

## **STUDENT GUIDE**

### **MODULE:**

**Neurorehabilitation and physical activity**

**Coordinator:** Dr. Josep Medina Casanovas

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**UAB Code:** 44133

**Modality:** mandatory

**6 ECTS**

### **Presential classes:**

**1<sup>st</sup> semester of the 2022-2023 academic year**

**Dates:** from September 26<sup>th</sup> to 30<sup>th</sup> and from October 03<sup>rd</sup> to 07<sup>th</sup>, 2022

**Schedule:** from 9 a.m. to 2 p.m.

### **Objective**

Provide the tools to understand the multidisciplinary process (bio-psycho-social model) of Neurorehabilitation, considering the great variability of symptoms of the neurological patient, as well as the neurological patient, as well as the procedures used for the approach and personal, family and social adaptation to disability in an interdisciplinary model. Also, to know the origins and the evolution of the sport as a base of the current adapted physical activity and to train the students to carry out programs of physical and sports activity with people with functional limitations in different phases of their pathology.

### **Workload:**

6 ECTS: equivalent to 150 hours of student work, of which 45 h are presential.

### **Competences and learning outcomes**

- E01 Demonstrate an advanced domain of knowledge and technologies in Neurorehabilitation as well as patient care techniques to improve the quality of life of people affected by a disability of neurological origin.
- E01.01 Distinguish the main procedures and the interdisciplinary work methodology in neurorehabilitation.
  - E01.02 Determine and prioritize the objectives, resources and actions in the rehabilitation process.
  - E01.03 Describe and use strategies for the development of teamwork skills.
  - E01.04 Analyze quality management in care and ethical aspects in neurorehabilitation.
  - E01.05 Describe the legal aspects related to disability.
  - E01.06 Identify the physical education activities that correspond to the clinical characteristics of patients with spinal cord injury and acquired brain injury.
  - E01.07 Differentiate the activities that correspond to group and individual exercises.
  - E01.08 Identify and describe competitive sports activities in the field of disability.
  - E01.09 Recognize sport as a way of socialization and maintenance of health.
- E02 Analyze the physical, psychological and social causes and consequences of neurological disability.
- E02.01 Explain the actions of prevention, disclosure and social awareness in the field of acquired disability.
  - E02.02 Analyze the situation and adequacy of resources, social services, legal aspects and risk factors of social exclusion.
  - E02.03 Specify the objectives and the role of the associations of the disabled that participate in the Social Council of the Institut Guttman.
  - E02.04 Integrate into the therapeutic programs all those contents that, in different phases of the rehabilitation process, physical activity and sport can contribute.
  - E02.05 Recognize the appropriateness and inadequacy of the sport and its modalities, after hospital discharge.
  - E02.06 Integrate functions, activities and participation at the social level that, from the field of rehabilitation, are proposed to people who study physical education or practice sports.

E03 Perform and interpret the explorations and apply the advanced techniques that allow the diagnosis and definition of therapeutic strategies in neurorehabilitation.

E03.01 Evaluate the socio-health situation of the person with disability and suggest the best resource to home and community reintegration.

I03.02 Dominate and apply the main tests and evaluation scales in relation to physical activity

E04 Apply knowledge in Neurorehabilitation to solve problems about the treatment and specialized rehabilitation of people with spinal cord injury or with acquired brain injury as well as the complications of their pathology.

E04.01 Apply the interdisciplinary methodology in the planning and monitoring of the neurorehabilitation process.

E04.02 Plan physical maintenance programs as a healthy resource and quality of life in the hospital.

E04.03 Propose a prevention plan for the most common complications in sports practice.

E04.04 Distinguish and apply the new technologies applied to fitness, physical activity and high-performance sports.

### **Transversal Competences**

GT01 Analyze, synthesize and take decisions by reasoning critically about the different professional actions.

GT04 Integrate into multidisciplinary teams in diverse cultural and scientific environments, creating and maintaining a climate of open collaboration and teamwork.

### **Teaching methodology**

The methodological approach of the module starts from considering the student as the protagonist of his teaching and learning process. The student must be active and autonomous throughout the process and the teacher will give support by providing the information and resources necessary for the learning to take place.

The module is presential and have an obligatory attendance of the 80% of the subjects. The methodology in class is an expository presentation with audiovisual support and workshops. Through the e-learning Guttman platform you will have access, among others, to the calendar and class schedules, to bibliographic support documentation, and you can also use it to do a collaborative work between the students and, between the students and teachers to clarify doubts, to share interesting findings, news, articles, books, conferences, etc.

The information presented in this document provides a summary of the main features of the program and learning outcomes that you could reasonably expect and achieve if you make the most of the learning opportunities provided to you.

