

**T.C.**

**ISTANBUL MEDIPOL UNIVERSITY**

**INTERNATIONAL SCHOOL OF MEDICINE**



**NEUROLOGICAL SCIENCES** **CLERKSHIP GUIDE**

**2021-2022**

**NEUROLOGICAL SCIENCES CLERKSHIP GUIDE**

**CLERKSHIP DESCRIPTION**

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| **Education Period** | Year V |
| **Clerkship Duration** | 4 weeks |
| **Training Place** | Medipol Mega University Hospital |
| **Instrructors** | * Assoc. Prof. Dr. Nesrin HELVACI YILMAZ * Assoc. Prof. Dr. Özge ARICI DÜZ * Assoc. Prof. Dr. Burcu POLAT * Assoc. Prof. Dr. Ebru ERBAYAT * Asst. Prof. Dr. Berkan KAPLAN * Prof. Dr. Yıldız DEĞİRMENCİ * Asst. Prof. Dr. Alican TAHTA * Prof. Dr. Cengiz ARAS * Prof. Dr. Mehmet Selim KOCABORA * Prof. Dr. Didem SERİN * Prof. Dr. Mustafa ÖZSÜTCU * Assoc. Prof. Dr. Göktuğ DEMİRCİ * Assoc. Prof. Dr. Sevil KARAMAN ERDUR * Assoc. Prof. Dr. Funda DİKKAYA * Assis. Prof. Dr. Asker BULUT * Assis. Prof. Dr. Ayse ÖZPINAR * Assis. Prof. Dr. Sezer HACIAĞAOĞLU |
| **The Head Instructor** | * Assoc. Prof. Dr. Nesrin HELVACI YILMAZ * Assoc. Prof. Dr. Sevil KARAMAN ERDUR |

**THE AIM OF NEUROLOGICAL SCIENCES CLERKSHIP**

To train scientific thinkers who will know about central and peripheral nervous system diseases, which are frequenD End can cause of morbidity and mortality, who can do emergency intervention of diagnosis and treatment of these diseases in primary health care, who can direct them to the upper step institution when necessary and who can provide advice on prevention methods and risk factors.

To learn the anatomy and physiology of G extract; diagnostic examinations used in ophthalmology; refractive defects and eye diseases and their symptoms and symptoms, clinical approach and treatment methods for eye diseases in primary and emergency situations.

**Learning Methods:**

* Theoretical Lessons (Online/Face-to-Face)
* Classroom Lessons
* Practical Applications (Neurological Examination,basic eye examination, pediatric eye muayneck, diagnostic methods anddevices)
* Bedside/Outpatient Clinic/Wards
* Case-Based Learning

**NEUROLOGICAL SCIENCES** **CLERKSHIP LEARNING GOALS**

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| **Course Name** | **Learning Objective of the Course / Application** | **Course Time / Application Time** |
| Neurological Examination | Lists the steps of the neurological examination. | 2 Hours |
| Defines the functions of the medical devices used in the neurological examination. |
| Performs a mental state examination. |
| Knows the examination of the cranial nerves |
| Explains the neurological examination methods required for motor function |
|  | Defines the cerebellar system examination steps |  |
|  | Defines the examination of posture and gait |  |
| Approach to Headaches, Primary Headaches | Sorts out primary headache syndromes. | 3 Hours |
| Explains the definition of migraine, principles of emergency and prevention methods. |
| Can question the patient with headache. |
| Evaluates the patient with headache. |
| Secondary Headaches | Recalls secondary causes of headache. | 1 Hour |
| Differentiate secondary headache from primary headache syndromes. |
| Recognizes and refers urgent pathologies within the causes of secondary headaches. |
| Cranial Nerves 1,2 | Recalls the anatomy and functions of the cranial nerves. | 3 Hours |
| Recognizes fascial paralysis. |
| Sorts out clinical findings in optic nerve pathology. |
| Identifies pathological findings of all cranial nerves. |
| Neurological Emergencies | Lists neurological emergencies. | 2 Hours |
| Explains the basic principles of emergency approach and treatment for acute ischemic stroke and intracerebral hemorrhages. |
| Knows status epilepticus definition, pathophysiology, classification and emergency treatment |
| Lists the emergency and treatment steps in acute meningitis and meningo-encephalitis. |
| Neuromuscular Diseases:Myopathies | Counts the clinical findings of myopathies. | 2 Hours |
| Knows the etiology of myopathies |
| Evaluates laboratory findings. |
| Evaluates the findings of respiratory failure that may develop due to muscle diseases. |
| Neuromuscular Diseases: Peripheral Neuropathies | Sorts out the findings of periheral neuropathies. | 2 Hours |
| Classifies polyneuropathies as acute and chronic. |
| Knows the findings of acute polyneuropathies. |
| Plans emergency treatment of acute polyneuropathies. |

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| **Course Name** | **Learning Objective of the Course / Application** | **Course Time / Application Time** |
| Neurological Coma and Consciousness Disorders | Remembers the definition of consciousness and anatomical centers thaD Ere related to consciousness. | 3 Hours |
| Describes semiology of disorders of unconsciousness . |
| Evaluates the unconscious patient. |
| Lists diseases that can cause unconsciousness. |
| Can distinguish the patient with syncope. |
| Plans emergency treatment of the patient with syncope. |
| Epilepsy-Diagnosis,Approach,Treatment | Defines a seizure. | 2 Hours |
| Lists the differential diagnosis of seizures. |
| Classifies epilepsy and epileptic seizures. |
| Describes the basics of epilepsy treatmenD End the properties of antiepileptic drugs |
| Explains the principles of evaluating the first seizure. |
| Knows the criteria for termination of antiepileptic D. |
| Sleep-Introduction | Sorts out the names of the sleep phases. | 1 Hour |
| Identifies apnea syndomes in sleep. |
| Draws the frame of narcolepsy. |
| Knows the diagnostic criteria for Restless Legs Syndrome. |
| Dementia and Alzheimer's Disease | Describes the semiology of cognitive impairment | 2 Hours |
| Sorts out the etiology of dementia. |
| Lists the diagnostic criteria for dementia. |
| Explains the situations that should be considered in the follow-up of the patient with dementia. |
| Explains the principles of emergency treatment of situations that may occur during the course of the disease. |
| Discusses the prevention of cognitive impairment. |
| Diseases of Medulla Spinalis | Recalls the anatomy of medulla spinalis, the names of the ascending and descending pathways. | 2 Hours |
| Relates clinical findings in neurological diseases with anatomical localization. |
| Evaluates the clinical findings of the diseases of medulla spinalis with emergency |
| Explains how to do the first intervention of medulla spinalis diseases with emergency. |
| Cerebrovascular Diseases-Hemorrhagic Stroke | Lists the types of hemorrhagic stroke. | 2 Hours |
| Knows the findings of subarachnoid hemorrhage |
| Recognizes the findings of intracranial pressure increase |
| Plans emergency treatment for intracranial pressure increase |
| Cerebrovascular Diseases-Ischemic Stroke | Distinguishes the stroke patient by clinical characteristics. | 2 Hours |
| Plans the treatment of acute stroke |
| Knows stroke risk factors. |
| Knows how to manage the prevention of stroke |
| Can refer a stroke patient to the neurologist. |
| Multiple Sclerosis and Neuroimmunological Disorders |  |  |
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| Can describe the clinical findings of multiple sclerosis.  Knows the epidemiology of multiple sclerosis |
|  | Explains the pathogenesis of the neuroimmunological diseases. | 2 Hours |
|  | Knows the names of the neuroimmunological diseases. |  |

