

## Degree in Nursing

Teaching: CLINICAL AND DISABILITIES NURSING

SSD Insegnamento: med/33, med/26, med/45, med/34

Numero di CFU: 5

Nome docente responsabile: Ippolito Notarnicola

email: [ippolito.notarnicola@unicamillus.org](mailto:ippolito.notarnicola@unicamillus.org)

Module: Nursing in Rehabilitation

SSD Course: MED/45

Credits: 2

Professor: Ippolito Notarnicola

e-mail: [ippolito.notarnicola@unicamillus.org](mailto:ippolito.notarnicola@unicamillus.org)

Module: Locomotive System Diseases

SSD Course: MED/33

Credits: 1

Professor: Giorgio Bove

e-mail: [giorgio.bove@unicamillus.org](mailto:giorgio.bove@unicamillus.org)

Module: Neurology

SSD Course: Med/26

Credits: 1

Professor: Ubaldo Bonuccelli

e-mail: [u.bonuccelli@med.unipi.it](mailto:u.bonuccelli@med.unipi.it)

Module: Physical and Rehabilitation Medicine

SSD Course: MED/34

Credits: 1

Professor: Irene Giovanna Aprile

e-mail: [irenegiovanna.aprile@unicamillus.org](mailto:irenegiovanna.aprile@unicamillus.org)

## PREREQUISITES

In order to understand the course, the student must have basic notions of the main theories of nursing and the phases of the nursing process. The student needs to have basic knowledge of neuroanatomy, neurophysiology, general pathology, pharmacology and internal medicine as obtained in the previous classes.

## LEARNING OBJECTIVES

Aim of the Teaching is to:

- make students acquire skills related to the preparation and implementation of educational and rehabilitation interventions.
- acquire knowledge (etiopathogenesis, clinical, notions of medical, surgical and rehabilitative treatment) of the main pathologies of orthopedic and rheumatological interest with particular regard to congenital or developmental diseases of which early diagnosis is important for the

prevention of outcomes; morbid conditions of degenerative type very widespread in the population (arthrosis of the large joints, spondylarthrosis); acquire knowledge of the main rehabilitation methods. Acquire knowledge on imaging diagnosis applied to diseases of the musculoskeletal system.

- address students to a correct approach to the clinical and care managing of patients presenting with central and peripheral nervous system diseases as well as muscle diseases. Chronic and acute diseases with long term disabilities and consequences will be the focus of the course.
- provide students with knowledge of the rehabilitation field, as transversal and multidisciplinary science.

## LEARNING OUTCOMES

knowledge and understanding

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

- How to develop personalized nursing care plans in the field of rehabilitation and geriatrics, ensuring performance related to Evidence Based Nursing (EBN).
- How to identify the most modern principles of nursing care for people with rehabilitation problems;
- how to identify in the existing literature the most recent knowledge produced in rehabilitative nursing and the related preventive interventions.
- relational skills for team and network work.
- and recognize the main pathologies in the orthopedic and trauma fields.
- How to perform the main semiological maneuvers for the diagnosis of diseases of the musculoskeletal system.
- the most useful instrumental examinations for diagnostic study in various clinical situations and post-traumatic ones with non.
- the various conservative and surgical therapeutic possibilities for the main pathologies.
- the principles of the most common surgical techniques (prosthetic surgery, arthroscopic surgery, treatment of the most frequent fractures).
- the principles of neurological examination including signs and symptoms related to disorders of consciousness, cognitive functions, cranial nerves, motor function, sensory function, neurovegetative function.
- Special techniques for neurological diagnosis: ecodoppler, Imaging (MRI, TAC, Nuclear medicine-PET/SPET).electroencephalography, electromiography, evoked potentials, lumbar puncture, neuropsychological testing.
- The principal neurological diseases (epidemiology, diagnosis, prognosis and therapeutics) :  
Cerebrovascular disorders, Trauma, Infectious and inflammatory disorders, Demyelinating disorders, Neurodegenerative disorders (Parkinsonisms and dementias), Toxic and metabolic disorders, Headaches, Intracranial hypertension and hypotension, epilepsies, brain and spinal tumors, mielopathies, peripheral neuropathies, myasthenic syndromes and myopathies.
- The characteristics of rehabilitation as a transversal and multidisciplinary science.
- What is the rehabilitation project
- What is the multidisciplinary team

