

## Degree Course in Physiotherapy

### **Integrated Teaching: INTERDISCIPLINARY CLINICAL SCIENCES**

**CFU: 6**

**SSD: MED/30, MED/31, MED/33, MED/34, MED/36**

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#### MODULE : PHYSICAL AND REHABILITATION MEDICINE

CFU: 2

SSD: MED/34

Professor: PROF. GIOVANNI MORONE

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#### MODULE : EYE DISEASE

CFU: 1

SSD: MED/30

Professor: PROF. VINCENZO PETITTI.

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#### MODULE : LOCOMOTIVE SYSTEM DISEASE

CFU: 1

SSD: MED/33

Professor: PROF. EDOARDO FRANCESCHETTI

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#### MODULE : DIAGNOSTIC IMAGING AND RADIOTHERAPY

CFU: 1

SSD: MED/36

Professor: PROF. MARIANO SCAGLIONE.

email : [mariano.scaglione@unicamillus.org](mailto:mariano.scaglione@unicamillus.org)

#### MODULE : OTOLARINGOLOGY

CFU: 1

SSD: MED/31

Professor: PROF. FRANCESCO RONCHETTI

email : [francesco.ronchetti@unicamillus.org](mailto:francesco.ronchetti@unicamillus.org)

### **PREREQUISITES**

#### **PHYSICAL AND REHABILITATION MEDICINE**

Although there are no preparatory prerequisites, basic concepts on rehabilitative methods and physical therapies are required, as well as elements of pathophysiology of the main neurological and orthopedic pathologies treated.

#### **EYE DISEASE**

None

#### **LOCOMOTIVE SYSTEM DISEASE**

Although there are no preparatory requirements, basic concepts of anatomy of the skeletal muscle system and human physiology are required.

### DIAGNOSTIC IMAGING AND RADIOTHERAPY

Knowledge of the general features of Human Anatomy and Physiology is preferred but not mandatory

### OTORINOLARINGOIATRIA/OTOLARINGOLOGY

Basic concepts of anatomy and physiology of the acoustic-vestibular system and air-digestive pathways are required, with particular reference to acute, chronic and degenerative diseases.

## **LEARNING OBJECTIVES**

### PHYSICAL AND REHABILITATION MEDICINE

The objectives of the teaching course are to provide students with the knowledge related to the individual rehabilitation project in the main orthopedic and neurological pathologies. In particular, the objective of the course is the definition by the student of the individual rehabilitation project in a wide range of disability from main neurological and orthopedic pathologies, in the framework of medical diagnosis and multidisciplinary.

### EYE DISEASE

The lessons have the objective of making the students understand the mechanisms of how the visual system functions, also by acquiring the notions of anatomy and physiopathology.

### LOCOMOTIVE SYSTEM DIDEASE

The aim of the course is to provide the basic principles of the main traumatic and degenerative pathologies of the musculoskeletal system with references to clinical practice in a perspective of assistance useful to the physiotherapist. In addition, the role of the physiotherapist will be investigated in pathologies involving surgical treatment.

### DIAGNOSTIC IMAGING AND RADIOTHERAPY

- To know the basic principles of physics of medical imaging
- To get the basic features “ABCS” methodology for the evaluation of plain films and MR images
- To understand the correlation between imaging features and pain and/or functional impairment

These objectives will be reached through frontal/interactive lessons to gather learning and improve the « solving problem » ability/correlation between pain and functional impairment using diagnostic imaging

### OTOLARINGOLOGY

The understanding of the pathophysiological mechanisms underlying the alterations in balance and the production mechanisms of speech and swallowing are essential objectives. These objectives will be achieved through face-to-face lectures, seminars and interactive teaching activities, designed to facilitate learning and improve the ability to deal with and solve the main pathological and degenerative diseases.

## **LEARNING OUTCOMES**

### **PHYSICAL AND REHABILITATION MEDICINE**

Al termine dell'insegnamento lo studente dovrà essere in grado di valutare nell'ambito del progetto riabilitativo individuale stilato in maniera multidisciplinare, le possibili metodiche riabilitative, la terapia fisica da utilizzare così come la possibile adozione di ortesi ed ausili.

#### **Conoscenza e capacità di comprensione (knowledge and understanding)**

At the end of the teaching course the student must be able to evaluate the possible rehabilitative methods and the physical therapy to be used as well as the possible adoption of orthoses and aids within the framework of the individual rehabilitation project drawn up in a multidisciplinary manner.

#### **knowledge and understanding**

At the end of this teaching course the student will be able to formulate the rehabilitation project in some of the main neurological and orthopedic diseases such as parkinson's disease, stroke, low back pain, arthrosis and shoulder and tibio-tarsal tendon injuries.

