory practices	15,00	100
Study and independent work	90,00	0
<b>TOTAL</b>	<b>150,00</b>	

**TEACHING METHODOLOGY**

Lectures by power-point presentations and video attachments on intervention in neurodegenerative diseases related to the clinic speech treatment. Practice about how to do interventions in neurodegenerative diseases and videos with real patient case studies on various interventions in neurodegenerative diseases. Scheduled individual and group tutorials. Supervision of practical work, guidance and resolution of doubts. Independent work of student case review, preparation of practical work, intervention programming in neurodegenerative disorder, reporting. Student study, preparation and conduct of the evaluation tests.

**EVALUATION**

The performance test on the level of knowledge acquired by the student will take the form of multiple-choice questions exam with 3 choices. Such test may include a case study with closed questions regarding the case. It will be necessary to obtain a rating of 5 on this test to pass the subject. In any case, the maximum score in the test will represent 60% of the total grade. The remaining 40% is obtained in the form of practical exercises and clinical reports of speech therapy intervention on real cases whose characteristics will be detailed during the course. The marks obtained in the works carried out will be saved for the June evaluation. Works that are not submitted in due time and form will not be recoverable.

Given the characteristics of the subject and the degree, a high command of written language will be required.

The teacher may require individual or small group interviews to verify the degree of participation and the achievement of the objectives pursued in any task carried out. Not accepting this verification will mean not passing the task / activity in question.

The manifest "copy" of any test, task, activity or report, whether individual or group, that serves for evaluation purposes in the subject, will make it impossible to pass the subject matter.



Honours degree will be awarded to those students whose grade in a subject is equal to or greater than 9 and the highest in their group. Obtaining honours is subject to taking an extraordinary oral exam in the event that two students have the same grade and it is only possible to award an honour degree. In no case will note subtract.

## REFERENCES

### Basic

- Juncos, O. (1998). *Lenguaje y envejecimiento. Bases para la intervención*. Barcelona: Masson.
- Muñoz, E. (coordinadora) (2009). *Estimulación cognitiva y rehabilitación neuropsicológica*. Editorial UOC.
- De las Heras, G., y Simón, T. (2018). *Logopedia y enfermedades neurodegenerativas*. Valencia: Nau LLibres.
- Junqué, C., Bruna, O., y Mataró, M. (2007). *Neuropsicología del lenguaje*. Barcelona: Masson.

### Additional

- Melle, N. (2007). *Guía de intervención logopédica en disartria*. Madrid: Síntesis.
- Duffy, J.R. (2013). *Motor Speech Disorders: substrates, differential diagnosis, and management*. St Louis, Missouri: Mosby.
- Bergado-Rosado JA, Almaguer-Melian W. (2000). *Mecanismos celulares de la neuroplasticidad*. *Revista de Neurología* 31: 1074-95.
- Peña-Casanova J. (1999). *Intervención cognitiva en la enfermedad de Alzheimer. Fundamentos y principios generales*. Barcelona: Fundació La Caixa.
- Zurita, A. (2014). *Guía de intervención logopédica en la enfermedad de Parkinson*. Barcelona: Masson.
- Clavé, P., y García, P. (Ed). (2011). *Guía de diagnóstico y tratamiento nutricional y rehabilitador de la disfagia orofaríngea*. Barcelona: Glosa.
- Pena-Casanova J. (1999). *Activemos la mente*. Barcelona: Fundació La Caixa.
- Paniagua, J., Susanibar, F., Murciego, P., Giménez, P., y García, R. (Coordinadores) (2019). *Disfagia. De la evidencia científica a la práctica clínica. Volumen I y II*. Madrid: Giuntieos.

## ADDENDUM COVID-19





**This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council**

## **1. CONTENTS**

All the contents initially programmed in the guide are kept theoretical and practical sessions.