- What are the rehabilitation goals and programs in a rehabilitation project
- What are the main aspects of the rehabilitation of the patient affected by neurological diseases
- What are the main aspects of the rehabilitation of the patient affected by orthopaedic diseases
- What are the principles and characteristics of robotic and technological rehabilitation of the upper limb, gait and balance

#### Applying knowledge and understanding

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

- apply knowledge regarding the rehabilitation organization, tools and rehabilitation techniques that are effective for people with rehabilitation.
- apply relational skills for team and network work.
- use empathic listening and a customer-centered communication approach.
- use tools and relational strategies with different types of users. Be understood effectively.
  - use the acquired knowledge for the autonomous deepening of aspects related to the specific field to which the student will devote himself within the professional activity.
  - use the acquired knowledge for the autonomous personal deepening of aspects related to the specific field to which the student will develop his professional activity.

#### Communication skills

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

- how to use specific scientific terminology in an appropriate manner.
- how to use the specific scientific terminology, understanding the relationship between neurological symptoms, diagnosis and therapeutics.

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

- how to carry out a general assessment of the topics covered

## COURSE SYLLABUS

### Nursing in Rehabilitation

- Main rules in the field of rehabilitation, the NHS and regional indications in the assistance to people with severe congenital and acquired disability
- Elaboration of care plans for patients undergoing rehabilitation with respect to the rehabilitation project defined with the team
- Nursing responsibility in defining the workload: use of interpretation of the main assessment and ADL scales
- Nursing process aimed at the psycho-physical recovery of the patient, the maintenance of residual capacities and / or the development of new skills
- Specific rehabilitation nursing interventions for people with: cardiac and respiratory diseases with a high level of disability, polytrauma and / or severe brain and spinal cord injuries, neurological bladder, congenital and / or chronic disability
- Notions on the management of pressure injuries in the rehabilitation and home environment

### Locomotive System Diseases

- General concepts of orthopedics and traumatology.
- Anamnesis, clinical examination and instrumental examinations.
- Arthrosis.
- Congenital malformations. Alterations of growth.
- Endocrine and metabolic alterations.
- General anomalies of skeletal development.
- Main traumatic injuries of the musculoskeletal system: bruises, fractures, dislocations, sprains and wounds.
- Main pathologies and traumatic injuries of the lower limb, the upper limb of the rachis and the pelvis.

### Neurology

The clinical method and the clinical history in neurology; principal issues in neurological examination :consciousness,cognitive functions,motor functions,sensory functions,cranial nerves,vegetative functions.Diagnostic testing in neurology :Ecodoppler,MRI,CT scan,Nuclear medicine imaging,Electroencephalography,Evoked potentials,Electromiography,Tests Neuropsychological tests,Lumbar puncture.and cerebrospinal fluid examination.

Neurological diseases :Cerebrovascular disorders,Trauma,Infective and inflammatory disorders, Demyelinating disorders(Multiple sclerosis),Neurodegenerative disorders (Parkinsonisms and dementias), Toxic and metabolic disorders,Headaches,Endocranial hypertension and hypotension, epilepsies,tumours ,spinal disorders ,peripheral neuropathies,myasthenic syndromes and myopathies.

### Physical and Rehabilitation Medicine

General concepts of Rehabilitation

Multidisciplinary team and Rehabilitation

Rehabilitation of the Stroke

Rehabilitation of the Multiple Sclerosis

Rehabilitation of the Parkinson Disease

Rehabilitation of the Motor Neurone Disease

Dysphagia

Pain

Rehabilitation after hip replacement

Rehabilitation after knee replacement

Balance impairment, walking disorders and upper limb deficit

Robotic rehabilitation of the upper limb

Robotic rehabilitation of the balance

Robotic rehabilitation of the walking

## COURSE STRUCTURE

The module of Nursing in Rehabilitation is structured in 28 hours of frontal lectures according to the timetable and workshops (individual and group activities).

