

**COURSE DATA****DATA SUBJECT****Code:** 46940**Name:** ICT Applications in Therapeutic Pedagogy**Cycle:** Master's Degree**ECTS Credits:** 3**Academic year:** 2026-27**STUDY (S)**

| Degree                                      | Center                                         | Acad. year | Period         |
|---------------------------------------------|------------------------------------------------|------------|----------------|
| 2276 - Master's Degree in Special Education | Facultat de Filosofia i Ciències de l'Educació | 1          | Second quarter |

**SUBJECT-MATTER**

| Degree                                      | Subject-matter                                                               | Character |
|---------------------------------------------|------------------------------------------------------------------------------|-----------|
| 2276 - Master's Degree in Special Education | TIC, Psicomotricidad y Expresión Musical y Plástica en Pedagogía Terapéutica | ELECTIVES |

**COORDINATION**

LACRUZ PEREZ IRENE

**SUMMARY**

The course Applications of ICT in Special Education will address content related to equality and a gender perspective, and will promote knowledge of Organic Law 10/2022, which aims to guarantee comprehensive sexual freedom and protection against sexual and gender-based violence. It will also integrate teaching practices for the prevention and detection of sexual violence, in coordination with institutional resources and protocols established by the University of Valencia (UV).

Information and Communication Technologies (ICT) have become an indispensable tool in the daily work of Special Education teachers who support students with Specific Educational Support Needs (SESN). Their use not only makes it possible to adapt the curriculum to the particular needs of each learner, but is also essential for ensuring universal accessibility within learning environments.

Throughout the course, students will explore key technological resources and environments for Special Education practice from a critical and reflective perspective, organised around three main areas:

- Universal accessibility and Universal Design for Learning (UDL) supported by ICT tools.



- The exploration and pedagogical evaluation of institutional portals and repositories of specialised web-based educational resources.
- The practical design of multimodal curricular materials using authoring software and generative Artificial Intelligence (AI) tools (such as accessible visual narratives, digital communication boards based on Augmentative and Alternative Communication (AAC) systems, gamified educational resources, and multimedia materials).

This course is directly aligned with Sustainable Development Goal (SDG) 4: Quality Education, contributing specifically to Target 4.5 (eliminating gender disparities in education and ensuring equal access for vulnerable populations, including persons with disabilities) and Target 4.a (building and upgrading education facilities that are disability-sensitive and gender-sensitive and that provide safe, non-violent, inclusive, and effective learning environments for all).

This course will focus on fostering an understanding of the regulatory framework and the fundamental principles of Organic Law 10/2022, dated September 6, on the comprehensive guarantee of sexual freedom. It will cover topics related to equality and a gender perspective, and will address strategies for the prevention, awareness-raising, and detection of sexual violence in educational settings, while integrating teaching practices aimed at preventing and detecting sexual violence, in coordination with the institutional resources and protocols established by the UV.

## PREVIOUS KNOWLEDGE

## RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

## OTHER REQUIREMENTS

## COMPETENCES / LEARNING OUTCOMES

### 2276 - Master's Degree in Special Education

Be able to design, apply and evaluate assistive technologies, authoring languages and/or alternative and/or augmentative communication systems.

Collaborate effectively in work teams, assuming responsibilities and leadership roles and contributing to collective improvement and development.

Demonstrate critical and self-critical reasoning in the field of special education, considering aspects such as professional ethics, moral values and the social implications of the different activities carried out.

Design, implement and evaluate inclusive education strategies.

Design and manage assessment and intervention procedures in the field of specific educational support needs.

Have an active commitment to non-discrimination, equal opportunities and equity.



Have the learning skills that allow students to continue to study in a manner that may be largely self-directed or autonomous.

Know how to communicate effectively, both orally and in writing, adapting to the characteristics of the situation and the audience.

Know how to prevent the emergence and/or intensification of specific educational support needs.

Know the contributions of assistive technologies, authoring programmes and alternative and/or augmentative communication systems.

Know the ethical principles of professional action in the field of specific educational support needs.

## **DESCRIPTION OF CONTENTS**

### **1. ACCESSIBILITY THROUGH DIGITAL TOOLS IN SPECIAL EDUCATION**

1. The concept of universal accessibility and Universal Design for Learning (UDL) supported by ICT.
2. Authoring tools to ensure cognitive, visual, auditory, and emotional accessibility.
3. Technology-mediated Augmentative and Alternative Communication (AAC) systems
4. Ethical principles in the use of technology in inclusive contexts, with particular attention to promoting gender equality, respecting sexual freedom, and supporting affective and sexual diversity in virtual environments.