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| **Course Name** | **Learning Objective of the Course / Application** | **Course Time / Application Time** |
| Movement disorders:Parkinson's Disease | Recalls the anatomy and physiology of basal ganglia. | 2 Hours |
| Describes hypokinetic movement disorders. |
| Knows the cardinal motor findings of Parkinson's disease |
| Neuromuscular Diseases: Myastenia Gravis and neuromuscular junction diseases | Lists the clinical findings of neuromuscular junction diseases. | 2 Hours |
| Recalls the anatomy and physiology of the neuromuscular junction diseases |
| Knows the etiology of neuromuscular junction diseases. |
| Predicts emergencies for life-threatening neuromuscular junction diseases. |
| Can refer the neuromuscular junction disease to a neurologist. |
| Motor Neuron Disease | Identifies the upper motor neuron findings. | 1 Hour |
| Identifies the lower motor neuron findings. |
| Sorts out the diseases of the anterior horn of medulla spinalis |
| Knows the clinical manifestations of motor neuron disease |
| Vertigo and Balance Disorders | Lists the causes of vertigo. | 2 Hours |
| Knows the clinical differences between peripheral and central vertigo. |
| Lists the principles of approach to a patient with vertigo. |
| Can plan simple treatment for vertigo |
| Can refer patient with vertigo (due to a neurological problem) to a neurologist. |
| Brain Edema | Remembers CSF physiology. | 1 Hour |
| Lists the diseases that cause an increase in intracranial pressure. |
| Knows the findings of intracranial pressure increase. |
| Lists the emergency treatment steps. |
| Movement Disorders: Dystonia and Tremor | Recalls the anatomy and physiology of basal ganglia. | 2 Hours |
| Defines hyperkinetic movement disorders. |
| Central Nervous System Radiology | Recognizes simple normal radiological anatomy in CD End MRI examinations in central nervous system diseases. | 2 Hours |
| Central Nervous System Radiology | Lists radiological findings of central nervous system tumors, vascular diseases, trauma, infectious diseases, neurodegenerative diseases and hydrocephalus. | 2 Hours |
| Central Nervous System Radiology | Counts the radiological diagnostic steps intended for symptoms in CNS diseases. | 2 Hours |
| Central Nervous System Radiology | Defines the radiological terms used in the reporting of imaging methods in CNS diseases. | 2 Hours |
| Radiological Imaging in Central Nervous System Emergencies | Lists possible symptoms and diseases that may occur in head trauma | 1 Hours |
| Explains the etiology of CNS emergency pathologies and the basic radiological changes observed in these cases. |
| Peripheral Vascular and Nonvascular Interventional Radiology | Lists peripheral vascular and nonvascular interventional radiological procedures. | 1 Hour |
| Peripheral Vascular and Nonvascular Interventional Radiology | Describes the usage areas of peripheral vascular and nonvascular interventional radiological procedures. | 1 Hour |
| Interventional Neuroradiological Procedures | Lists the usage areas of interventional neuroradiology. | 1 Hour |
| Lists the methods of interventional neuroradiological treatments. | 1 Hour |
| Lists the symptoms of diseases related to interventional neuroradiology treatment field. | 1 Hour |
| Explain the basic radiological findings of diseases related to the interventional neuroradiology treatment field. | 1 Hour |
| Selects patients to be referred to interventional neuroradiology while providing primary health care. | 1 Hour |

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| **Course Name** | **Learning Objective of the Course / Application** | **Course Time / Application Time** |
| Anatomy and Physiology of the Eye | Remembers the anatomy of the eye. | 1 Hour |
| Tells the physiology of the eye and vision. |
| In general, it combines eye diseases with functional anatomy. |
| Basic Eye Examination and Diagnosis Methods | Lists the examination and diagnostic methods in eye diseases. | 2 Hour |
| Makes inferences from the examination results. |
| Lists advanced diagnostic methods. |
| Diagnosis and Treatment of Refraction Defects of the Eye | Explains the anatomical and physiological causes of refractive errors. | 1 Hour |
| Explains the importance of refractive errors in clinical practice and public health. |
| Lists the diagnostic and basic treatment methods used in refractive errors. |
| Refractive Surgery | Lists the basic principles of appropriate patient selection in refractive surgery. | 1 Hour |
| Describes indications of refractive surgery. |
| Lists the methods used in refractive surgery. |
| Corneal Diseases and Treatment | Explains the risk factors and etiology of corneal diseases. | 1 Hour |
| Describes the mechanisms of physiological defense in the corneal diseases. |
| Lists the findings of corneal diseases. |
| Associates systemic diseases with corneal diseases. |
| Conjunctiva and Ocular Surface Diseases | Recalls the anatomy and embryology of conjunctiva. | 1 Hour |
| Explains the etiology and differential diagnosis of conjunctivitis. |
| Expresses the importance and treatment principles of neonatal conjunctivitis. |
| Etiology, Diagnosis and Treatment in Uveitis | Recalls the anatomy and physiology of uvea. | 1 Hour |
| Lists the symptoms and signs in patients with uveitis. |
| Associates uveitis with systemic and ocular diseases for etiology. |
| Selects the patients to refer to the ophthalmologist with suspicion of uveitis while providing primary health care services. |
| Lists the basic principles of uveitis treatment. |
| Lens Diseases and Treatment | Recalls the anatomy and physiology of the lens. | 1 Hour |
| Lists the lens diseases. |
| Lists diseases of the lens. |
| Defines treatment methods in lens disorders. |
| Describes the relationship of cataracts with systemic diseases and its importance in public health. |
| Hereditary Diseases of the Retina | Recalls retinal anatomy and vision physiology. | 1 Hour |
| Lists hereditary retinal disorders. |
| When providing 1st step health care, selects the patients suspected of hereditary retinal disease to refer to the ophthalmologist. |
| Vascular Diseases of the Retina | Recalls retinal vascular structure. | 1 Hour |
| Lists retinal vascular diseases. |
| Correlates retinal vascular diseases with systemic diseases. |
| Acquired Diseases of the Retina | Lists morphological and functional diagnostic methods of the retina. | 1 Hour |
| Describes subjective symptoms, examination findings, and management of age-related macular degeneration. |
| Describes the pathophysiology of retinal detachment, describes demographic characters, and illustrates the treatment modalities. |
| Orbital and Eyelid Diseases | Recalls orbital and eyelid anatomy and important structures. | 1 Hour |
| Defines basic examination methods in orbital and eyelid diseases and the use of radiology in orbital disorders . |
| Outlines physiopathology and epidemiology, and describes diagnostic and treatment methods of acquired and congenital diseases of the eyelid. |

