

BSc in Physiotherapy

INTEGRATED COURSE TITLE: REHABILITATION METHODOLOGY III
NUMBER OF ECTS CREDITS: 8
SSD: MEDS-26/C
MODULE CONVENOR: PROF.SSA FRANCESCA ROBERTA PANUCCIO
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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES
NUMBER OF ECTS CREDITS: 2
SSD: MEDS-26/C
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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES
NUMBER OF ECTS CREDITS: 2
SSD: MEDS-26/C
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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES
NUMBER OF ECTS CREDITS: 2
SSD: MEDS-26/C
PROFESSOR : FRANCESCA ROBERTA PANUCCIO
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MODULE: NURSING SCIENCES AND NEUROPSYCHIATRIC REHABILITATION TECHNIQUES
NUMBER OF ECTS CREDITS: 2
SSD: MEDS-26/C
PROFESSOR: [SANAZ POURNAJAF](#) e- mail: sanaz.pournajaf@unicamillus.org

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

The purpose of the course is to increase the students knowledge about the functional assessment and management of the main muscle-skeletal disorders, in patients with spinal cord injuries and in patients with amputations.

The course aims also to provide basic knowledge on the anatomy and biomechanics of the hand and upper limb, with specific focus on the hand, wrist, elbow, and shoulder districts. It will also provide useful tools for the rehabilitative treatment of the main orthopedic, rheumatologic and neurological (central and peripheral) pathologies affecting the hand and upper limb, as well as insights related to upper limb splinting, personal/environmental strategies and aids for the performance of activities of daily living (ADLs).

LEARNING OUTCOMES

Knowledge and Understanding

At the end of this teaching the student should know:

- Know the etiology of amputations
- Know the Amputation Levels
- Know the Pathologies of the Stump
- Know the treatment and its Rehabilitation Phases.
- Know the treatment of Phantom Limb Pain
- Know stump bandaging techniques
- Know the objectives of rehabilitation of lower and upper limb amputees.
- Know the training in the use of the prosthesis
- Know the main manual therapy techniques
- Know the basics of therapeutic exercise
- Know the neurophysiological basis of pain
- Know the anatomy and biomechanics of the hand and upper limb
- Know the main orthopedic pathologies of the hand and upper limb and their specific treatment
- Know the main rheumatic pathologies of the hand and upper limb and their specific treatment
- Know the main neurological pathologies (central and peripheral) of the upper limb and their specific treatment
- Know the main personal and environmental strategies, aids and orthoses that can be used in the treatment of the main pathologies of the upper limb
- Recognize the characteristics of a patient with spinal cord injury

Applying Knowledge and Understanding

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

- Apply knowledge for the evaluation and treatment of major musculoskeletal disorders
- Plan a short-medium-long term program for the patient
- Know how to use assessment techniques in a patient with spinal cord injury
- Know how to use treatment techniques in a patient with spinal cord injury
- Use the knowledge acquired for the independent study of aspects relating to the specific field to which the student will dedicate himself as part of his professional activity.

Communication Skills

At the end of the course, the student should use specific scientific terminology appropriately.

Making Judgements

At the end of the course, the student should carry out general assessments relating to the topics covered.

Learning Skills

The student will have acquired skills and learning methods suitable for deepening and improving their knowledge and skills in the field of rehabilitation sciences, also through consultation of scientific literature.

COURSE SYLLABUS

Syllabus Prof.ssa Rossi

- 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

Syllabus Prof. Rinaldi

- 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 low back pain
- Assessment and treatment of cervical pain
- Assessment and conservative treatment of knee and hip osteoarthritis
- Assessment and treatment of lateral ankle sprain in athletes
- Assessment and treatment of temporomandibular joint
- Basics on pain neurophysiology
- Basics of therapeutic exercise and how to effectively use it
- Rehabilitation of the athletes after ACL surgery

Syllabus Prof.ssa Panuccio

- Observation and assessment of patients with upper limb disorders
- Evaluation and rehabilitative approach of primary orthopedic disorders affecting the hand and upper limb
- Evaluation and rehabilitative treatment of primary neurological disorders affecting the hand and upper limb

Syllabus Prof.ssa Sanaz Puornajaf

- 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

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 during the 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.

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

PROF.SSA SIMONETTA ROSSI

Atlas of amputations and limb deficiencies: surgical, prosthetic, and rehabilitation principles

Jl Krajbich, MS Pinzur, BK Potter, PM Stevens - 2023

- Fundamentals of amputation care and prosthetics

DP Murphy - 2013

- Amputation and rehabilitation

C. Marshall, G Stransby - Surgery (Oxford), 2010

- Free download ICRC publications

- La riabilitazione nel paziente amputato, centro protesi INAIL, free download

PROF.SSA FRANCESCA ROBERTA PANUCCIO

Cooper's Fundamentals of Hand Therapy – Christine M. Wietlisbach

Hand and Upper Extremity Rehabilitation: a Practical Guide – Rebecca J. Saunders

PROF.SSA SANAZ POURNAJAF

Handouts provided by the teacher

PROF. DARIO RINALDI

Explain Pain - second edition David S. Butler and G. Lorimer Moseley

Manual therapy: nags, snags, mwms etc. - Brian Mulligan

Maitland peripheral manipulation

Maitland vertebral manipulation

Orthopaedic physical therapy - Robert A. Donatelli, Michael J. Wooden

Orthopaedic manual therapy - Chad E.Cook