

**INTEGRATED COURSE: REHABILITATION METHODOLOGY III**

**CFU : 8**

**SSD : MED/48**

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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES

CFU: 2

SSD: MED/48

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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES

NUMERO DI CFU: 2

SSD: MED/48

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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES

CFU: 2

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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES

CFU: 2

SSD: MED/48

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**PREREQUISITES**

*Knowledge of basic sciences (neuroanatomy and anatomy, physiology and neurophysiology), notions of general pathology, basic concepts of surgery and kinesiology are required. Furthermore, to be admitted to the exam of this Integrated Course, the exams Human Anatomy and Physiology, Rehabilitation Methodology I and Rehabilitation Methodology II are preparatory.*

**LEARNING OBJECTIVES**

NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Maimone)

Learning objective is the knowledge of common rheumatic diseases, of those rheumatic diseases that involve an emergency treatment, of socially relevant rheumatic diseases; recognition of symptoms and signs associated with rheumatic diseases; knowledge of the meaning red flags in rheumatology; to be able to evaluate the results of the most indicative laboratory parameters in the diagnostic iter of rheumatic diseases; knowledge of the correct use of imaging in rheumatology (X-rays, ultrasounds, magnetic resonance, computerized tomography, scintigraphy).

These objectives will be achieved through lectures aimed at improving the ability to address and resolve the main issues of Rheumatology field.

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Frontani)

The purpose of the course is to increase the students knowledge about the functional assessment and management of the main muscle-skeletal disorders. Basics on manual therapy and therapeutic exercise will be provided. Allowing the students to properly complete the physical therapy assessment is the last goal of the course, by widening the students' skills to manage and plan a rehabilitation program.

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Berardi)

The course aims to give in a simple and interactive way information relating to assistive devices for autonomy, for sitting posture in a wheelchair, electronic solutions for moving and home automation technologies. Within a process aimed at improving the quality of life of the person with disability, the emphasis is placed on the assistive device as an integral part of the rehabilitation process and tools for its evaluation are offered to the therapist.

The potential and limits of solutions aimed at motor disabilities and life situations are examined. First of all the tricks useful to all users are considered, then the tools are deepened by customizing the choices in complex cases.

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Pellicciari)

Knowledge of the assessment and treatment techniques of a patient with spinal cord injuries are essential objectives.

These objectives will be achieved through lectures aimed at improving the ability to address and resolve the main issues of this field.

## **LEARNING OUTCOMES**

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Maimone)

#### **knowledge and understanding**

At the end of this course the student will have to know:

- The general mechanisms of innate and acquired immunity
- The main signs and symptoms and laboratory parameters in rheumatic diseases
- The imaging techniques in Rheumatology
- The classification of rheumatic diseases.
- Inflammatory arthritis
- Extra-articular rheumatisms
- Main connective tissue diseases
- Outline on pharmacological, rehabilitative and thermal therapeutic strategies in rheumatic diseases

#### **Applying knowledge and understanding**

At the end of the course the student should be able to :

- Use the acquired knowledge to autonomously deepen aspects related to the specific field to which the student will devote his professional activity.

#### **communication skills**

At the end of the course the student should be able to:



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- correctly use the specific scientific terminology

### **making judgements**

At the end of the course the student should be able to:

- make general evaluations over the topics covered.

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Frontani)

After completing this course, the student is able to:

- Understand and apply the main manual therapy techniques
- Understand and apply the therapeutic exercise basics
- Understand and apply the neurophysiological basics on pain
- Assess and manage the main muscle-skeletal disorders
- Plan a rehabilitation program at brief-middle-long term

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Berardi)

#### **knowledge and understanding**

At the end of this course the student will have to know:

- To provide evaluation elements for person-assistive device-environment compatibility;
- To provide the basic knowledge and criteria to choose and customize posture systems, manual and electronic wheelchairs, powered mobility solutions, commands for environment control;
- To illustrate solutions aimed at complex disabilities;
- To provide tools for evaluating the patient and the assistive device;
- To provide the knowledge to improve autonomy and safety in living environments through home automation.

#### **Applying knowledge and understanding**

At the end of the course the student should be able to :

- Use the acquired knowledge to autonomously deepen aspects related to the specific field to which the student will devote his professional activity.

#### **communication skills**

At the end of the course the student should be able to:

- correctly use the specific scientific terminology

### **making judgements**

At the end of the course the student should be able to:

- make general evaluations over the topics covered.

