COURSE DATA

DATA SUBJECT

Code: 46932
Name: Motor Disabilities and Brain Injury
Cycle: Master's Degree
ECTS Credits: 4.5
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	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2276 - Master's Degree in Special Education	Intervención en Discapacidad Cognitiva	COMPULSORY

COORDINATION

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SUMMARY

This course will address, from a comprehensive and inclusive perspective, the psychoeducational aspects of learners with motor disabilities and acquired or congenital brain injury.
The term brain injury refers to damage affecting the central nervous system (brain, brainstem, and cerebellum). Among the most common causes in children and young people are cerebral palsy, intracranial tumors, and traumatic brain injuries.
Learners with brain injuries present a wide range of characteristics. These differences are not only due to the location, extent, and severity of the injury, but also to factors such as the age at which it occurs, previously acquired skills, the quality of medical, educational, and rehabilitation interventions, family and environmental support, and the availability of resources and opportunities. Each person¿s response is also influenced by individual traits such as adaptability and resilience.
Brain injury can result in a variety of functional consequences, which may affect:
¿ Motor skills (e.g., spasticity, athetosis, ataxia);
¿ Communication (e.g., expressive and receptive language difficulties, including dysarthria or non-verbal communication);
¿ Sensory processing (visual, auditory challenges, etc.);

¿ Cognitive functions (attention, memory, executive functioning);
¿ Behavior and emotional regulation.
These aspects can impact learning, classroom participation, socialization, and overall well-being. Additionally, some associated conditions such as fatigue, hydrocephalus, epilepsy or ADHD should also be considered when planning educational responses.
In intervention processes, it is essential to consider brain plasticity, as the developing nervous system often allows functional reorganization following injury. In general, recovery tends to be better in focal injuries than in diffuse ones, particularly during early developmental stages.
To promote autonomy and make the most of each learner¿s abilities, a wide range of assistive technologies are used in areas such as mobility, oral and written communication, cognitive organization, interaction with the environment, and educational, leisure or daily living activities.
Among motor disorders not directly associated with brain injury ¿typically of spinal, muscular or osteoarticular origin¿ the course will cover cerebral palsy, spina bifida, and myopathies. For each condition, clinical characteristics, etiological factors, educational needs and intervention strategies will be explored in school, family and community contexts.
¿ In cerebral palsy, pedagogical support strategies tailored to different clinical profiles will be developed.
¿ In the case of spina bifida, educational and social implications will be analyzed with a focus on inclusive support strategies.
¿ Regarding myopathies, different types and necessary educational adaptations will be reviewed to facilitate learners¿ participation in all developmental settings.
Special attention will be given to access adaptations within the educational system, such as the removal of architectural barriers, the use of assistive technology, and accommodations related to mobility, communication, and everyday school life.
Inclusive educational policies have enabled the participation of many learners with motor disabilities or brain injury in all levels of the education system. This progress has fostered a fairer society that embraces human diversity, reduces stigma, and promotes values such as equity, respect and cooperation.

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 enrolment restrictions have been specified with other subjects in the curriculum

COMPETENCES / LEARNING OUTCOMES

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

Design, plan and evaluate ordinary and specific care measures according to the different specific

educational support needs, as well as in social and work contexts.

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 and understand the functioning of the nervous system and the consequences associated with early brain damage.

Know and understand the procedures for research, assessment and intervention in the school environment for children with specific educational support needs.

Know how to collaborate in academic and social environments with families, professionals and institutions.

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 aetiology and the physical, cognitive and emotional characteristics of different syndromes with specific educational support needs.

DESCRIPTION OF CONTENTS

1. Who are we talking about?

1. Motor disorders: Definition and main classifications.
2. Brain-origin lesions: Cerebral Palsy.
3. Spinal-origin lesions: Spina Bifida.
4. Muscle-origin lesions: Myopathies.

2. Evaluation of motor disorders

1. Introduction to evaluation.
2.Developmental scales.
3. Functional assessment: the ICF.

3. Educational and multidisciplinary intervention

3.1. Principles of Evidence-Based Practice (EBP).
3.2. Multidisciplinary approach and collaborative work.
3.3. The role of families in educational intervention.
3.4. Physiotherapy intervention and educational coordination.
3.5. Assistive technology and accessibility in the school setting.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theoretical and practical classes	45,00
Total hours	**45,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	10,00
Individual or group project	20,00
Independent study and work	20,00
Preparation of lessons	10,00
Preparation for assessment activities	5,00
Resolution of case studies	5,00
Total hours	**70,00**

TEACHING METHODOLOGY

Given the theoretical and practical nature of the competencies to be developed, the course will adopt an active and participatory methodology, aimed at meaningful knowledge construction, critical reflection, and professional application.
Various teaching strategies will be combined:
¿ Theoretical sessions, including interactive lectures and class discussions on key concepts.
¿ Supervised practical activities, such as case analysis and resolution, classroom-based and off-site practices, use of digital tools, and student presentations.
¿ Collaborative work, involving the development of a group project addressing the different thematic areas, integrating theory and practice.
¿ Independent study and individual tasks, encouraging self-directed learning.
¿ Personalized tutorials, to provide academic guidance, resolve doubts, and support project development.
¿ Formative and continuous assessment, embedded in the learning process and focused on improvement.