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| **Course Name** | **Learning Objective of the Course / Application** | **Course Time / Application Time** |
| Pediatric Ophthalmology and Strabismus | Recalls the anatomy and physiology of extraocular muscles. | 1 Hour |
| Tells how tests like red reflex, Brückner, and Hirschberg are performed. |
| Lists the symptoms of the most common pediatric eye diseases. |
| Distinguishes between the urgency of disorders such as pediatric cataracts, glaucoma, and strabismus in terms of treatment. Describes the critical period of lazy eye treatment. |
| Eye Tumors | Lists the types of ocular surface and eyelid tumors, clinical characters and treatment modalities. | 1 Hour |
| Recognizes tumors and symptoms of orbital origin and selects the patients to be referred aD En early stage. |
| Counts the clinical findings and demographic characteristics of retinoblastoma, the most common intraocular cancer of childhood. |
| Lists local radiation (brachyD, etc.) treatments and surgical treatments commonly used in ocular tumor treatment. |
| Diseases of The Optic Nerve and Visual Pathways | Describes clinical anatomy, diagnostic tests, and visual field examination and its rationale in diseases of the optic nerve and visual pathways. | 1 Hour |
| Compares the ophthalmoscopic appearance of the normal optical disc with the ophthalmoscopic characters of the edematous optic disc. |
| Explains the difference between papilledema and optic disc edema, and its reasons. |
| Eye in Systemic Diseases | Lists the relationship between systemic diseases and eye diseases. | 1 Hour |
| Counts the ophthalmological pathologies that can be seen in systemic diseases. |
| Describes the side effects of treatment methods used in systemic diseases on the eye. |
| Eye Traumas and Ophthalmological Emergencies | Lists pathologies that can occur in eye traumas. | 2 Hours |
| Lists red and painful eye conditions and emergencies that lead to sudden decreased vision. |
| As a general practitioner, explains how to perform first intervention in emergency and trauma situations concerning the eye. |
| Distinguishes emergency eye patients to be referred to the ophthalmologist. |
| Premature Retinopathy | Defines retinopathy of prematurity and risk factors. | 1 Hour |
| Distinguishes babies who are at risk for retinopathy of prematurity. |
| Describes the principles of screening and treatment of retinopathy of prematurity. |
| Neuro-ophthalmological Emergencies | Recalls the anatomy and physiology of optic nerve, pupil and visual pathways. | 1 Hour |
| Lists neuro-ophthalmological emergencies. |
| Recognizes a patient with a neuroophthalmological problem and refers to the ophthalmologist. |
| Pupillary Anomalies | Recalls physiology of the pupil and physiological reflexes. | 1 Hour |
| Explains the pathological pupillary responses and causes of response disorders. |
| Describes how to evaluate pathological pupillary reflex responses and distinguishes which diseases are associated with the pathological reflexes. |
| Lacrimal System Diseases | Recalls the anatomy and physiology of the lacrimal system. | 1 Hour |
| Lists the pathologies of the lacrimal system. |
| Defines the diagnostic and treatment principles of lacrimal system obstructions. |
| Describes medical and surgical treatment methods in lacrimal system disorders. |
| Definition, Physiopathogenesis, Diagnosis, and Treatment of Glaucoma | Makes the definition and describes physiopathology of glaucoma. | 1 Hour |
| Defines importance of glaucoma in terms of epidemiology and public eye health. |
| Makes glaucoma classification and defines types of glaucoma. |
| Describes the diagnosis and treatment methods of glaucoma. |

**ASSOCIATION OF LEARNING OBJECTIVES WITH PROGRAM COMPETENCIES AND KEY ROLES**

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| **LEARNING GOAL** | **RELATED PROGRAM QUALIFICATIONS** | **BASIC ROLE** | **MEDICAL SKILLS** |
| **R1- Medical Expert**  **R2-Collaborator**  **R3-Communicator**  **R4-Leader**  **R5-Health Advocate**  **R6-Scholar**  **R7-Professional** | **MS1- Analytical and Critical Thinking**  **MS2-Clinical Questioning-Reasoning**  **MS3-Problem Solving**  **MS4-Accessing and Using Information**  **MS5-Lifelong Learning**  **MS6-Communication and Teamwork** |
| He/she remembers the anatomy and physiological mechanisms of the nervous system and predicts neuroscience as the field of advanced medicine applications. | PQ1, PQ2, PQ4, PQ5, PQ6, PQ7 | R1 |  |
| Evaluates differential diagnosis using basic symptoms and neurological examination findings and necessary diagnostic tools in common neurological diseases. | PQ1, PQ2, PQ3, PQ4, PQ5, PQ6, PQ7, PQ8 | R1, R3, R7, | MS1, MS2, MS3, MS6 |
| Explains the global burden of neurological diseases, risk factors and protection. (K) | PQ1, PQ3, PQ4, PQ5, PQ8 | R1, R5 | MS4, MS5 |
| Adopts the importance of preventive medicine in neurological diseases. (K) | PQ3, PQ4, PQ5, PQ8 | R1, R3, R5 | MS4, MS5 |
| He/she makes sense of the preliminary diagnosis of dementia, multiple sclerosis, epilepsy, movement disorders, sleep disorders. (Pnosis) | PQ1, PQ2, PQ3, PQ4, PQ5, PQ7, PQ8 | R1 | MS1, MS2, MS3 |
| During primary health care, he/she selects the patients he/she will refer to the neurologisD End provides consultancy on this subject. (Pnosis) | PQ1, PQ2, PQ3, PQ4, PQ5, PQ6, PQ7, PQ8 | R1, R2,R7 | MS1, MS2, MS3, MS6 |
| He/she manages neurological diseases requiring chronic follow-up and counseling, especially headache, stroke, polyneuropathy, within the scope of primary health care. (T K I) | PQ1, PQ2, PQ3, PQ4, PQ6, PQ7, PQ8, PQ14 | R1, R3, R7 | MS1, MS2, MS3, MS6 |
| He/she plans the diagnosis and treatment of tension type headache. (TT) | PQ1, PQ2, PQ3, PQ4, PQ5, PQ6, PQ7, PQ8 | R1, R5, R7 | MS1, MS2, MS3, MS6 |
| He/she plans emergency treatment of vital neurological diseases such as stroke, epileptic seizure, acute polyneuropathic syndrome, acute medulla spinalis lesion. (A) | PQ1, PQ2, PQ3, PQ4, PQ5, PQ6, PQ7, PQ8 | R1 | MS1, MS2, MS3, MS6 |
| **LEARNING GOALS** | **RELATED PROGRAM QUALIFICATIONS** | **BASIC ROLE** | **MEDICAL SKILLS** |
| **R1- Medical Expert**  **R2-Collaborator**  **R3-Communicator**  **R4-Leader**  **R5-Health Advocate**  **R6-Scholar**  **R7-Professional** | **MS1- Analytical and Critical Thinking**  **MS2-Clinical Questioning-Reasoning**  **MS3-Problem Solving**  **MS4-Accessing and Using Information**  **MS5-Lifelong Learning**  **MS6-Communication and Teamwork** |
| He/she advises on the necessary regulations about the working conditions of epileptic patients and questions the possible toxic exposure of a patient with polynoropathy. (Occupational Health) | PQ1, PQ2, PQ3, PQ4, PQ5, PQ6, PQ7, PQ8, PQ21 | R1, R3, R7 | MS1, MS2, MS3, MS6 |
| He/she performs the neurological examination completely and detailed and relates it to the systemic physical examination findings. | PQ1, PQ2, PQ4, PQ5, PQ6, PQ7, PQ8, PQ11 | R1, R3, R7 | MS2, MS6 |
| He/she uses diagnostic methods from simple to complex steps. | PQ1, PQ2, PQ4, PQ5, PQ7, PQ8 | RI, R5, R7 | MS1, MS2, MS3 |
| He/she communicates effectively with patients, their relatives and his/her colleagues, both verbally and in writing. | PQ2, PQ14 | R1, R3, R7 | MS6 |
| He/she uses evidence-based medical practices when providing primary health care. | PQ1, PQ2, PQ3, PQ4, PQ5, PQ7, PQ8, PQ13 | R1, R3, R6 | MS4, MS5 |
| He/she takes care of human and patient riMSts while providing medical services and adopts the principles of protection of personal data. | PQ14 | R1, R3, R7 | MS6 |