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

At the end of the teaching course the student will be able to:

- Use the knowledge acquired for the in-depth study of aspects related to the formulation of rehabilitation projects to which the student will dedicate himself in the professional activity of physiotherapist

#### **Communication skills**

At the end of the teaching the student must know:

- Use specific scientific terminology appropriately.

#### **Making judgements**

At the end of the teaching course the student must know:

- carry out rough assessments relating to rehabilitation treatments in the pathologies treated.

### **EYE DISEASE**

As outcome of the learning process the student should be able to understand both the anatomy of the eye and the most frequent ophthalmic pathologies

### **LOCOMOTIVE SYSTEM DISEASE**

At the end of the course the student will have to know the correct diagnostic procedure, with the ability to carry out differential diagnosis among the various pathologies, knowing how to identify the boundary between conservative and surgical treatment

### **DIAGNOSTIC IMAGING AND RADIOTHERAPY**

The student has to :

- know the basic principles of physics of medical imaging
- get the basic features "ABCS" for the evaluation of plain films and MR images
- understand the correlation between imaging features and pain and/or functional impairment

#### **Communication skills**

The student has to :

- use the scientific terminology adequately

### **Making judgements**

The student has to :

- Make a general assessment of the abovementioned issues

### OTOLARINGOLOGY

#### **Knowledge and understanding**

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

- Anatomy and physiology of the central and peripheral vestibular system
- Describe the main methods of clinical analysis of the peripheral vestibular system
- Knowing the main pathological frameworks of the peripheral vestibular system
- Knowing the principles of physical rehabilitation of vestibular pathologies
- Principles of prosthetic rehabilitation of the peripheral vestibular system
- Know the anatomy of the oral, larynx and the air-digestive tract
- Know the physiology of voice production and swallowing
- Know the main clinical analysis tests of the air-digestive system
- Knowing and describing the main pathological and degenerative frameworks of the air-digestive system
- Know the rehabilitative methods of swallowing

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

At the end of the teaching, the student will be able to:

- Use the knowledge acquired for the autonomous deepening of aspects related to the specific field to which the student will devote himself in the field of professional activity;

#### **Communication skills**

At the end of the teaching, the student will need to know:

- Use specific scientific terminology appropriately.

#### **Making judgements**

At the end of the teaching, the student will need to know:

- general assessments of the topics covered.

### **COURSE SYLLABUS**

#### PHYSICAL AND REHABILITATION MEDICINE

Rehabilitation program in patients with Parkinson's disease

- Patient rehabilitation program with stroke (subacute phase)
- Patient rehabilitation program with stroke (chronic phase)
- Patient rehabilitation program with low back pain
- Patient rehabilitation program with arthrosis
- Rehabilitation program in muscle injuries
- Rehabilitation program in the tibio-tarsal tendon lesions
- Rehabilitation program in tendon shoulder injuries

## EYE DISEASE

Ocular Anatomy  
Ocular pathologies  
Low vision  
Orthoptics

## OCOMOTIVE SYSTEM DIDEASE

- General information on fractures. Classification; etiology, pathogenesis, anatomy; clinical picture; complications; principles of therapy. Upper limb fractures: clavicle; humeral; forearm; wrist and hand. Lower limb and pelvis fractures: femur; knee; leg; ankle and foot; hip bone. Vertebral fractures: dorso-lumbar; cervical.
- Arthrosis: generalities; hip; knee; shoulder:
- Specific Shoulder Diseases (Instability, Rotator Cuff Pathology, Osteoarthritis, Art Acromion Clavicle Disorders)
- Specific Knee Disorders (Ligamentous Capsule Disorders, Osteoarthritis)
- Specific Hip Diseases (Ligamentous Capsule Disorders, Arthrosis)
- Specific Ankle Disorders (Ligamentous Capsule Disorders, Osteoarthritis)
- Specific pathologies of hand and foot
- Spinal disorders: scoliosis; stenosis of the canal. spondilo lysis and spondylolisthesis herniated disc
- Tumors: general information on tumors; main primitive tumors; metastasis

## DIAGNOSTIC IMAGING AND RADIOTHERAPY

- The Physics of Medical Imaging
- Systematic Analysis of plain films and MR imagrns Using ABCs
- The spine and great joints
- Correlation between imaging and pain and/or functional impairment