EVALUATION

Considering that attendance is considered mandatory for students (roll call will be taken in each session with classroom activities), three aspects will be taken into account for evaluation: exams, individual and group assignments, and activities conducted in class.

The requirements to pass the course are: passing both the exam and successfully completing all proposed assignments. This means achieving an average of 5 in each of the following parts:

- Exam: accounts for 70% of the final grade and includes open-ended and/or multiple-choice questions, as well as the completion of a practical task.
- Individual and group assignments, as well as attendance and participation in class activities, contribute 30% to the final grade.

Both parts can be retaken in a second sitting. If either part is failed, the same criteria as in the first sitting will apply in the second, and the passing grade will be retained. Participation in class activities will be replaced by a written practical test based on the activities conducted.

To obtain an "honors" grade, attendance in classes and the quality of individual assignments submitted will be considered.

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

- 10.1 Referencias Básicas

Referencia b1: Grau Rubio, C. y Gil Llario, Mª.D. (coords.) (2010). Intervención psicoeducativa en necesidades específicas de apoyo educativo. Pearson.
Referencia b2: Latorre Latorre, A. y Bisetto Pons, D. (2010). Trastornos motores. Adaptación curricular y casos prácticos. Tirant lo Blanch.
Referencia b3: Latorre Latorre, A. y Bisetto Pons, D. (2009). Trastornos del desarrollo motor. Programas de intervención y casos prácticos. Pirámide.
Referencia b4: DEC. (2014). Prácticas recomendadas. División de la Infancia Temprana para Niños Excepcionales. https://ir.uv.es/zpycn2U

Referencia b5:
Ferrer, A., & Ávila, V. (2003). Intervención temprana en niños con discapacidades físicas y sensoriales. En F. Viguer et al. (Eds.), Intervención temprana. Pirámide.
Referencia b6: Mañá, A., & Lloria, M. (2018). Alumnado con discapacidad motora. En C. Grau & M.ª D. Gil Llario (Coords.), Intervención psicoeducativa en alumnado con necesidades específicas de apoyo educativo (pp. 229¿246). Tirant lo Blanch.

Referencia b7: Rosenbaum, P., & Gorter, J. W. (2011). The F-words in childhood disability: I swear this is how we should think! Child: Care, Health and Development, 38(4), 457¿463. https://doi.org/10.1111/j.1365-2214.2011.01338.x

10.2 Referencias Complementarias

Referencia c1: Cook, B., Tankersley, M., & Landrum, T. J. (2014). Council for Exceptional Children: Standards for evidence-based practices in special education. Teaching Exceptional Children, 46(6), 206¿212.

Referencia c2: Grau, C. (2012). Alumnado con tumores intracraneales: el papel de la escuela en la mejora de la calidad de vida y en la rehabilitación de los efectos tardíos de la enfermedad y sus tratamientos. Educatio Siglo XXI, 30(1), 161¿186. http://revistas.um.es/educatio/article/view/149191/132171

Referencia c3: Bosch, M. y Fernández-Llebrez, C. (2014). Las pautas de lectura fácil como metodología de aproximación al trabajo en el aula. Estudio de caso en estudiantes con síndrome de Down. Revista Síndrome de Down, 31, 155-162.
Referencia c4: González Gancedo, J., & Fernández García, D. (2007). Proceso de cuidados en un paciente con espina bífida: Caso clínico. Enfermería Clínica, 17(2), 90¿95. https://www.elsevier.es/es-revista-enfermeria-clinica-35linkresolver-proceso-cuidados-un-paciente-con-13100760

Referencia c5: Sebastián, M. Y. (2002). Tratamiento fisioterápico en la parálisis cerebral dentro del ámbito educativo: a propósito de un caso clínico. Fisioterapia, 24(4), 196¿205. https://doi.org/10.1016/S0211-5638(02)73005-8

Referencia c6: Alcantud Marín, F., & Soto Pérez, F. J. (Coords.). (2003). Tecnologías de ayuda en personas con trastornos de comunicación. Nau Llibres.

Referencia c7: Centro de Recursos de Educación Especial de Navarra. (2000). Necesidades

educativas especiales: Alumnado con discapacidad motórica. Gobierno de Navarra.

Referencia c8: Grau, C., & Cañete, A. (2000). Las necesidades educativas especiales de los niños con tumores intracraneales. ASPANION.

Referencia c9: Martín Betanzos, J. (2011). Parálisis cerebral y contexto escolar. Necesidades educativas: del diagnóstico a la intervención. Eos.

Referencia c10: Torres Monreal, S. (Coord.). (2001). Sistemas alternativos de comunicación: Manual de comunicación aumentativa y alternativa. Sistemas y estrategias. Ediciones Aljibe.

Referencia c11: Jiménez Rodrigo, M. A. (1998). Espina bífida: Aspectos psicológicos. Ministerio de Trabajo y Asuntos Sociales.

Referencia c12: Semrud-Clikeman, M., & Teeter Ellison, P. A. (2011). Neuropsicología infantil: Evaluación e intervención en los trastornos neuroevolutivos. Pearson.

Referencia c13: Serrano, M. (2021). Práctica educativa basada en la evidencia: recursos y estrategias. Comunicación presentada en el III Congrés d¿Educació Inclusiva: Accessibilitat Universal, CEFIRE ¿ GVA, València.