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Pellicciari)

#### **knowledge and understanding**

At the end of this course the student will have to know:

- Recognize the characteristics of a patient with spinal cord injuries
- Knowing how to use assessment techniques in a patient with spinal cord injury
- Knowing how to use treatment techniques in a patient with spinal cord injury

### **Applying knowledge and understanding**

At the end of the course the student should be able to :

- Use the acquired knowledge to autonomously deepen aspects related to the specific field to which the student will devote his professional activity.

### **communication skills**

At the end of the course, the student should know:

- Use specific scientific terminology appropriately.

### **making judgements**

At the end of the course, the student should know:

- Carry out general assessments relating to the topics covered.

## **COURSE SYLLABUS**

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Maimone)

#### *REHABILITATION OF THE AMPUTATED PATIENT*

- Levels of amputation, etiology and surgical techniques
  - Pathologies of the stump intervention of the physiotherapist
  - The Pain: Phantom limb
  - Rehabilitation
  - Pre-prosthetic and prosthetic phases
  - Compression bandage (exercise on the technique)
  - Prosthetics
  - Upper limb prostheses
  - Lower limb prostheses
  - Prosthesis for ADL (activities of daily living)
- Outline of high-tech prostheses and sports prostheses*

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Frontani)

- ) Plan a rehabilitation program, define the program goals (brief-medium-long term), define and select the appropriate outcomes and outcome measures, define the optimal therapeutic choice and the correct scheduling to reach the goal.
- ) Assessment and treatment of lumbar pain
- ) Assessment and treatment of cervical pain
- ) Assessment and conservative treatment of knee and hip arthritis
- ) Assessment and treatment of TMJ disease
- ) Basics on pain neurophysiology
- ) Basics of therapeutic exercise and how to effectively use it
- ) Basics on the main manual therapy techniques

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Berardi)

- To provide evaluation elements for person-assistive device-environment compatibility;
- To provide the basic knowledge and criteria to choose and customize posture



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systems, manual and electronic wheelchairs, powered mobility solutions, commands for environment control;

- To illustrate solutions aimed at complex disabilities;
- To provide tools for evaluating the patient and the assistive device;
- To provide the knowledge to improve autonomy and safety in living environments through home automation.

#### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Pellicciari)

- Functional assessment in a patient with spinal cord injury
- Functional prognosis in a patient with spinal cord injury
- Principles of treatment in a patient with spinal cord injury

#### **COURSE STRUCTURE**

The Course is structured in 80 hours of frontal teaching, divided into lessons of 2, 4 or 5 hours according to the academic calendar. Attendance: at least 75% of the course.

#### **COURSE GRADE DETERMINATION INTEGRATED COURSE**

*Learning will be assessed through a written test consisting of 60 multiple choice questions. In order to access the compulsory oral exam, the student must correctly answer 40 questions. There is also a practical test on the topics covered by Prof. Frontani's lessons. During the oral exam, the examining commission will assess the student's ability to apply the knowledge and will ensure that the skills are adequate to support and solve problems of a rehabilitation nature. The following will also be assessed: making judgements, communication skills and learning skills as indicated in the Dublin descriptors. For the attribution of the final grade, the following criteria will be adopted:*

**Unsuitable:** *Poor or lacking knowledge and understanding of the topics; limited capacity for analysis and synthesis, frequent generalizations of the required contents; inability to use technical language.*

**18-20:** *Just enough knowledge and understanding of topics, with obvious imperfections; just sufficient capacity for analysis, synthesis and independent judgement; poor ability to use technical language.*

**21-23:** *Sufficient knowledge and understanding of topics; sufficient capacity for analysis and synthesis with the ability to logically and coherently argue the required contents; sufficient ability to use technical language.*

**24-26:** *Fair knowledge and understanding of the topics; discrete capacity for analysis and synthesis with the ability to rigorously argue the required contents; Good ability to use technical language.*

**27-29:** *Good knowledge and understanding of required content; good capacity for analysis and synthesis with the ability to rigorously argue the required contents; good ability to use technical language.*



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**30-30L:** *Excellent level of knowledge and understanding of the requested contents with an excellent capacity for analysis and synthesis with the ability to argue the requested contents in a rigorous, innovative and original way; Excellent ability to use technical language.*

## **READING MATERIALS**

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Maimone)

- Rheumatology, Evidence-Based Practice for Physiotherapists and Occupational Therapists. Dziedzic & Hammond. Elsevier - Churchill Livingstone, 2010
- Unireuma - Reumatologia per studenti e medici di medicina generale. Valesini et al. Ed. Idelson Gnocchi, 2018

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Berardi)

- Valutare, consigliare, prescrivere gli AUSILI - Tecnologie al servizio delle persone con disabilità: guida per operatori della riabilitazione. Renzo Andrich. I QUADERNI della Fondazione Don Gnocchi

### NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES (Pellicciari)

Further material will be provided by the teacher