### **2. PORTALS AND WEB RESOURCES FOR SPECIAL EDUCATION**

1. Exploration, analysis, and critical evaluation of web portals, institutional repositories, and didactic resource platforms specific to Special Education (including the free software/LliureX environment).
2. Pedagogical and accessibility criteria for selecting online resources.
3. Critical analysis of digital materials in order to detect and avoid gender bias, promoting equality and the visibility of diversity.

### **3. EDUCATIONAL SOFTWARE AND DESIGN OF RESOURCES IN SPECIAL EDUCATION**

1. Evolution of educational software and authoring tools towards interactive, dynamic, and multi-



device learning environments.

- Contributions of generative Artificial Intelligence (AI) tools in Special Education intervention: automation of curricular adaptations, generation of accessible multimedia materials, and personalization of learning.
- Design, customization, and practical application of accessible digital resources for Special Education intervention: software-based Augmentative and Alternative Communication (AAC) systems (digital communication boards), accessible visual narratives (picture-based stories), multimodal curricular materials, and gamification-based learning resources (such as digital BreakOuts).
- Creation of accessible audiovisual and curricular materials for students with Specific Educational Support Needs (SESN).
- Gender perspective in the design of digital resources: use of inclusive language and elimination of gender stereotypes in visual and pictographic supports.

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## WORKLOAD

### PRESENCIAL ACTIVITIES

| Activity                          | Hours        |
|-----------------------------------|--------------|
| Theoretical and practical classes | 30,00        |
| <b>Total hours</b>                | <b>30,00</b> |

### NON PRESENCIAL ACTIVITIES

| Activity                              | Hours        |
|---------------------------------------|--------------|
| Attendance at other activities        | 0,00         |
| Individual or group project           | 40,00        |
| Independent study and work            | 9,00         |
| Preparation of lessons                | 0,00         |
| Preparation for assessment activities | 0,00         |
| Resolution of case studies            | 5,00         |
| <b>Total hours</b>                    | <b>54,00</b> |

## TEACHING METHODOLOGY

Group and cooperative work.



Academic tutoring.

Problem-based learning.

Self-learning systems.

Work in specific classrooms (computer classroom).

Small group teaching.

Participatory master lesson

## EVALUATION

The teacher will assess individual/in groups classroom tasks.

Fraudulent conduct in assessment tests and plagiarism in assessment work will be considered in accordance with the UV Assessment and Grading Regulations (ACGUV 108/2017) and the Protocol for Action against Fraudulent Practices (ACGUV 123/2020).

The use of technologies (including AI) to create assessment materials without prior and express authorization from the teaching staff will prevent them from being considered as self-authored and will be treated according to current regulations and the UV Code of Coexistence and Good Practices (ACGUV 300/2023, DOGV, no. 9747/18.12.2023).

## REFERENCES

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- Sartoreto, S.E., Costi, L.M., Rodrigues, D.A. (2014). Tecnologías de la información y comunicación, TIC, en educación especial. Universidad de Alcalá.
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### Complimentary references

- Adam, T., & Tatnall, A. (2017). The value of using ICT in the education of school students with learning difficulties. *Education and Information Technologies*, 22(6), 2711-2726.
- Ciampa, K. (2017). Building bridges between technology and content literacy in special education: Lessons learned from special educators use of integrated technology and perceived



- benefits for students. *Literacy Research and Instruction*, 56(2), 85-113.
- Edyburn, D. L. (2013). Critical issues in advancing the special education technology evidence base. *Exceptional Children*, 80(1), 7-24
  - Liu, G. Z., Wu, N. W., & Chen, Y. W. (2013). Identifying emerging trends for implementing learning technology in special education: A state-of-the-art review of selected articles published in 2008-2012. *Research in Developmental Disabilities*, 34(10), 3618-3628
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  - Tárraga, R., Sanz, P. e Iborra, A. T. (2017). Uso de los pictogramas con apoyo de las TIC en la intervención educativa en niños con Trastorno del Espectro Autista. *Comunicación y Pedagogía: Nuevas tecnologías y recursos didácticos*, 297, 29-34.