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| **LEARNING GOALS** | **RELATED PROGRAM QUALIFICATIONS** | **BASIC ROLE** | **MEDICAL SKILLS** |
| **R1- Medical Expert**  **R2-Collaborator**  **R3-Communicator**  **R4-Leader**  **R5-Health Advocate**  **R6-Scholar**  **R7-Professional** | **MS1- Analytical and Critical Thinking**  **MS2-Clinical Questioning-Reasoning**  **MS3-Problem Solving**  **MS4-Accessing and Using Information**  **MS5-Lifelong Learning**  **MS6-Communication and Teamwork** |

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| He remembers anatomy, physiology, histology information about the eye and its appeases. | PQ1 | R1 |  |
| Explains the physiology, causes and relationships of symptoms related to eye diseases with other systems. | PQ1, PQ2 | RI, R7 | MS1, MS2, MS3 |
| Explainsand interpretsthefrequent clinical findings ofeyediseases. | PQ1, PQ2 | RI, R7 | MS1, MS2, MS3, |
| Describes general epidemiological features related to eye diseases and preventive medicinepractices. | PQ1, PQ3, PQ14 | RI, R5 | MS4, MS5 |
| It considers the traumatic diseases of the eye, glaucoma, diseases of the retina, cornea and ocular surface, lacrimal system, as well as pupilla anomalies and paralytic strabismus as preliminary diagnosis with the findings of physicalexamination. | PQ1, PQ2, PQ5, PQ6 | R1 | MS1, MS2, MS3 |
| It refers patients with eye traumas, sudden loss of vision and non-conjunctivitis red eye patients to theirspecialist. | PQ1, PQ2, PQ5,PQ6, PQ7, PQ14 | R1, R2,R7 | MS1, MS2, MS3, MS6 |
| Explains diseases such as conjunctivitis, neonatal conjunctivitis, treatment methods, properties of basic drugs and serious side effects that lead to the red eye. | PQ1, PQ2, PQ3, PQ6, PQ7, PQ11, PQ14, PQ18 | R1, R5 | MS1, MS2, MS3, MS6 |
| It performs emergency intervention in cases of chemical eyeburns. | PQ1, PQ2, PQ3, PQ6, PQ7, PQ14 | R1, R5 | MS1, MS2, MS3, MS6 |
| It performs visual acuity, pupilla, eye movements and eyeball examinations. | PQ1, PQ2, PQ6 | R1, R3, R7 | MS2, MS6 |
| It uses diagnostic methods in simple to complexsteps. | PQ1, PQ2, PQ7, PQ8, PQ18 | RI, R5, R7 | MS1, MS2, MS3 |
| Applies the principles of rational druguse. | PQ1, PQ2, PQ3, PQ7, PQ8, PQ18 | RI, R5, R7 | MS1, MS2, MS3 |

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|  |  | **BASIC ROLE** | **MEDICAL SKILLS** |
| **LEARNING GOALS** | **RELATED PROGRAM QUALIFICATIONS** | **R1- Medical Expert**  **R2-Collaborator**  **R3-Communicator**  **R4-Leader**  **R5-Health Advocate**  **R6-Scholar**  **R7-Professional** | **MS1- Analytical and Critical Thinking**  **MS2-Clinical Questioning-Reasoning**  **MS3-Problem Solving**  **MS4-Accessing and Using Information**  **MS5-Lifelong Learning**  **MS6-Communication and Teamwork** |
| Patients communicate effectively in writing and verbally with their relatives andcolleagues. | PQ14 | R1, R3, R7 | MS6 |
| It takes care of human and patient riMSts when providing medical services and adopts the principles of protection of personal data. | PQ18, PQ19 | R1, R3, R7 | MS6 |
| Understands the importance of multidisciplinary approach in diagnosis and treatment monitoring of emergency eyediseases. | PQ1, PQ2, PQ12, PQ14, PQ20 | R2, R4, R7 | MS6 |
| When carrying out the family medicine service, the notification of mandatory diseases at the primary level, definitions, can makenotifications. | PQ1, PQ2, PQ11, PQ14, PQ18, | R1, R2, R7 | MS6 |

