

## SCIENZE BIOLOGICHE, MEDICHE E CHIRURGICHE (RJ0009)

### 1. language

Italian.

### 2. course contents

Coordinator: Prof. MASSIMILIANO MIRABELLA

Year Course: 1<sup>st</sup>

Semester: 2nd

UFC: 5

Modules and lecturers:

- ANESTESIOLOGIA GESTIONE DELL' EMERGENZA NEI DIVERSI CONTESTI RIABILITATIVI (RJ0047) - 1 CFU - SSD MED/41 - Prof. Giorgio Conti
- GESTIONE DEL RISCHIO CLINICO (RJ0050) - 1 CFU - SSD MED/09 - Prof. Giuseppe Vetrugno
- NEUROLOGIA TEORIE E TECNICHE AVANZATE NELLE SCIENZE RIABILITATIVE (RJ0046) - 1 CFU - SSD MED/26 - Prof. Massimiliano Mirabella
- NEUROPSICHIATRIA INFANTILE TEORIE E TECNICHE AVANZATE NELLE SCIENZE RIABILITATIVE (RJ0049) - 1 CFU - SSD MED/39 - Prof. Domenica Immacolata Battaglia
- PEDIATRIA GENERALE E SPECIALISTICA TEORIE E TECNICHE AVANZATE NELLE SCIENZE RIABILITATIVE (RJ0048) - 1 CFU - SSD MED/38 - Prof. Antonio Chiaretti

### 3. BIBLIOGRAPHY

The texts and notions necessary for passing the Biological, Medical and Surgical Sciences exam are essentially represented by the contents of the slides projected during the lessons or other documentation presented in classroom during practical training that will be made available to the students.

For any further information in depth about the topics of the course, the following text are recommended (by consulting the appropriate chapters dedicated to the relevant topics):

Neurologia:

- Padovani A, Borroni B, Cotelli MS. Neurologia per le professioni sanitarie. 2018, Piccin (Facoltativo)

Pediatria:

- Nelson: manuale di pediatria. Masson Editore

### 4. LEARNING OBJECTIVES

#### ***Knowledge and understanding (Dublin 1)***

The integrated Course aims to provide students with the methodological tools for a comprehensive and advanced approach to the patient undergoing rehabilitation.

Selected topics regarding adult and pediatric patients affected by the most relevant medical, neurological and childhood neuropsychiatric diseases will be discussed with a particular focus on

the rehabilitative approach.

Furthermore, it aims to provide the basic notions, based on the principles of evidence-based medicine, concerning risk management and evaluation, and theoretical and practical training of Crisis Situation Management on the main emergencies in the various rehabilitation contexts.

#### ***Applying knowledge and understanding (Dublin 2)***

The acquired knowledge will allow the student to have a cultural basis for understanding the notions deriving from the study of different specialised medical disciplines.

To be able to correctly interpret the diagnostic criteria for the main diseases of the central and peripheral nervous system from a clinical and instrumental point of view.

#### ***Making judgements (Dublin 3)***

To be aware of the indication of rehabilitation and other therapeutical interventions as part of a multidisciplinary treatment to modify the course of the diseases and how to manage them in the various clinical contexts

#### ***Communication skills (Dublin 4)***

The acquired knowledge will allow the student to correctly set up the relationship between healthcare worker and patients and to develop the ability to appropriately communicate the clinical picture and the diagnosis to colleagues and other professionals and to describe its possible clinical-therapeutic and rehabilitation implications.

#### ***Learning skills (Dublin 5)***

To acquire knowledge and understanding by studying critically and comparing the theory to the practical aspects. To become autonomous in updating one's knowledge in the field through appropriate and effective use of the main scientific search engines such as PubMed, Embase and Scopus.

### **5. prerequisites**

The students must possess knowledge of internal medicine which constitute the preparatory basis for understanding the main pathological pictures of interest in physical and instrumental medical evaluation of children and adult patients.

In particular the students must have:

- knowledge of anatomy, physiology, and general pathology that form the basis for understanding the main pathological frameworks of interest of physical and instrumental medical semeiotics
- knowledge of anatomical location of the main neurological clinical syndromes of the Central Nervous System and of neuromuscular disorders
- knowledge of the main pathophysiological mechanism of the unstable patient
- knowledge of the basic criteria of multidimensional assessment and evaluation of fragile patients
- notions of childcare and health balances and knowledge of child with disabilities management.

### **6. TEACHING METHODS**

The course is delivered through lectures that make use of the help of slides and theoretical-practical lessons on the main emergencies in the various rehabilitation contexts.

