

## Course guide

### 240312 - 240NR012 - Rehabilitation Therapies

**Last modified:** 24/07/2025

**Unit in charge:** Barcelona School of Industrial Engineering  
**Teaching unit:** 1022 - UAB - (ANG) pendent.

**Degree:** MASTER'S DEGREE IN NEUROENGINEERING AND REHABILITATION (Syllabus 2020). (Compulsory subject).

**Academic year:** 2025    **ECTS Credits:** 3.0    **Languages:** Spanish, English

#### LECTURER

---

**Coordinating lecturer:** JOAN VIDAL SAMSÓ

**Others:** JOAN VIDAL SAMSÓ, ELOY OPISSO SALLERAS, JESÚS BENITO PENALVA, SERGIU ALBU, RAÚL PELAYO VERGARA, ROCÍO SÁNCHEZ-CARRIÓN, ANDREA JIMÉNEZ CRESPO, JOSEP MEDINA CASANOVAS, MARK A. WRIGHT, IGNASI SORIANO CRESPO, ALBERT BORAU DURAN, NICOLÁS RIVAS ZOZAYA

#### REQUIREMENTS

---

No official prerequisites are defined for this subject. However, it is recommended that the student has acquired basic knowledge and competences on Rehabilitation Therapies.

#### TEACHING METHODOLOGY

---

- Theory classes with systematic explanations of the subject topics, giving relevance to the most important concepts.
- The student will acquire the basic knowledge of the subject, which will be complemented by self-study of the themes of the subject program.
- Practical sessions for the observation and performance of procedures for electrophysiological techniques and their biomedical application.

#### LEARNING OBJECTIVES OF THE SUBJECT

---

- To identify the bio-psycho-social consequences derived from disability of neurological origin.
- To describe the main substitute and rehabilitative therapeutic strategies in neurological injuries and respiratory and cardiac complications.
- To know the main functional and cognitive assessment scales in rehabilitation.

## CONTENTS

---

### REHABILITATION THERAPIES

**Description:**

REHABILITATION THERAPIES

**Specific objectives:**

- Introduction to Neurorehabilitation
- Spinal Cord Injury
- Brain Injury
- Neuropathic pain
- Neurodegenerative Diseases
- Neurodevelopmental disorders
- Cognitive rehabilitation
- Speech and Language rehabilitation
- Gait rehabilitation
- Physical activity and sport
- Balance rehabilitation
- Sphincter rehabilitation
- ADLs rehabilitation
- Upper limb rehabilitation
- Pediatric rehabilitation

Clinical lab visit

Application examples

**Full-or-part-time:** 75h

Theory classes: 23h

Laboratory classes: 2h

Guided activities: 3h

Self study : 47h

## GRADING SYSTEM

---

The evaluation of the subject will be based on the theoretical and practical syllabus contained in the Program.

Final examination will consist in:

- Multiple-choice questions to evaluate the theoretical concepts of the subject, representing 75% of the overall grade.
- Work assignment, representing 25% of the overall grade:

Use case (2 pages max) of application of technology in a current rehabilitation therapy or in a completely new one:

- State of the art (Rehab therapy)
- Technology description
- Hypothesis
- Methodology (Target [Diagnose/es], Dose, Intensity...)

All Works must be defended orally.

A make-up examination will be offered under the same conditions to students who had not passed the final exam.