**NEUROLOGICAL SCIENCE BLOCK** **CEP TABLE**

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT EVALUATION METHOD** |
| **AGGRAVATION (PRIVACY)** | Cognitive Disorders (Dementia, Delirium) | 1.Coma and Unconscious Disorders  2.Dementia and Alzheimer's Disease | D E P F | Written |
| **AGITATION** | Cognitive Disorders (Dementia, Delirium) | 1.Coma and Unconscious Disorders  2.Dementia and Alzheimer's Disease | D E P F | Written |
| **HEADACHE** | Essential Hypertension | Approach to Headache, Primary Headaches | D E P F | Written- Oral |
| **HEADACHE** | Depression | Approach to Headache, Primary Headaches | D E P F | Written - Oral |
| **HEADACHE** | Drug Side Effects | Approach to Headaches, Primary Headaches | P | Written-Oral |
| **HEADACHE** | Migraine | Approach to Headache, Primary Headaches | D E P F | Written |
| **HEADACHE** | Upper Respiratory Tract Infections | Approach to Headache, Primary Headaches | D E P F | Written-Oral |
| **HEADACHE** | Tension Type Headache | Approach to Headaches, Primary Headaches | DT | Written |
| **HEADACHE** | Brain Edema | Approach to Headache, Primary Headaches | D E P F | Written-Oral |
| **HEADACHE** | Intracranial Infections | Approach to Headache, Primary Headaches | D E P F | Written-Oral |
| **HEADACHE** | Intracranial Pressure Increase Syndrome (IPIS; Acute Cerebrovascular Events) | Approach to Headache, Primary Headaches | D E P F | Written-Oral |
| **HEADACHE** | Head Trauma | Approach to Headache, Primary Headaches | D E P F | Written-Oral |
| **HEADACHE** | Secondary Hypertension | Approach to Headache, Primary Headaches | D E P F | Written-Oral |
| **HEADACHE** | Intracranial Lesions | Approach to Headache, Primary Headaches | D E P F | Written-Oral |
| **HEADACHE** | Glaucoma | Approach to Headache, Primary Headaches | D E P F | Written-Oral |
| **HEADACHE** | Refractive Defects | Approach to Headache, Primary Headaches | D E P F | Written-Oral |
| **HEADACHE** | Subarachnoid Hemorrage | Approach to Headache, Primary Headaches | D E P F | Written-Oral |
| **HEADACHE** | Bodily Symptom Disorder (Somatization) | Approach to Headache, Primary Headaches | D E P F | Written-Oral |
| **DIZZINESS** | Drug Side Effects | Vertigo and Balance Disorders | P | Written-Oral |
| **DIZZINESS** | Benign Paroxysmal Vertigo | Vertigo and Balance Disorders | DT | Written-Oral |
| **DIZZINESS** | Stroke | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Cerebrovascular Diseases-Ischemic stroke | D E P F | Written |
| **DIZZINESS** | Vestibular neuritis | Vertigo and Balance Disorders | P | Written-Oral |

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **DIZZINESS** | Intracranial Lesions | Vertigo and Balance Disorders | P | Written-Oral |
| **LOSS OF CONCIOUSNESS** | Stroke | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Cerebrovascular Diseases-Ischemic stroke | D E P F | Written |
| **LOSS OF CONCIOUSNESS** | Fluid and Electrolyte Balance Disorders | Neurological Coma and Disorders of Consciousness | D E | Written-Oral |
| **LOSS OF CONCIOUSNESS** | Acute Complications of Diabetes | Neurological Coma and Disorders of Consciousness | D E | Written-Oral |
| **LOSS OF CONCIOUSNESS** | Cardiopulmonary Arrest | Neurological Coma and Disorders of Consciousness | D E | Written-Oral |
| **LOSS OF CONCIOUSNESS** | Coma | Neurological Coma and Disorders of Consciousness | D E | Written-Oral |
| **LOSS OF CONCIOUSNESS** | Head Trauma | Neurological Coma and Disorders of Consciousness | D E | Written-Oral |
| **LOSS OF CONCIOUSNESS** | Intracranial Pressure Increase Syndrome (IPIS; Acute Cerebrovascular Events) | Neurological Coma and Disorders of Consciousness | D E | Written-Oral |
| **LOSS OF CONCIOUSNESS** | Hypoglycemia | Neurological Coma and Disorders of Consciousness | D E | Written-Oral |
| **SEXUAL PROBLEMS** | Sexual Dysfunctions | 1. Multiple Sclerosis and Neuroimmunological Disorders  2. Disorders of Medulla Spinalis | P | Written - Oral |
| **DOUBLE VISION** | Drug Side Effects | 1. Diseases of Cranial Nerves 1,2  2. Vertigo and Balance Disorders  3. Neuromuscular Diseases:M.Gravis and others | P | Written-Oral |
| **DOUBLE VISION** | Migraine | Approach to Headache, Primary Headaches | D E P F | Written |
| **DOUBLE VISION** | Myastenia Gravis and the Cholinergic Crisis | Neuromuscular Diseases: M.Gravis and others | D E | Written |
| **DOUBLE VISION** | Multiple Sclerosis | Multiple Sclerosis and Neuroimmunological Disorders | D E | Written |
| **PROBLEMS WITH BALANCE / MOVEMENT** | Stroke | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Cerebrovascular Diseases-Ischemic stroke | D E P F | Written |

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **PROBLEMS WITH BALANCE / MOVEMENT** | Poliomyelitis | Neuromuscular Diseases: Peripheral Neuropathies | P | Written |
| **PROBLEMS WITH BALANCE / MOVEMENT** | Parkinson's Disease | Movement Disorders: Parkinson's Disease | D | Written |
| **PROBLEMS WITH BALANCE / MOVEMENT** | Vestibuler Neuritis | Vertigo and Balance Disorders | P | Written-Oral |
| **PROBLEMS WITH BALANCE / MOVEMENT** | Guillain Barré Syndrome | Peripheral Neuropathies | D | Written |
| **PROBLEMS WITH BALANCE / MOVEMENT** | Transient Ischemic Attack | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2. Cerebrovascular Diseases- ischemic stroke | D | Written |
| **PROBLEMS WITH BALANCE / MOVEMENT** | Spinal Cord Compression Syndrome | Neuromuscular Diseases:Peripheral Neuropathies | P | Written |
| **PROBLEMS WITH BALANCE / MOVEMENT** | Multiple Sclerosis | Multiple Sclerosis and Neuroimmunological Disorders | D E | Written |
| **PROBLEMS WITH BALANCE / MOVEMENT** | Muscular Diseases (Myopathies) | Neuromuscular Diseases: Myopathies | P | Written |
| **ATTENTION DEFICIENCY** | Cognitive Disorders (Dementia, Delirium) | 1.Coma and Unconscious Disorders  2.Dementia and Alzheimer's Disease | D E P F | Written |
| **ATTENTION DEFICIENCY** | Sleep Disorders | Sleep | P | Written - Oral |
| **DYSPNEA** | Muscular Diseases (Myopathies) | Neuromuscular Diseases: Myopathies | P | Written |
| **MOOD CHANGES** | Cognitive Disorders (Dementia, Delirium) | 1.Coma and Unconscious Disorders  2.Dementia and Alzheimer's Disease | D E P F | Written |
| **NECK STIFFNESS** | Intracranial Pressure Increase Syndrome (IPIS; Acute Cerebrovascular Events) | Approach to Headache, Primary Headaches | D E P F | Written-Oral |

