UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

# COURSE SYLLABUS

# Diseases of The Nervous System

**2627-5-H4101D329**

## Aims

The integrated Course of “Diseases of the Nervous System” aims to introduce the student to the knowledge of primary and secondary diseases of the nervous system (central and peripheral), of interest and competence both neurological and neurosurgical.
The etiopathogenetic bases and the clinical expression of these pathologies will be outlined, in order to arrive at the formulation of an appropriate diagnostic definition, with the consequent prognostic implications and, in the majority of cases, therapeutic indications of a medical and/or surgical nature.

## Contents

Based on anamnesis, symptoms, neurological examination and few and selected imaging and laboratory tools, the student must know how to formulate a neurological diagnosis, answering the following questions: 1. “Where is the lesion located?” 2. “ What kind of lesion is it?” In order to reach these objectives, a preliminary knowledge of neuroanatomy, neurophysiology, pathology, is needed, as well as the learning of appropriate skills (neurological anamnesis, semeiology and neurological examination) and know how (differential diagnosis of main neurologic pathologies, imaging and laboratory exams, diagnosis and therapy of most common neurologic disorders and neurologic emergencies).
Attention will be paid to gender differences.

## Detailed program

To reach objectives of the course preliminary base knowledge is necessary (neuroanatomy, neurophysiology, pathology), some skills need to be achieved (anamnesis, demeiology and neurological exam) and knowledge (differential diagnosis of the main neurological disorders, exams, diagnosis and therapy of common disorders and

of neurological emergencies). Detailed program follows:
BASE PRELIMINARY KNOWLEDGE - Neuroanatomy including Central, peripheral and autonomic Nervous system
NEUROLOGICAL SEMEIOLOGY AND MAIN NEUROLOGICAL SYNDROMES (deep knowledge) - Sensory semeiology - Sensory syndromes due to lesions of nerve trunk, roots, spinal cord, cortical lesions. Motor system semeiology, tone and reflexes, paresis and paralysis due to upper and lower motor neuron, extrapyramidal symptoms, coordination, stance and gait disturbances, cerebellar and vestibular disorders, optic nerve and pathways, visual field defects, ocular movement disorders, cranial nerve disorders, cognitive symptoms, alteration of consciousness, coma.
NEUROLOGICAL ANAMNESIS (skill) - Onset, progression and characteristics of the main neurological dysfunctions
NEUROLOGICAL EXAM (skill) Mental functions, including orientation, consciousness, language and memory, cranial nerves, motor functions: strenght, tone, trophism, involuntary mobements, deep and superficial reflexes, coordination, primary sensory functions (pain, temperature, posistion, pallesthesia), secondary sensory functions (stereognosia, graphesthesia, discrimination), stance and gait, meningism and auscultation of carotid bruit.
NEUROIMAGING AND NEUROPHYSIOLOGICAL EXAMS, LUMBAR PUNCTURE, CAROTID SONOLOGY, COGNITIVE TESTS (knowledge and observation)
LOCALIZATION AND DIFFERENTIAL DIAGNOSIS OF THE MAIN NEUROLOGICAL DISORDERS (knowledge of aethiology, neuropathology, clinical presentation, diagnosys, medical and surgical therapy): Cerebrovascular disorders, brain and spinal cord tumors, headache, demielinating disorders, nerodegenerative disorders, alterations of consciousness and coma, epilepsy, peripheral nervous system alterations, muscular disorders.
NEUROLOGICAL EMERGENCIES (diagnosis and therapy) - Coma, endocranial hypertension, meningoencephalitis, acute polineuropathy, subaracnoid hemorrage, trauma, acute compressive myelopathy
NEUROLOGICAL COMPLICATIONS OF SYSTEMIC DISORDERS (diagnosis) - neurological complications of alcholisms, HIV, COVID-19

## Prerequisites

Knowledge of propedeutical courses: anatomy, physiology, biochemistry, general pathology, pharmachology

## Teaching form

Frontal lessons, small group lessons, practical activity in the ward and otpatients clinics

## Textbook and teaching resource

Malattie del Sistema Nervoso, Carlo Ferrarese et al McGraw-Hill, Seconda edizione 2016 Collana “Core Curriculum”, 2011
Hauser S.L. Harrison Neurologia Clinica Ed. McGraw-Hill, I edizione italiana 2006
Ropper A.H. Adams e Victor Principi di Neurologia Ed. McGraw-Hill, VIII edizione italiana 2006
Fazio C. e Loeb E. Neurologia di Fazio Loeb Ed. Società Editrice Universo, IV edizione, ristampa 2005

## Semester

5th year, first semester

## Assessment method

Oral exam in attendance
Oral discussion will start with the presentation of a sham clinical case to evaluate the clinical reasoning of the student, based on knowledge of the field

## Office hours

By appointment
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## Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY