VNIVERSITAT ID VALÈNCIA

# COURSE DATA

| Data Subject | |
| --- | --- |
| Code | 35301 |
| Name | Assistive Technology Applied to Speech Therapy Intervention |
| Cycle | Grade |
| ECTS Credits | 4.5 |
| Academic year | 2023 - 2024 |

| Study (s) | | | |
| --- | --- | --- | --- |
| **Degree** | **Center** | **Acad. year** | **Period** |
| 1203 - Degree in Speech Therapy | Faculty of Psychology and Speech Therapy | 3 | Second term |

| Subject-matter | | |
| --- | --- | --- |
| **Degree** | **Subject-matter** | **Character** |
| 1203 - Degree in Speech Therapy | 28 - Technological resources and augmentative communication systems | Obligatory |

| Coordination | |
| --- | --- |
| **Name** | **Department** |
| MARQUEZ BALDO, LIDIA | 270 - Research Methodology, Educational Diagnosis and Assessment |

# SUMMARY

"Technological resources applied to speech therapy intervention" matter has as main objective to publicize the implementation processes of evaluation, diagnosis and intervention therapy of technological resources. This course seeks to provide students of the basic information to get you to understand the basics of computer technology and its application in the field of speech therapy. The approach to information technology will be held as a tool of multiple utilities in any performance of the speech therapist, in the overall process aimed to answer the questions that occupy you, with special attention to the processes of integration of technological resources in the process of intervention in speech therapy.

# PREVIOUS KNOWLEDGE

## Relationship to other subjects of the same degree

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

## Other requirements

No specific requirements.

# OUTCOMES

## 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.

- Explore, evaluate, diagnose and predict the evolution of communication and language disorders from a multidisciplinary perspective.

- Use the exploration techniques and instruments typical of the profession and record, synthesize and interpret the data provided by integrating them into the information set.

- 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.

- Select, implement and facilitate the learning of augmentative communication systems, as well as the design and use of prostheses and technical aids adapted to the physical, psychological and social conditions of the patient.

- Work in the school, healthcare and healthcare settings as part of the professional team.  Advice on the development, implementation of care and education policies on topics related to speech therapy.

- Be familiar with communication, language, speech, hearing, voice and non-verbal communication disorders.

- Understand and critically evaluate the terminology and research methodology of speech therapy.

- Manage the technologies of communication and information.

- Facilitate learning of alternative and augmentative communication systems as well as the design and use of prostheses and assistive devices.

- Have computer skills related to the field of study.

## LEARNING OUTCOMES

Handle technical aids for communication, play, mobility and environmental control systems, manual signs, graphics systems. Handle technical aids for augmentative and alternative communication: communication boards; Communicators; Computer access devices; Software adapted. Communication skills and assess specific and global needs of the patient. Select by criteria systems and functional characteristics of signs for communication and display forms. Augmentative rehabilitation programs adapted to different contexts (occupational workshop curriculum, etc.) Design and implement interventions with specific systems for visual and hearing impairment. Handle the instruments and technology required for such interventions implentar programs and interactive multimedia displays speech for the evaluation, design and intervención.Aplicar technological resources for intervention in severe motoric and communication disorders.

## DESCRIPTION OF CONTENTS

### 1. Information and Communication Technologies: resources and services.

Technology resources. Concept of technologies of information and communication technology (ICT). Internet: web 1.0 and web 2.0. Characteristics of the information on the Internet. Access to the information. Use of technological resources in speech therapy.

### 2. ICT training and professional updating

ICT as a resource for access to scientific information. Portals and websites of speech therapy. Bibliographic databases. Communication between professionals through ICT. Technological resources for collaboration among professionals. Dissemination of experiences and research.

### 3. Technological resources in the psycho-educational evaluation

Use of the computer support in the psycho-educational evaluation. Brief history. Computerized assessment. Adaptive assessment. Software used in the evaluation and Psychoeducational diagnosis. Specific tests for speech therapy.

## 4. Interactive multimedia applications: design and evaluation.

Concept of multimedia application. Classification of multimedia. Quality criteria for multimedia applications. Design and development of multimedia applications for intervention in speech therapy.

## 5. Multimedia applications for intervention in disorders of the oral and written language.

Multimedia applications for expressive language level. ICT for the development of the comprehensive level of language. Technological resources for problems in literacy intervention.

## 6. Technologies for intervention in the speech and voice disorders.

Technological applications of articulatory Phonetics. Viewers of the speech: concept. fundamental characteristics. Viewers of the speech for intervention in the speech and voice disorders. Voice recognition systems.

## 7. Technological resources for intervention in disorders of hearing.

Prosthesis and technical AIDS. Applications for the development of the oral language and lip reading. Applications for sign language learning. Applications for mixed language: dual-mode and the completed word.

## 8. ICT for people with severe communication problems.

Characteristics of people with severe communication problems. Technologies for access to the computer. Electronic communicators. Programs and resources of environmental structuring. Multimedia applications of emotions.

# WORKLOAD

| ACTIVITY | Hours | % To be attended |
|---|---|---|
| Theory classes | 30,00 | 100 |
| Laboratory practices | 15,00 | 100 |
| Development of group work | 16,00 | 0 |
| Development of individual work | 22,00 | 0 |
| Readings supplementary material | 4,00 | 0 |
| Preparation of evaluation activities | 8,00 | 0 |
| Preparing lectures | 8,00 | 0 |
| Resolution of case studies | 7,50 | 0 |
| Resolution of online questionnaires | 2,00 | 0 |
| TOTAL | 112,50 | |

## TEACHING METHODOLOGY

- Study, preparation and realization of the evaluation tests.

- Supervision of practical work, orientation and resolution of doubts.

- Autonomous work: preparation of works, review of clinical cases, design of the intervention, preparation of reports.

- Theoretical classes in which the different contents of the subject will be worked on, promoting the participatory intervention of the students through the resolution of the questions that arise throughout the study.

- Practical classes, demonstrations and case studies with the objective that the students acquire the necessary knowledge for the evaluation, establishment of a diagnosis and elaboration of intervention programs and selection of appropriate intervention materials for each patient.

- Theoretical-practical classes in the computer room for the management of specific technological programs and resources.

## EVALUATION

The evaluation will be carried out through various procedures:

-       Practical activities (70%). They will be evaluated through the tasks delivered in the Virtual Classroom.

-       Theoretical contents (30%). They will be evaluated through objective tests (multiple choice).

To pass the course it is necessary to have passed all the activities of the course.

In case that any activity does not reach the minimum requirements to be considered as approved and, provided that the delivery dates allow it, a second recovery option may be given, which may consist of improving the task submitted or do an alternative, according to the teacher's indication. In these cases, the activity will be scored with a maximum grade of 5.

In any case, all activities are recoverable also on second call, keeping the grade of those that have already been passed in the first call.

The allocation of honors will only be made among students who pass the course in the first call. They will be assigned to those people who obtain the best grades, in strict order, and as long as they have 9 or more points. In case of a tie in grades, the following aspects will be considered, in this order: the performance of voluntary activities, class attendance and the number of activities with outstanding grades (greater number of tasks with a grade of 10, greater number of tasks with rating between 9.5 and 9.9, etc.).

In the event of fraudulent practices, the Action Protocol for fraudulent > practices at the University of Valencia will be applied (ACGUV 123/2020): https://www.uv.es/sgeneral/Protocols/C83.pdf

# REFERENCES

## Basic

- La bibliografía básica de la materia se limitará a los materiales propios del profesorado, que se incorporarán a Aula Virtual.

## Additional

- Arnaiz, P., Hurtado, M.D. y Soto, F.J. (Coords.) (2010). 25 años de integración en España: Tecnología e inclusión en el ámbito educativo, laboral y comunitario. [Material multimedia]. Consejería de Educación, Formación y Empleo de la Región de Murcia https://redined.mecd.gob.es/xmlui/bitstream/handle/11162/1526/01820112013044.zip?sequence=1&isAllowed=y

- Arnaiz, P., Gracia, M.D. y Soto F.J. (Coords.) (2018). Tecnología accesible e inclusiva: logros, resistencias y desafíos. Consejería de Educación, Juventud y Deportes de la Región de Murcia. http://diversidad.murciaeduca.es/publicaciones/tecno2017/investiga.html

- Arriba, JA., Modino, R. y Cid, J. (2012). Programa iParlea de Comunicación Aumentativa mediante la selección de símbolos pictográficos en dispositivos móviles (iPad, iPod, iPhone) para usuarios con dificultades de expresión oral. En J. Navarro et al. (Coords.) (2012) Respuestas flexibles en contextos educativos diversos. Consejería de Educación, Formación y Empleo de la Región de Murcia. http://diversidad.murciaeduca.es/publicaciones/dea2012/docs/iparlea.pdf

- González, G. (2009). Logopedia escolar digitalizada. Instituto Superior de Formación y Recursos en Red para el Profesorado (ISFTIC). http://ares.cnice.mec.es/informes/18/index.htm

- Marqués (2012). Impacto de las TIC en la educación: funciones y limitaciones. 3C TIC. Cuadernos de desarrollo aplicados a las TIC, 2(1). https://doi.org/10.17993/3ctic.2013.21

- Navarro, J., Fernández, M.T., Soto, F.J. y Tortosa, F. (Coords.) (2012). Respuestas flexibles en contextos educativos diversos. Consejería de Educación, Formación y Empleo de la Región de Murcia. http://diversidad.murciaeduca.es/publicaciones/dea2012/

- Rodríguez, Y. y Rodríguez, G. E. (2019). Competencia digital en Fonoaudiología: retos de formación profesional desde los avances tecnológicos. Revista de Logopedia, Foniatría y Audiología, 39(4), 192-200. https://doi.org/10.1016/j.rlfa.2019.04.003

- Ruiz, J. y Sánchez, J. (2008). Tecnologías de apoyo en logopedia. Horsori.

- Santos, A. (2010). El uso de las nuevas tecnologías para alumnos con necesidades educativas específicas. Bubok Publishing.

- Toledo, P. y Hervás, C. (2008). Nuevas tecnologías aplicadas en el ámbito de la logopedia. Ministerio de Cultura.