# Diseases of the Locomotor System and Physio-kinesitherapy

## Prof. Antonio Ziranu; Prof. Aluena Battaglioli

Module 1: *Diseases of the locomotor system* (Prof. Antonio Ziranu)

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

* The course aims to introduce the general principles and treatment of the main orthopaedic diseases in adolescents and adults.
* The course aims to provide students with the basic notions of diagnosis and treatment of the main traumatic diseases of the upper and lower limbs, the pelvis, the spine and of the most common orthopaedic oncology diseases.
* A further aim of the course is to provide a general understanding of the diagnosis and treatment of traumatic disease in the elderly.
* At the end of the course, students will have learnt the basic concepts mentioned above, and will be able to identify and know the patient's orthopaedic and traumatic diseases, define and understand the diagnostic and therapeutic procedures to which the patient has been subjected, and indicate a specific programme for functional recovery.
* Students will be able to indicate a specific functional recovery programme for the individual, for degenerative, inflammatory and secondary traumas, as well as for any orthopaedic treatment performed.

***COURSE CONTENT***

– Principles of Orthopaedics. Clinical, morphological and functional diagnosis.

– Pathologies in younger patients.

– Traumatology of the upper and lower limbs: diagnosis and principles of treatment.

– Traumatology in the elderly. Diagnosis, epidemiology and principles of treatment.

– Traumatology and degenerative diseases of the spine.

– Cartilaginous pathology. Diagnosis, epidemiology and principles of treatment.

– Arthrosis and prosthetic surgery.

– Capsulo-ligamentous lesions of the knee.

– Capsulo-ligamentous lesions of the tibiotarsal joint.

– Traumatic and degenerative pathologies of the shoulder.

– Tendon and muscle pathologies.

– Orthopaedic oncology diseases

***READING LIST***

Course slides provided by the lecturer.

Search for articles from the main search engines PUBMED, COCHRANE, PEDRO.

***TEACHING METHOD***

Lectures.

***ASSESSMENT METHOD AND CRITERIA***

The exam takes place by an oral test in order to be able to evaluate the student's ability to frame the functional aspects of a patient with an osteoarticular, muscular or neural disease, and to indicate appropriate treatment for the purpose of recovery.

The scheduling of the written exam will be announced by the lecturer on their webpage or on Blackboard.

***NOTES AND PREREQUISITES***

In case the current Covid-19 health emergency does not allow frontal teaching, remote teaching will be carried out following procedures that will be promptly notified to students.

 Further information can be found on the lecturer's webpage at http://docenti.unicatt.it/web/searchByName.do?language=ENG, or on the Faculty notice board.

Module 2: *Physio-kinesitherapy* (Prof. Aluena Battaglioli)

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

* The course aims to provide students with a general understanding of rehabilitation in osteoarticular diseases, through an explanation of the basic notions underlying the principles of rehabilitation medicine, and the clinical biomechanics of the musculoskeletal system.
* The course aims to provide students with the basic notions underlying the general principles of physiotherapy and rehabilitation in orthopaedic and traumatic sports and in neurological diseases, as well as information on the rehabilitation pathway protocols for functional recovery and prevention.
* A further aim of the course is to introduce the topic of physical activity integration in re-education and rehabilitation pathways, and the physical science graduate's role in these pathways.
* At the end of the course, students will have learnt the basic concepts mentioned above, and will be able to identify the re-educational pathway most suited to the individual based on his physical and functional characteristics.
* Students will be able to indicate a programme of functional recovery and return to sports gestures specific to individuals with degenerative, inflammatory and diseases secondary to a specific sports trauma.

***COURSE CONTENT***

* Physiological and cultural bases of physical and rehabilitative medicine, individual and teamwork.
* Functional re-education and therapeutic exercise: role related to degenerative and inflammatory joint diseases, osteoporosis and NS pathologies.
* Anatomy, physiology and kinesiology of the upper limb: related sports pathologies, functional re-education and prevention.
* Anatomy, physiology and kinesiology of the lower limb: related sports pathologies, functional re-education and prevention.
* Disabilities secondary to CNS and PNS pathologies.
* Guidelines in rehabilitation and principles of rehabilitation in orthopaedics and sports traumatology.
* Principles of clinical biomechanics applied to pathology, functional recovery and prevention.

***READING LIST***

Slides provided by the lecturer.

Search for articles from the main search engines PUBMED, COCHRANE, PEDRO.

Texts on Anatomy (Netter) and Physiology (Pirola, Kendall)

***TEACHING METHOD***

Frontal lectures will be held by the lecturer as per the Faculty's schedule.

Short- and long-term training internships.

***ASSESSMENT METHOD AND CRITERIA***

The exam takes place in two parts, both compulsory for all students.

The written exam with multiple-choice questions and the oral exam are aimed at assessing the student's ability to frame the functional aspects of a patient with an osteoarticular, muscular or neural disease, and to indicate appropriate treatment for the purpose of recovery.

To be able to take the oral exam, a student must have passed the written exam. The scheduling of the written exam will be announced by the lecturer on their webpage or on Blackboard.

 ***NOTES AND PREREQUISITES***

Students must know the basic concepts of anatomy and physiology, and must be able to contextually integrate the notions from this course with those of other courses so as to have a complete view of the physiological, pathological and functional frameworks, and to understand the relational link between pathology and recovery.

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