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **FECAL INCONTINENCE** | Cognitive Disorders (Dementia, Delirium) | 1.Coma and Unconscious Disorders  2.Dementia and Alzheimer's Disease | D E P F | Written |
| **FECAL INCONTINENCE** | Spinal Cord Compression Syndrome | Neuromuscular Diseases:Peripheral Neuropathies | P | Written |
| **PROBLEMS WITH EVALUATING REALITY (Delusion,Hallucination)** | Cognitive Disorders (Dementia, Delirium) | 1.Coma and Unconscious Disorders  2.Dementia and Alzheimer's Disease | D E P F | Written |
| **VISUAL IMPAIRMENT / LOSS** | Optic Neuritis | 1. Diseases of Cranial Nerves 1,2  2.Multiple Sclerosis and Neuroimmunological Disorders | P | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Behçet's Disease | 1. Diseases of Cranial Nerves 1,2  2.Multiple Sclerosis and Neuroimmunological Disorders | P | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Transient Ischemic Attack | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2. Cerebrovascular Diseases-Ischemic stroke | D | Written |
| **VISUAL IMPAIRMENT / LOSS** | Multiple Sclerosis | 1.Multiple Sclerosis and Neuroimmunological Disorders | D E | Written |
| **SNORE** | Sleep Apnea Syndrome | Sleep | P | Written-Oral |
| **URINARY RETENTION** | Spinal Cord Compression Syndrome | 1.Neuromuscular Diseases:Peripheral Neuropathies  2.Systemic Diseases and Neurology | P | Written |
| **HEARING DISORDER** | Multiple Sclerosis | 1.Multiple Sclerosis and Neuroimmunological Disorders | D E | Written |
| **MUSCLE WEAKNESS** | Stroke | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Cerebrovascular Diseases-Ischemic Stroke | D E P F | Written |

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **MUSCLE WEAKNESS** | Myastenia Gravis and the Cholinergic Crisis | Neuromuscular Diseases: M.Gravis and others | D E | Written |
| **MUSCLE WEAKNESS** | Spinal Cord Compression Syndrome | 1.Neuromuscular Diseases:Peripheral Neuropathies  2.Systemic Diseases and Neurology | P | Written |
| **MUSCLE WEAKNESS** | Muscular Diseases (Myopathies) | Neuromuscular Diseases: Myopathies | P | Written |
| **MUSCLE WEAKNESS** | Guillain Barré Syndrome | Peripheral Neuropathies | D | Written |
| **MUSCLE WEAKNESS** | Polymyositis and Dermatomyositis | Neuromuscular Diseases:Myopathies | P | Written-Oral |
| **MUSCLE WEAKNESS** | Peripheral Neuropathy | Neuromuscular Diseases: Peripheral Neuropathies | P | Written |
| **MUSCULOSKELETAL SYSTEM PAIN (Back, Neck, Back, Hip and Extremity Pain)** | Polymyositis and Dermatomyositis | Neuromuscular Diseases:Myopathies | P | Written-Oral |
| **MUSCULOSKELETAL PAIN (Back, Neck, Back, Hip and Extremity Pain)** | Peripheral Neuropathy | Neuromuscular Diseases: Myopathies | P | Written |
| **MUSCULOSKELETAL PAIN (Back, Neck, Back, Hip and Extremity Pain)** | Muscular Diseases (Myopathies) | Neuromuscular Diseases: Myopathies | P | Written |
| **SPEECH DISORDERS (Aphasia, Dysphasia, Dysartria, Stuttering)** | Stroke | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Cerebrovascular Diseases-Ischemic Stroke | D E P F | Written |

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **SPEECH DISORDERS (Aphasia, Dysphasia, Disarthria, Stuttering)** | Speech Disorders | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Neurological Examination  3. Diseases of Cranial Nerves 1,2  4.Cerebrovascular Diseases- Ischemic Stroke | D | Written |
| **SPEECH DISORDERS**  **(Aphasia, Dysphasis, Dysarthria, Stuttering)** | Multiple Sclerosis | Multiple Sclerosis and Neuroimmunological Disorders | D E | Written |
| **CONVULSIONS** | Febrile convulsion | Epilepsy-Classification, Syndromes, Treatment | Pred F | Written-Oral |
| **CONVULSIONS** | Liquid and Electrolyte (Sodium, Potassium, Calcium, Magnesium, Phosphorus) Balance Disorders | Epilepsy-Classification, Syndromes, Treatment | Pred F | Written-Oral |
| **CONVULSIONS** | Eclampsia, Preeclampsia, HELLP Syndrome | Epilepsy-Classification, Syndromes, Treatment | Pred F | Written-Oral |
| **CONVULSIONS** | Brain Edema | Epilepsy-Classification, Syndromes, Treatment | Pred F | Written-Oral |
| **CONVULSIONS** | Hypoglycemia | Epilepsy-Classification, Syndromes, Treatment | Pred F | Written-Oral |
| **CONVULSIONS** | Head Trauma | Epilepsy-Classification, Syndromes, Treatment | Pred F | Written-Oral |
| **CONVULSIONS** | Intracranial Infections | Epilepsy-Classification, Syndromes, Treatment | Pred F | Written-Oral |
| **CONVULSIONS** | Intracranial Pressure Increase Syndrome (IPIS; Acute Cerebrovascular Events) | Epilepsy-Classification, Syndromes, Treatment | Pred F | Written-Oral |
| **CONVULSIONS** | Epilepsy | Epilepsy-Classification, Syndromes, Treatment | Pred F | Written |
| **CONVULSIONS** | Intracranial Lesions | Epilepsy-Classification, Syndromes, Treatment | Pred F | Written-Oral |
| **NEURALGIA** | Peripheral Neuropathy | 1. Diseases of Cranial Nerves 1,2  2.Neuromuscular Diseases: Peripheral Neuropathies | P | Written |
| **PARESTHESIA** | Guillain Barré Syndrome | Peripheral Neuropathies | D | Written |
| **PARESTHESIA** | Multiple Sclerosis | Multiple Sclerosis and Neuroimmunological Disorders | D E | Written |

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **PARESTHESIA** | Peripheral Neuropathy | Neuromuscular Diseases: Peripheral Neuropathies | P | Written |
| **PARESTHESIA** | Spinal Cord Compression Syndrome | Neuromuscular Diseases:Peripheral Neuropathies | P | Written |
| **PARESIS / PARALYSIS** | Stroke | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Cerebrovascular Diseases- Ischemic Stroke | D E P F | Written |
| **PARESIS / PARALYSIS** | Fascial Paralysis | 1.Neurological Examination  2.Diseases of Cranial Nerves 1,2 | D | Written |
| **PARESIS / PARALYSIS** | Poliomyelit | Neuromuscular Diseases: Peripheral Neuropathies | P | Written |
| **PARESIS / PARALYSIS** | Spinal Cord Compression Syndrome | Neuromuscular Diseases:Peripheral Neuropathies | P | Written |
| **PARESIS / PARALYSIS** | Multiple Sclerosis | Multiple Sclerosis and Neuroimmunological Disorders | D E | Written |
| **PARESIS / PARALYSIS** | Guillain Barré Syndrome | Peripheral Neuropathies | D | Written |
| **PARESIS / PARALYSIS** | Peripheral Neuropathy | Neuromuscular Diseases: Peripheral Neuropathies | P | Written |
| **PUPIL SIZE CHANGES** | Stroke | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Cerebrovascular Diseases-Ischemic Stroke | D E P F | Written |
| **SYNCOPE** | Drug Side Effects | Epilepsy-Classification, Syndromes, Treatment | TD E | Written-Oral |
| **SYNCOPE** | Stroke | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Cerebrovascular Diseases- Ischemic Stroke | D E P F | Written |
| **SYNCOPE** | Transient Ischemic Attack | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Cerebrovascular Diseases- Ischemic Stroke | D | Written |
| **TINNITUS** | Multiple Sclerosis | Multiple Sclerosis and Neuroimmunological Disorders | D E | Written-Oral |

