



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Neurology

2425-5-H4101D329-H4101D215M

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#### Aims

Teaching Unit of "Neurology" within the Course of "Nervous System Disorders"

To recognize signs and symptoms of neurological disorders through deep knowledge of physiopathology and semeiology of the correspondent nervous system dysfunction.

To learn the nosology and clinical expression of these specific neurological diseases .

To learn the principles of the correct management of these specific neurological disorders.

#### Contents

Semeiology and nosology of neurological disorders treated within this module

#### Detailed program

NEUROLOGIC SEMEIOLOGY

· Exam of sensory system

Sensitive syndromes due to:

- lesions of nerves
- lesions of roots

- lesions of spinal cord
- cortical lesions

· Semeiology of motility

Paresis and paralysis due to:

- upper motor neuron lesions
- lower motor neuron lesions
- differential diagnosis of different types of paralysis
- Akynesia and involuntary movements (extrapyramidal disorders)

· Exam of coordination, stance and gait

Cerebellar symptoms and ataxia

- Optic nerve and pathways
- Alterations of ocular movements
- Semeiology of symbolic defects

Aphasia

Apraxia

Agnosia

ANAMNESIS

- Define the onset, progression, characteristics of disorder, identifying related symptoms and exacerbating conditions

NEUROLOGIC EXAM

- Examination of mental functions, including consciousness, language and memory
- Examination of the cranial nerves
- Examination of motor functions: tests of strength, tone, trophism, involuntary movements, reflexes
- deep and superficial
- Coordination examination
- Examination of primary sensory functions (pain, temperature, position, pallesthesia)
- secondary (stereognosia, graphesthesia, discrimination)

- Examination of standing and walking
- Examination of the meningism and listening to carotid murmurs.

#### LOCATION AND DIFFERENTIAL DIAGNOSIS OF THE MAIN DISEASES

- Distinguish focal, multifocal and diffuse processes
- Determine whether the history and examination indicate a neurologic disorder
- Differentiate aphasia, dysarthria, confusion, amnesia and hemi-inattention
- Recognize and describe brainstem lesion disorders
- Distinguish gaze disorders from cortical or brainstem lesions
- Localize the lesion site of visual field disorders
- Distinguish central and peripheral facial paralysis
- Distinguish central and peripheral paralysis
- Discuss the meaning of a sensory level and sensory dissociations
- Distinguish disorders from hemispheric and vermian cerebellar lesions
- Distinguish the lesions of the root - plexus - nervous trunk - neuromuscular junction - muscle

#### DIAGNOSIS AND THERAPY OF COMMON NEUROLOGICAL CONDITIONS

Etiopathogenesis, neuropathology, clinical picture, fundamental diagnostic procedure, clinical pharmacology and therapeutic potential of surgery for:

- Cerebrovascular diseases
  - Atherothrombotic and embolic infarction
  - Transient ischemic attacks
  - Lacunar state
- Medullary vascular diseases
- Headaches
- Encephalitis and meningitis
  - Pyogenic infections of the SN
  - Clear liquor meningitis
  - Viral infections of the SN, in particular Herpes encephalitis
  - Neurological complications of HIV infection

- Demyelinating diseases, in particular Multiple Sclerosis
- Neurodegenerative diseases; in particular:
  - Parkinson's disease, parkinsonism and Huntington's chorea
  - Dementias, in particular Alzheimer's disease
  - Amyotrophic lateral sclerosis and spinal amyotrophies
  - Eredotassie
- Disorders of consciousness
- Epilepsy (classification, symptoms and elements of therapy)
- Conditions of the peripheral nervous system
  - Trigeminal neuralgia
  - Peripheral paralysis of the VII cranial nerve
  - Polyneuropathies
  - Guillain-Barré syndrome
- Muscle diseases
  - Myasthenia gravis
  - Muscular dystrophies
  - Other myopathies

## DIAGNOSIS AND TREATMENT OF NEUROLOGICAL EMERGENCIES

- Coma
- Increased intracranial pressure
- Status epilepticus
- Subarachnoid hemorrhage
- Cranio-cerebral and vertebral-medullary trauma
- Infections of the nervous system
- Compression of the spine.

## DIAGNOSIS OF NEUROLOGICAL DISEASES DURING INTERNAL DISEASES AND NEUROLOGICAL

COMPLICATIONS OF ALCOHOLISM

INDICATIONS AND USE OF THE MAIN NEURORADIOLOGICAL INVESTIGATIONS

### **Prerequisites**

Knowledge of morphology and functions of different parts of central and peripheral nervous system.  
Neuropharmacology and Neuroradiology

### **Teaching form**

Frontal lessons and ward practical attendance

### **Textbook and teaching resource**

C. Ferrarese I. Appollonio et al. Core Curriculum "Malattie del sistema nervoso" Mc Graw-Hill 2nd ed. 2016

### **Semester**

5th Year - First Semester

### **Assessment method**

Oral exam within the course of Nervous System Disorders

### **Office hours**

E-mail contact with professor for appointment  
carlo.ferrarese@unimib.it

### **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION

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