## **2. WORKLOAD AND TIME PLANNING OF TEACHING**

The workload foreseen in the course guide is maintained for both theory classes (45 hours) and practice (15 hours). The same volume of study and autonomous work of the student is also maintained (90 hours), with a total volume of work of 150 hours.

In the event that teaching is developed in a hybrid way, theory classes will be held 100% in a non-attendance manner but synchronously according to the schedule programmed for the faculty. The practical hours will be carried out 100% in person, provided that the health and university authorities consider this to be the case.

## **3. TEACHING METHODOLOGY**

Substitution of the face-to-face theory classes by synchronous video conferencing using the Blackboard Collaborate tool on the days and times corresponding to the theory class schedule. The sessions can be recorded and the students will have the links to the recordings. On the other hand, the practical sessions will be attended. In case of changes that require teaching entirely on-line, the practical sessions will be adapted to be taught with a combination of synchronous content through Blackboard Collaborate and other activities using the tools of the virtual classroom.

In principle, the same materials will be used as in the original guide for face-to-face teaching.

Tutoring system: the virtual tutoring program is maintained and synchronous video conferencing tutorials are introduced with face-to-face tutorials.

## **4. EVALUATION**

In the case of a mixed teaching situation (semi-presential), the theoretical contents will be evaluated by means of a classroom test containing objective test-type questions (including clinical cases). The percentage of the final mark associated with this test will be 40%.

In case a face-to-face exam is not possible, the evaluation will be done through an open written test (which will include clinical cases) defined as "homework" in a virtual classroom and with time restrictions. The student will have all the reference material of the subject to take the test. If a person does not have the means to establish this connection and access the virtual classroom, he/she must contact the teaching staff by e-mail (e-mail account @alumni.uv.es) at the time of publication of this annex in the teaching guide. In case of connection difficulties on the day of the exam, the student must communicate this to the teacher from his or her email @alumni.uv.es, describing the difficulties, in order to arrange with the teacher to take an oral exam (via Blackboard or telephone) that will be recorded, on the day of the exam. The anti-plagiarism tool URKUND contracted by the UV will be used to review the Answer Exchange. The practical contents will be evaluated continuously and may account for up to 60% of the



mark. This percentage includes the development of the different activities, exercises, reports, memories, etc., proposed in the practical sessions.

In the case of a totally online teaching situation, the final exam will represent 30% of the total grade and will be carried out by means of an open written test (which will include clinical cases) defined as a "virtual classroom task" and with time restrictions. The continuous assessment part will account for the remaining 70% and will include the activities set out in the practical sessions.

The final grade of the course is obtained from the weighted sum of the grades of each part of the evaluation, provided that each of the parts has been passed with a score of 5 out of 10 (the part corresponding to the written test officially called and the practice report)

The variation in the presence of the practical sessions could lead to changes in the weighting of the evaluation systems. If the weighting contemplated in the addendum is modified due to this circumstance, it will be notified by the faculty publicly through the virtual classroom no later than one week after the end of the practical sessions. The final exams will be held in accordance with the regime determined by the agreements of the Governing Council in force at any given time.

Interviews by videoconference may be required to verify participation in the tasks performed, individually or in groups. If the student declines to do so, he/she will not be able to complete the individual or group activity in question.

UV plagiarism detection systems will be used in the evaluation evidence. The manifest copy of any task or activity, whether individual or group, that serves for the purpose of evaluation in the subject, will make it impossible to pass the course.

Honours degree will be awarded to those students whose grade in a subject is equal to or greater than 9 and the highest in their group. Obtaining honours is subject to taking an extraordinary oral exam in the event that two students have the same grade and it is only possible to award an honour degree. In no case will note subtract.

## **5. BIBLIOGRAPHY**

The recommended bibliography in the course guide is maintained as it is not mandatory and is complementary to the presentations and materials uploaded to the virtual classroom. In the case of totally on-line teaching, if some material is not accessible, it can be replaced by contents elaborated by the teachers and deposited in the virtual classroom.