### **Contents description:**

- The Bio-psycho-social and interdisciplinary work
- Quality in Neurorehabilitation
- Hospital discharge planning
- Physical activity and sports as a tool for rehabilitation
- Competition sport according to the different levels of involvement

- Sport as a means of socialization and maintenance of health

### Competences evaluation

The evaluation activities will be carried out at the end of the module. These are activities that you must work individually and consists of:

1. **Theoretical tests:** It has a value of **30% of the final grade of the module** and will consist of 40 multiple-choice questions of all the topics addressed in the program. The wrong answers subtract 0.25.
2. From a **practical case** you should plan a program of recommendations that will be made to the patient to stay healthy after hospital discharge. All information, education, healthy activities, leisure contacts or treatment techniques for physical and psychological well-being. **30% Percentage** You will have access to the practical case study from the beginning of the module and once you have solved it you will have to enter it in the "Bústia de lliurament de treballs" that you will find in the e-learning Guttman platform.
3. **The Portfolio** is an evaluation for folders that consists of the collection of student work, to demonstrate through progressive improvement, what you can do, finding, searching or compiling in a certain thematic area or in a specific content. It is a living, dynamic and continuously updated document, even when you have finished your master studies. You must collect information on the topics: Quality in Neurorehabilitation or motor learning, functional assessment, specific rehabilitation techniques or physical activity, and you can deliver it in paper format or in digital format.

The Portfolio have a value of **30% of the final grade of the module**.

This evaluation section will favor the achievement of the specific competences of analysis and identification of the main problems that motor disability can generate, to practice and interpret the explorations and diagnostic techniques, the accessibility difficulties of people with disabilities and to distinguish and put into practice the specific activity and sport. Within the transversal competences, the Portfolio will help you to manage complex information, to achieve skills to organize and plan tasks, to be up-to-date on new techniques and to review, analyze and update scientific literature.

#### Portfolio Valuation Criteria:

1-Fidelity in the presentation regarding the demand	0-2
2-Neatness and clarity	0-2
3-Ability to draw conclusions from the solutions presented. Utility	0-2
4-Use of graphic language. Tables, drawings, schemes...	0-2
5-Ability to synthesize the elements presented	0-2
<b>TOTAL:</b>	<b>10 POINTS</b>

4. **The attendance and participation** I class has a weight of **10% in the final mark of the module**.

The maximum date for the delivery of the test is **October 23<sup>th</sup>, 2022**.

- If you do not present evidence of learning or you have not attended the minimum number of hours of the programmed activities of the module (80%), the subject will be "not evaluable". The qualification of not evaluable in the final evaluation report implies exhausting the inherent right in the module's enrollment.

- You will pass the subject if you obtain a minimum score of 5 points (scale 0-10) as the average mark of the two evidences of learning.

### **Procedure and recovery criteria**

The re-evaluation is a process that will be put into operation once the period of publication of the final grades has ended.

- You will be entitled to a re-evaluation if you have obtained between 3.5 and 4.9 in the average grade of the subject.
- The test submitted to the re-evaluation process may not exceed 5.0 points (approved) in the final grade.

### **The module's web**

In the web of each module you Will find information of interest for the follow-up of the study:

- Forum of the module. Through this space you can keep in touch with the teachers or among the other students, to provide suggestions, answer questions, etc.
- News. It is the space from where you Will receive news and announcements about the evolution of the module.
- Programs. The module can be downloaded in PDF format, indicating the subjects, schedules and the teaching staff.
- Documentation. Here you Will find information and bibliography of interest that you can consult for the later study of the topics.
- Evaluation of competences. In this space you Will find all the necessary information and the delivery dates of the evaluation that will be done for this module

### **Satisfaction surveys**

It is very important that students send us your comments, complaints and suggestions regarding the module. That's why we put t your disposal two evaluation surveys. The surveys are **anonymous**:

- Teacher evaluation. Daily, at the end of the classes, you Will receive an email (on your computer or on your mobile) that Will link you to a brief satisfaction questionnaire about the teachers that have taught that day. The objective of these surveys is to collect your opinion that will be a great help for the improvement of this module.
- Module evaluation. Also, at the end of the course you can answer the general evaluation survey of the module.

### **Coordination**

For any aspect of the organization and planning of the module you can contact

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### RECOMMENDED BIBLIOGRAPHY

1. [La medida de la salud](#). Badia, X., Salamero, M., Alonso, J. (2002).. Edimac, 3ª edició.
2. [Valoración de la discapacidad física: El Índice de Barthel](#). Cid Ruzafa J., Damián Moreno J. (1997). *Rev. Esp Salud Pública*; 71: 127 – 137.
3. [Introducción a la metodología de la investigación empírica](#). Editorial Paidotribo. Heinemann, K. (2003).
4. [Sports and Recreation for People with Spinal Cord Injuries](#). Ian Rice, Rory A. Cooper, Rosemarie Cooper, Annmarie Kelleher, Amy Boyles. *Spinal Cord Injuries (FIRST EDITION)*, 2009, Pages 455-477.