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **TREMOR** | Drug Side Effects | Movement Disorders:Dystonia and Tremor | DT | Written - Oral |
| **TREMOR** | Stroke | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Cerebrovascular Diseases- Ischemic Stroke | D E P F | Written |
| **TREMOR** | Multiple Sclerosis | Multiple Sclerosis and Neuroimmunological Disorders | D E | Written |
| **TREMOR** | Parkinson's Disease | Movement Disorders: Parkinson's Disease | D | Written |
| **FORGETFULNESS** | Depression | Dementia and Alzheimer's Disease | P | Written-Oral |
| **FORGETFULNESS** | Drug Side Effects | Dementia and Alzheimer's Disease | P | Written-Oral |
| **FORGETFULNESS** | Hypothyrodism | Dementia and Alzheimer's Disease | P | Written-Oral |
| **FORGETFULNESS** | Cognitive Disorders (Dementia, Delirium) | Dementia and Alzheimer's Disease | P | Written-Oral |
| **FORGETFULNESS** | Problems with Alcohol and Substance Use | Dementia and Alzheimer's Disease | P | Written-Oral |
| **FORGETFULNESS** | Head Trauma | Dementia and Alzheimer's Disease | P | Written-Oral |
| **FORGETFULNESS** | Transient Ischemic Attack | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2. Cerebrovascular Diseases-Ischemic Stroke | D | Written |
| **FORGETFULNESS** | Intracranial Lesions | Dementia and Alzheimer's Disease | P | Written-Oral |
| **SLEEP PROBLEMS** | Sleep Disorders | Sleep | P | Written-Oral |
| **SLEEP PROBLEMS** | Sleep Apnea Syndrome | Sleep | P | Written-Oral |
| **URINARY INCONTINENCE** | Stroke | 1.Cerebrovascular Diseases-Hemorrhagic Stroke  2.Cerebrovascular Diseases-Ishemic Stroke | D E P F | Written |
| **URINARY INCONTINENCE** | Guillain Barré Syndrome | Peripheral Neuropathies | D | Written |
| **URINARY INCONTINENCE** | Multiple Sclerosis | Multiple Sclerosis and Neuroimmunological Disorders | D E | Written |
| **URINARY INCONTINENCE** | Parkinson's Disease | Movement disorders:Parkinson's Disease | P | Written-Oral |
| **POISONINGS** | Cognitive Disorders (Dementia, Delirium) | 1.Coma and Unconscious Disorders  2.Dementia and Alzheimer's Disease | D E P F | Written |
| **POISONINGS** | Coma | Neurological Comas and Disorders of Consciousness | D E | Written-Oral |

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | | **LEVEL OF LEARNING** | | **MEASUREMENT-EVALUATION** |
| **HEADACHE** | Glaucoma | | 1.Definition of Glaucoma and Physiopatogenesis2.Diagnosis and Treatment in Glaucoma | | D | Written-Oral |
| **HEADACHE** | Refractive Defects | | 1.Refraction Defects of the Eye2.Diagnosis and Treatment of Refraction Defects | | D | Written-Oral |
| **DOUBLE VISION** | Migraine | | 1.Şaşılıklar2. Oftalmolojik Aciller | | D E K F | Written-Oral |
| **DOUBLE VISION** | Eye Trauma | | 1.Strabismus2. Eye Traumas | | D | Written-Oral |
| **DOUBLE VISION** | Intracranial Pressure Increase Syndrome (KIBAS; Acute Cerebrovascular Events) | | 1.Optic Neurosciences2.Neuro-ofralmological Emergencies | | E | Written-Oral |
| **DOUBLE VISION** | Head Trauma | | Eye Traumas | | E | Written-Oral |
| **DOUBLE VISION** | Multiple Sclerosis | | Şaşılıklar | | P | Written-Oral |
| **DOUBLE VISION** | Intracred Lesions | | 1.Ophthalmological Emergencies2.Eye in System Diseases | | P | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Eye Trauma | | Eye Traumas | | E | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Intracranial Infections | | 1.Eye Traumas2.Neuro-ofralmological Emergencies3.Pupilla Anomalies | | E | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Premature Retinopathy in Newborn | | 1.Pediyatrik Oftalmoloji2.Prematüre Retinopatisi | | D | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Intrauterine Infections | | 1.Etiology in Uveitis2.Diagnosis and Treatment in Uveitis3.Pediatric Ophthalmology | | PrD P | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Intracred Lesions | | 1.Oftalmolojik Aciller2.Nöro-Oftalmolojik Aciller | | P | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Cataract | | Lens Diseases and Treatment | | D | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Optics Nevrit | | Optic Neuroscience | | D | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Glaucoma | | 1.Definition of Glaucoma and Physiopatogenesis2.Diagnosis and Treatment in Glaucoma | | D | Written-Oral |
| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | | **TERM 5 COURSE NAME** | | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **VISUAL IMPAIRMENT / LOSS** | Refractive Defects | | 1.Refraction Defects of the Eye2.Diagnosis and Treatment of Refraction Defects | | D | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Behçet's Disease | | 1.Etiology in Uveitis2.Diagnosis and Treatment in Uveitis | | D | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Temporary Ischemic Attack | | Oftalmolojik Aciller | | P | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Multiple Sclerosis | | Optic Neuroscience | | P | Written-Oral |
| **RED EYE (Red Eye Redness)** | Urticaria and Angioedema | | 1. Orbital Diseases2. Eyelid Diseases3. Eye in System Diseases | | TD E | Written-Oral |
| **RED EYE (Red Eye Redness)** | Conjunctivitis in Neonatology | | 1. Conjunctiva and Ocular Surface Diseases2. Pediatric Ophthalmology | | DT K | Written-Oral |
| **RED EYE (Red Eye Redness)** | Konjonktivit | | 1. Conjunctiva and Ocular Surface Diseases2. Ophthalmological Emergencies | | DT K | Written-Oral |
| **RED EYE (Red Eye Redness)** | Fluid and Electrolyte Balance Disorders | | Eye in System Diseases | | D E K | Written-Oral |
| **RED EYE (Red Eye Redness)** | Allergic Reaction | | 1. Conjunctiva and Ocular Surface Diseases2. Ophthalmological Emergencies | | D E | Written-Oral |
| **RED EYE (Red Eye Redness)** | Glaucoma | | 1. Glaucoma Definition and Physiopatogenesis2. Diagnosis and Treatment of Glaucoma | | D | Written-Oral |
| **PUPİL DEĞİŞİKLİKLERİ** | Drug Side Effects | | 1. Neuro-ofralmological Emergencies 2. Pupilla Anomalies | | TD E K F | Written-Oral |
| **PUPİL DEĞİŞİKLİKLERİ** | Paralysis | | 1. Neuro-Ophthalmological Emergencies 2. Pupilla Anomalies | | D E K F | Written-Oral |
| **PUPİL DEĞİŞİKLİKLERİ** | Kardiyo Pulmoner Arrest | | 1. Neuro-ofralmological Emergencies 2. Pupilla Anomalies | | A | Written-Oral |
| **PUPİL DEĞİŞİKLİKLERİ** | Intracranial Infections | | 1. Neuro-ofralmological Emergencies2. Pupilla Anomalies | | A | Written-Oral |
| **PUPİL DEĞİŞİKLİKLERİ** | Head Trauma | | 1. Neuro-ofralmological Emergencies 2. Pupilla Anomalies | | E | Written-Oral |
| **PUPİL DEĞİŞİKLİKLERİ** | Lung Cancer | | 1. Neuro-ofralmological Emergencies 2. Pupilla Anomalies | | PrD T | Written-Oral |
| **PUPİL DEĞİŞİKLİKLERİ** | Intracred Lesions | | 1. Neuro-ofralmological Emergencies 2. Pupilla Anomalies | | P | Written-Oral |
| **ŞAŞILIK** |  | | Şaşılıklar | | DT | Written-Oral |
| **BURNT** | Accidents (Home, Work, Traffic, Electric Shock, Fall, Drownings) | | Eye Traumas | | E P | Written-Oral |

