

BSc in Physiotherapy

INTEGRATED COURSE TITLE: REHABILITATION METHODOLOGY II

NUMBER OF ECTS CREDITS: 8

SSD : MED/48

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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES

NUMBER OF ECTS CREDITS: 2

SSD: MED/48

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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES

NUMBER OF ECTS CREDITS: 2

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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES

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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES

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PROFESSOR: [Giovanni Sellitto](#)

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PREREQUISITES

Knowledge of basic sciences (neuroanatomy and anatomy, physiology and neurophysiology) is required. Furthermore, in order to be admitted to the exam of this Integrated Course, the exams Human Anatomy and Physiology and Rehabilitation Methodology I are preparatory.

LEARNING OBJECTIVES

This course aim at enhancing previous background on the functional evaluation of motor and neurological performance and providing the student additional expertise related to patients with neurological and motor diseases. A specific assessment of signs and symptoms together with analysis of balance, gait, posture, reaching and grasping will be provided in order to identify the treatment goals and design a rehabilitation plan in various fields.

LEARNING OUTCOMES

After completing this course, the student is able:

- to understand basic principles of motor learning
- to understand basic principles of neuroplasticity
- to translate residual learning capacity into clinical practice
- to evaluate functional abilities (balance, gait, posture, reaching and grasping)
- to design a rehabilitation approach taking into account: the diversity of symptoms, the

disease evolution, the impact on global functioning, the existing scientific evidence

COURSE SYLLABUS

Syllabus Prof. Sellitto

- Definition and aim of neurorehabilitation
- Functional evaluation of main neurological diseases
- Definition and identification of the treatment objectives for each clinical situation
- Planning rehabilitation treatment based on neurological damage

Syllabus Prof. Galeoto

Principles of treatment of pathologies of the musculoskeletal system and orthopedic semeiotics.

Planning of a rehabilitation program: orthopedic patient handling, treatment techniques, orthopedic aids and traumatology

Walking: principles of re-education on the journey

LOWER LIMB

- Rehabilitation after hip arthroplasty, osteosynthesis in acetabular fractures, osteosynthesis in fractures of the proximal epiphysis of the femur, diaphyseal and distal femoral epiphysis; osteosynthesis in tibial leg and pilon fractures, osteosynthesis in tibial and patella plate fractures, cruciate ligament reconstruction, meniscal tear surgery, knee and ankle joint replacement surgery, osteosynthesis in malleolar fractures.
- Rehabilitation in Achilles tendon lesions, in ankle sprain. in patellofemoral syndrome

UPPER LIMB

- Rehabilitation of the shoulder: impingement, instability, rotator cuff injuries, adhesive capsulitis, shoulder prosthesis, clavicle fractures.
- Rehabilitation of fractures of the humerus, arthroplasty and elbow fractures, wrist and hand fractures.

Syllabus Prof. Frontani

Physical therapy assessment of musculoskeletal disorders

Flag system

Congenital hip diseases:

Congenital hip dislocation;

Hip dysplasia surgery and rehabilitation. Functional evaluation and therapeutic approach.

Osteochondrosis:

Slipped, capital epiphysis, epiphysiolisis

M.di Perthes;

Osgood-Schlatter disease;

Assessment and management

Congenital Foot Diseases:

Clubfoot Evaluation and therapeutic approach

Scoliosis. Clinical-functional evaluation and rehabilitation treatment

The parameters of the lower limbs: Knee varus; Knee valgus; The flat-valgus foot;
Assessment and management

DCD developmental coordination disorder

Syllabus Prof. Tofani

Psycho and Neurodevelopment of the Child

CEREBRAL PALSY :

- definition
- aetiology
- topographic, clinical and functional classifications
- neurodevelopmental delay during the first year of life
- associated disorders

ASSESSING A CHILD WITH CP. (evaluation form):

- analysis of interactive processes;
- adaptive skills analysis;
- analysis of postural adaptations ;
- functional analysis;
- treatment goals.

CLINICAL FORMS :

- The child with spastic bilateral form of CP : motor characteristics, natural evolution, goals and treatment.
- The child with diplegia : motor characteristics, natural evolution, goals and treatment.
- The child with unilateral spastic form of CP : motor characteristics, natural evolution, goals and treatment.
- The child with dykinetic CP (choreo-athetotic and dystonic forms): motor characteristics, natural evolution, goals and treatment.
- The child with ataxia : motor characteristics, natural evolution, goals and treatment.
- The premature baby : general characteristics, rehabilitation issues.
- Eléments of Assistive Technologies for CP : standing and walking frames, adaptive seating systems and devices for communication

COURSE STRUCTURE

80 hours of frontal lessons. Attendance: at least 75% of the integrated course.

COURSE GRADE DETERMINATION

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 45 questions. 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;



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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.

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.

OPTIONAL ACTIVITIES

A group-based power-point exercises will be proposed with the aim to improve students' ability in presenting scientific papers.

READING MATERIALS

Pennsylvania Child Welfare Resource Center (2005) Child and Adolescent Development Resource Book. University of Pittsburgh

Levitt, S., & Addison, A. (2018). Treatment of cerebral palsy and motor delay. Wiley-Blackwell. 6th edition

Physiotherapy in Orthopaedics - A Problem-Solving Approach
Karen Atkinson Fiona Coutts Anne-Marie Hassenkamp – Elsevier

Davies, Patricia M. *Steps to follow: the comprehensive treatment of patients with hemiplegia*. Springer Science & Business Media, 2000.

O'Sullivan, Susan B., and Thomas J. Schmitz. *Improving functional outcomes in physical rehabilitation*. FA Davis, 2016.

Scientific articles will be inserted on the topics discussed