

STUDENT GUIDE

MODULE:

**Physiopathology and therapeutic approach of Brain
Damage and neurodegenerative diseases in adults and
children**

Coordinators:

Dr. Raúl Pelayo Vergara
rpelayo@guttmann.com

Dra. Rosa Terré Boliart
rterre@guttmann.com

UAB Code: 44137

Modality: mandatory

12 ECTS

Presential classes:

Dates: from March 15th to March 19th, from April 12th to
April 16th and from May 10th to may 14th, 2021

Schedule: 9 a.m. to 3 p.m.

Objective

Study the Neurorehabilitation process of the different pathologies that compose the Acquired Brain Injury (DCA) and the most prevalent Neurodegenerative Diseases in adults and children, its evaluation, diagnosis and the most Advanced therapeutic strategies. It will be addresses from a holistic perspective, considering its great complexity and variability, without forgetting aspects such as neuropsychological and speech as the management of dysphagia.

Workload

12 ECTS: equivalent to 300 hours of student work, of which 90h are on-site.

Competences and learning outcomes

E01 Demonstrate an Advanced domain of knowledge and technologies in Neurorehabilitation as well as patient care and attention techniques to improve the quality of life of people affected by a neurological disability.

E01.23 Identify the main symptoms and secondary complications of the ICTUS and the TCE.

E01.24 Classify the severity of the TCE.

E01.25 Identify the evolutionary particularities of the main progressive diseases in relation to their rehabilitation.

E01.26 Identify the most prelevant pathologies in the neurological disability of the child.

E02 Analyze the causes and physical, psychological and social consequences of neurological Neurorrehabilitador diasavbility.

E02.12 Integrate affectation in multiple spheres (behavioral, cognitive, Language, swallowing, motor, sensory,...) of brain injury and progressive neurological diseases in the specific work of each of the specialties that make a multidisciplinary neurorehabilitator team.

E02.13 Evaluate the different therapeutic strategies of Brain injury and the different neurodegenerative diseases.

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

E03.10 Perform or interpret the most Advanced diagnostic and explorations techniques in the patient with DCA or neurodegenerative diseases.

E03.11 Classify from the functional point of view the different neuropathic disabilities.

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

E04.10 Establish a prevention plan for the most common complications in DCA and neurodegenerative diseases.

E04.11 Design individual rehabilitation programs based on the particular characteristics of progressive diseases in adults.

E04.12 Design individual rehabilitation programs based on the particular characteristics of progressive diseases in child.

Transversal Competences

- GT01 Analyze, synthesize and make decisions reasoning critically in the different professional activities.
- GT02 Establish protocols of work through the search of information in the scientific literature.
- GT03 Work according to professional ethics and responsibility.
- GT04 Integrate into multidisciplinary teams in diverse cultural and scientific environments, creating and maintaining a climate of open collaboration and teamwork.

Teaching methodology

The teaching methodology and the proposed evaluation may undergo some modification depending on the restrictions on attendance that the health authorities impose.

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:

- Epidemiology, diagnosis and neurorehabilitation treatment of the cranioencephalic traumatism (TCE).
- Epidemiology, diagnosis and neurological and rehabilitation treatment of the cranioencephalic traumatism (TCE).
- Introduction to the neurodegenerative disease diagnosis, evaluation and treatment.
- Neuropsychological Rehabilitation.
- Diagnosis and treatment of the neurogenesis dysphagia.
- Speech therapy rehabilitation.

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. **Resolution of practical cases:** 2 cases will be proposed with questions to develop, one at the end of the first block of the module (13/04) and the other at the end of the module.
 - a. ICTUS and/or DCA clinical case **(30% of the final grade of the module):**
 - i. Period from 13/04 to 30/04.
 - b. Neurodegenerative and/or infantile clinical case **(30% of the final grade of the module):**
 - i. Period from 14/05 to 30/05.
 2. **Theoretical tests:** It Will consists of a multiple choice questionnaire about all the subjects taught **(30% of the final grade of the module):**
 - i. Period from 14/05 to 30/05
 3. **The attendance and participation** in class has a weight of **10% in the final mark of the module.**
- 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 the module temary you can contact

Dr. Raúl Pelayo Vergara
Doctor in Medicine.
Especialista en Neurologia
Institut Guttman – UAB
E-mail: rpelayo@guttmann.com

Dra. Rosa Terré Boliart
Doctor in Medicine. Specialist in
Physical Medicine and Rehabilitation
Institut Guttman – UAB
E-mail: rterre@guttmann.com

BIBLIOGRAFIA RECOMANADA

- **Brain Injury Medicine. Principles and Practice.** Nathan D. Zasler. Ed: DemosMedical New York. ISBN-13: 978-1888799934
- **Neurological rehabilitation.** Richard Greenwood. Ed: Churchill Livingstone, 1993Churchill Livingstone. ISBN 044304287X, 9780443042874
- **Physical Medicine and Rehabilitation: Principles and Practice.** Delisa's Lippincott Raven;
- **Dysphagia: Clinical Management in Adults and Children,** 2009 by Michael E. Groher
- **Diagnosis and treatment of cerebral vascular diseases**
https://scneurologia.cat/wp-content/uploads/2019/03/Guia-Vascular-Societat-Catalana-de-Neurologia_2018.pdf
- **Diagnosis and treatment of Parkinson's disease**
https://scneurologia.cat/wp-content/uploads/2019/02/Guia-Mèdica-de-Parkinson-de-la-Societat-Catalana-de-Neurologia_Actualització_2016-segona-edició_def.pdf
- **Diagnosis and treatment of Multiple Sclerosis**
<https://scneurologia.cat/wp-content/uploads/2018/12/Diagnòstic-i-tractament-de-Esclerosi-Múltiple-2015.pdf>