## OTOLARINGOLOGY

### Vestibular system:

Anatomy and physiology of the auditory and vestibular system, immuno-mediated diseases of the inner ear associated with vertigo, pathophysiology of the optical-kinetic system and the visuo-vestibule-oculomotor reflex, elttro-nistagmography, caloric and instrumental vestibular evaluation, the potential evoked myogenic vestibular (VEMP's) clinical applications, assessment of the patient with dizzying-postural disorders the bed-side examination, clinic of peripheral disorders of balancewith Associated audiological symptoms, positional paroxysm dizziness from labyrinthitis, vertigo and barotrauma, cervical whiplash and visuo-vestibular system, rehabilitative therapy in vestibular system pathology peripheral

### Dysphagia:

Terminology of disphagy, pathophysiological components in swallowing disorders, disphagy and other disorders of swallowing, aspiration, etiology of disphagy, mecanic and neurological disphagy, clinical of the disphagoic patient, procedures diagnostics, primary pathological frameworks in paediatric and adultage, disphagy in the elderly, voice and disphagia, treatment of disphagia.texts uncamillus

## **COURSE STRUCTURE**

### PHYSICAL AND REHABILITATION MEDICINE

The teaching is structured in 20 hours of frontal teaching, divided into lessons of 2 or 4 hours according to the academic calendar. The teaching course will include theoretical lessons and group exercises on the topics covered.

### EYE DISEASE

Lectures

This teaching programme is made up of 10 hours of frontal/interactive lessons of 3 and 4 hours

### LOCOMOTIVE SYSTEM DISEASE

The Teaching is structured in 10 hours of frontal teaching, divided into lessons of 2 or 3 hours according to the academic calendar. Lectures will include theoretical lessons and supplementary seminars on the topics covered.

### DIAGNOSTIC IMAGING AND RADIOTHERAPY

The Teaching is structured in 10 hours of frontal teaching, divided into lessons of 3 or 4 hours according to the academic calendar. Lectures will include theoretical lessons and supplementary seminars on the topics covered.

### OTOLARINGOLOGY

The Teaching is structured in 10 hours of frontal teaching, divided into lessons of 2 or 4 hours according to the academic calendar. The frontal teaching includes theoretical lectures and supplementary seminars on the topics covered.

## **COURSE GRADE DETERMINATION INTEGRATED COURSE**

### DIAGNOSTIC IMAGING AND RADIOTHERAPY

The verification of the preparation of the students will take place with a written exam followed by an oral test. The written test will consist of 30 questions with multiple choice answers, for each exact answer will be assigned a point. The final score of the written test will be given by the sum of the partial scores assigned to each correctly answered question. To enter the oral exam, the student must have scored at least a minimum of 18 points. During the oral test, the Examining Commission will assess the Student's ability to apply the knowledge and ensure that the skills are adequate to support and solve microbiological problems. In addition, the results of the evaluation of the evaluation (making judgments), communication skills and learning skills will be assessed as indicated in the Dublin descriptors.

## **OPTIONAL ACTIVITIES**

### PHYSICAL AND REHABILITATION MEDICINE

n/a

### EYE DISEASE

n/a

LOCOMOTIVE SYSTEM DISEASE  
DIAGNOSTIC IMAGING AND RADIOTHERAPY

OTOLARINGOLOGY

In addition to the educational activity, the student will be given the opportunity to participate in Seminars, Research Internships, Departmental Internships and Monographic Courses. The subjects of the activities are not subject to examination. The acquisition of allocated hours takes place only with a mandatory frequency of 100% and is expected to be eligible.

**READING MATERIALS**

PHYSICAL AND REHABILITATION MEDICINE

La riabilitazione in ortopedia S. Brent Brotzman, Kevin E. Wilk, Masson 2008

Clinical Orthopaedic Rehabilitation. Kevin E. Wilk; S. Brent Brotzman.  
Elsevier - Health Sciences Division

EYE DISEASE

Lecture notes

LOCOMOTIVE SYSTEM DISEASE

Slides from the lessons

A.Mancini, C. Morlacchi , "Clinica Ortopedica" Manuale-Atlante; V Edizione A cura di F.Franceschi e F Mancini; Piccin editore

Mark D. Miller Stephen R. Thompson Miller's Review of Orthopaedics 7th Edition

DIAGNOSTIC IMAGING AND RADIOTHERAPY

James Swain, Kenneth W. Bush

Diagnostic Imaging for Physical Therapists

Saunders, Elsevier

OTOLARINGOLOGY

Vertigo and Dizziness Common Complaints Dieterich, Strupp, Springer London Limited 2005

Clinic Of LabyrinthS Peripherals Official Report XCII National Congress Enzo Mora

Dysphagia diagnosis and Treatment Olle Ekberg Springer London

Dysphagia Otolaryngologic Clinics of North America volume 31 number 3