The module of Locomotive System Diseases is structured in 14 hours of frontal teaching, divided into lessons of 2 or 4 hours according to the academic calendar. Frontal teaching includes theoretical lessons

The module of Neurology is structured in 14 hours of frontal teaching, divided in lessons of either 3 or 4 hours including theoretical lessons and clinical cases possibly by video presentation.

The module of Physical and Rehabilitation Medicine is structured in 14 hours of frontal teaching, divided into lessons of 2 or 3 hours according to the academic calendar. Frontal teaching includes theoretical lessons and additional seminars on the topics covered.

## COURSE GRADE DETERMINATION

The exam of the Teaching of CLINICAL AND DISABILITIES NURSING is comprised of an exam of the modules of NURSING IN REHABILITATION, LOCOMOTIVE SYSTEM DISEASES, NEUROLOGY, PHYSICAL AND REHABILITATION MEDICINE, whose marks are an integral part of the Teaching.

The knowledge and ability to understand, the ability to apply knowledge and understanding, the autonomy of judgment and the communication skills of the student will weigh in the final score as follows 30%, 30%, 30% and 10%, respectively.

**NURSING IN REHABILITATION:** Written exam with multiple choice questions, with possible oral integration. The test consists of 30 questions, each correct answer is equal to a score of one, to pass the written test and access the oral one the student must have done well at least 18 questions.

**LOCOMOTIVE SYSTEM DISEASES:** oral exam. The oral test aims to ascertain the student's ability to know how to frame, the various orthopedic pathologies. The use of the specialized lexicon, the ability to investigate and connect the various pathologies of the musculoskeletal system. The oral exam will consist of an interview divided into questions on the topics covered by the program aimed at ascertaining the level of knowledge achieved by the student. It will be graded out of thirty and passing the exam will be obtained with a minimum grade of 18/30.

**NEUROLOGY:** Students' skills will be verified with a written exam followed by an oral interview. The written test will consist of 30 questions with multiple-choice answers, for each exact answer a point will be assigned. The final score of the written test will be given by the sum of the partial scores assigned to each question answered correctly. To take the oral exam, the student must have scored at least 15 points.

**PHYSICAL AND REHABILITATION MEDICINE:** Students' skills will be verified with a written exam. The written test will consist of 30 questions with multiple-choice answers, for each exact

answer a point will be assigned. The final score of the written test will be given by the sum of the partial scores assigned to each question answered correctly. To pass the exam, the student must have scored at least 18 points.

### OPTIONAL ACTIVITIES

Videos and slides related to rehabilitation. The topics of the support activities are not subject to examination. In addition to teaching activities, students will be given the opportunity to participate in Seminars, Research Internships, Department Internships and Monographic Courses. The subjects of the activities are not exam subjects.

### READING MATERIALS

- Code of ethics of the nursing professions:  
[https://www.fnopi.it/archivio\\_news/attualita/2688/codice%20deontologico\\_2019.pdf](https://www.fnopi.it/archivio_news/attualita/2688/codice%20deontologico_2019.pdf)
- Didactic material provided by the teacher
- ORTHOPEDIC CLINIC. C.Morlacchi, A.Mancini
- Neurologia per le professioni sanitarie (Italiano) PICCIN 2017. A. Padovani, B. Borroni , M. S. Cotelli
- Neuroscience Nursing: Scope and Standards of Practice, 3rd Edition by American association of neuroscience nursing (advanced)
- Essentials of Physical Medicine and Rehabilitation. Musculoskeletal Disorders, Pain and Rehabilitation. Fourth Edition. Walter R Frontera, Julie K Silver, Thoma D. Rizzo, Jr