*Knowledge and understanding (Dublin 1):* During the lectures students will have a direct interaction with the teachers and will be encouraged to ask questions and vice versa urged to

answer questions to the teachers on the topics of the lesson.

*Applying knowledge and understanding (Dublin 2):* During the lectures and professional activities the students will be invited to express their opinions, to raise doubts and hypotheses. With the opportunity to deal with the different areas of the integrated course, they will acquire knowledge enough to mature their beliefs in an integrated multidisciplinary context.

*Making judgements (Dublin 3):* During the lectures and professional activities the students will be stimulated to participate actively in the clinical evaluation of cases and in the management of patients.

*Communication skills (Dublin 4):* Students will learn how to communicate with patients and other health-workers and discuss real clinical cases using the language most appropriate to the specific context, medical or scientific.

*Learning skills (Dublin 5):* The student will be required to develop and expand their knowledge by studying not only the teaching material provided or suggested, but also learning to consult independently the sources available on the WEB (e.g. pubmed, UpToDate, etc...).

The student will also learn how to integrate theoretical knowledge with medical reality in the everyday practice.

## 7. OTHER INFORMATION

The teachers are available for information on the organization and contents of the course at the end of each lesson or by e-mail.

## 8. METHODS FOR VERIFYING LEARNING AND FOR EVALUATION

There will be a final oral exam on some topics of the course (Module 3), while the other teachers reserve the right to alternatively use the written exam tool essentially made with open questions. For Module 1 there will be an individual assessment *in itinere* by ERC/IRC Advanced Instructors. The final grade will be expressed in thirtieth and will be the result of the weighted average of the individual exams.

In compliance with the Dublin descriptors and in relation to the topics making up the program, the learner is required to acquire knowledge and understanding, ie to apply himself in the study of the topics inherent in the course; acquire autonomy of judgment, in the sense of studying critically, comparing the theory to the practical aspects; acquire communication skills, with the duty to demonstrate the knowledge acquired; acquire the ability to learn, that is to put yourself in front of the teachers and the study texts in an active way, making the most of the interaction during the lesson hours until the mastery of the subject is achieved.

The student to get the highest marks must demonstrate mastery of the acquired knowledge, ability to apply them in relation to the questions proposed by the teachers and good exposure ability in all the modules that make up the integrated course.

## 9. program

### **Modulo 1- ANESTESIOLOGIA GESTIONE DELL' EMERGENZA NEI DIVERSI CONTESTI RIABILITATIVI (Giorgio Conti)**

Theoretical/practical lessons on the main emergencies in the various rehabilitation contexts and in particular:

Session 1: Emergencies in adult and pediatric patients: main differences and physiopathological aspects; recognition of the unstable patient and stabilization of vital functions

-Session 2: Crisis Situation Management (CRM); principles of cardiopulmonary resuscitation; removal of foreign bodies from the airways; Team Work in emergency situations

### **Modulo 2- GESTIONE DEL RISCHIO CLINICO (Giuseppe Vetrugno)**

- Guiding Principles of Clinical Risk Management
- The Root Cause Analysis (RCA)
- The Failure Mode, Effects, and Criticality Analysis (FMECA)
- Safety 1 vs. Safety 2: healthcare safety in the Gelli-Bianco Law

### **Modulo 3- NEUROLOGIA TEORIE E TECNICHE AVANZATE NELLE SCIENZE RIABILITATIVE (Massimiliano Mirabella)**

- Cerebrovascular diseases
- Multiple Sclerosis and other demyelinating diseases
- Neuromuscular diseases

### **Modulo 4- NEUROPSICHIATRIA INFANTILE TEORIE E TECNICHE AVANZATE NELLE SCIENZE RIABILITATIVE (Domenica Immacolata Battaglia)**

- The main neuropsychiatric disorders in childhood: neurodevelopmental disorders, childhood cerebral palsy, epilepsy, movement disorders, autism spectrum disorders, intellectual disability
- Rehabilitation of children with neuropsychiatric disorders
- Organisation of Child Neuropsychiatry services in Italy

### **Modulo 5- PEDIATRIA GENERALE E SPECIALISTICA TEORIE E TECNICHE AVANZATE NELLE SCIENZE RIABILITATIVE (Antonio Chiaretti)**

- Alte (Apparent Life Threatening Event) and Sids (Sudden Infant Death Syndrome)
- Child abuse
- Treatment of pain in children
- Head injury
- Ultrasound in paediatrics
- Fever and feverish convulsions
- Bronchiolitis and pneumonia
- Basic paediatric resuscitation concepts
- Rheumatic diseases