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| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **NECK STIFFNESS** | Intracranial Infections | Central Nervous System Radiology | D | Written-Oral |
| **NECK STIFFNESS** | Intracranial Pressure Increase Syndrome (IPIS; Acute Cerebrovascular Events) | 1.Central Nervous System Radiology  2.Radiological Imaging in Central Nervous System Emergencies | D | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Intracranial Infections | Central Nervous System Radiology | D | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Intracranial Lesions | 1.Central Nervous System Radiology 2.Radiological Imaging in Central Nervous System Emergencies | D | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Transient Ischemic Attack | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **VISUAL IMPAIRMENT / LOSS** | Multiple Sclerosis | Central Nervous System Radiology | D | Written-Oral |
| **HEARING DISORDER** | Intracranial Infections | Central Nervous System Radiology | D | Written-Oral |
| **MUSCLE WEAKNESS** | Stroke | Radiological Imaging in Central Nervous System Emergencies  -Interventional Neuroradiological Applications | D | Written-Oral |
| **SPEECH DISORDERS** **(Aphasia,**  **Dysphasia, dysarthria,stuttering)** | Stroke | 1.Central Nervous System Radiology 2.Radiological Imaging in Central Nervous System Emergencies  3.Interventional Neuroradiological Applications | D | Written-Oral |
| **CONVULSIONS** | Brain Edema | 1.Central Nervous System Radiology 2.Radiological Imaging in Central Nervous System Emergencies | D | Written-Oral |
| **CONVULSIONS** | Intracranial Infections | Central Nervous System Radiology | D | Written-Oral |
| **CONVULSIONS** | Intracranial Pressure Increase Syndrome (IPIS; Acute Cerebrovascular Events) | 1.Central Nervous System Radiology 2.Radiological Imaging in Central Nervous System Emergencies | D | Written-Oral |
| **CONVULSIONS** | Epilepsy | Central Nervous System Radiology | D | Written-Oral |
| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **CONVULSIONS** | Intracranial Lesions | Radiological Imaging in Central Nervous System Emergencies | D | Written-Oral |
| **MICRO-MACROCEPHALY** | Hydrocephalus | Central Nervous System Radiology | D | Written-Oral |
| **PARESIS / PARALYSIS** | Stroke | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **PELVIC PAIN** | Urolithiasis | Urogenital System Radiology | D | Written-Oral |
| **PUPIL SIZE CHANGES** | Stroke | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **PUPIL SIZE CHANGES** | Intracranial Infections | Central Nervous System Radiology | D | Written-Oral |
| **PUPIL SIZE CHANGES** | Head Trauma | Radiological Imaging in Central Nervous System Emergencies | D | Written-Oral |
| **PUPIL SIZE CHANGES** | Lung Cancer | Respiratory System Examination Methods and Thorax Radiology | D | Written-Oral |
| **PUPIL SIZE CHANGES** | Intracranial Lesions | Radiological Imaging in Central Nervous System Emergencies | D | Written-Oral |
| **SYNCOPE** | Stroke | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **SYNCOPE** | Transient Ischemic Attack | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **TINNITUS** | Migraine | Central Nervous System Radiology | D | Written-Oral |
| **TREMOR** | Stroke | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **FORGETFULNESS** | Head Trauma | Radiological Imaging in Central Nervous System Emergencies | D | Written-Oral |
| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **URINARY INCONTINANCE** | Stroke | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **POISONINGS** | Brain Edema | 1.Central Nervous System Radiology 2.Radiological Imaging in Central Nervous System Emergencies | D | Written-Oral |
| **HEADACHE** | Subarachnoid Hemorrhage | 1.Central Nervous System Radiology 2.Radiological Imaging in Central Nervous System Emergencies  3.Interventional Neuroradiological Applications | D | Written-Oral |
| **DIZZINESS** | Stroke | 1.Central Nervous System Radiology 2.Radiological Imaging in Central Nervous System Emergencies  3.Interventional Neuroradiological Applications | D | Written-Oral |
| **LOSS OF CONCIOUSNESS** | Stroke | 1.Central Nervous System Radiology 2.Radiological Imaging in Central Nervous System Emergencies  3.Interventional Neuroradiological Applications | D | Written-Oral |
| **PROBLEMS WITH BALANCE / MOVEMENT** | Stroke | 1.Central Nervous System Radiology 2.Radiological Imaging in Central Nervous System Emergencies  3.Interventional Neuroradiological Applications | D | Written-Oral |
| **PROBLEMS WITH BALANCE / MOVEMENT** | Transient Ischemic Attack | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **SYMPTOMS/CONDITIONS** | **CORE DISEASES / CLINICAL PROBLEMS** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** | **MEASUREMENT-EVALUATION** |
| **VISUAL IMPAIRMENT / LOSS** | Transient Ischemic Attack | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **MUSCLE WEAKNESS** | Stroke | Radiological Imaging in Central Nervous System Emergencies  -Interventional Neuroradiological Applications | D | Written-Oral |
| **INTERMITTENT CLAUDICATION** | Peripheral Artery Disease | Peripheral Vascular and Nonvascular Interventional Radiology | D | Written-Oral |
| **SPEECH DISORDERS**  **(Aphasia,**  **Dysphasia,**   **dysarthria ,stuttering)** | Stroke | 1.Central Nervous System Radiology 2.Radiological Imaging in Central Nervous System Emergencies  3.Interventional Neuroradiological Applications | D | Written-Oral |
| **PARESIS / PARALYSIS** | Stroke | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **PUPIL SIZE CHANGES** | Stroke | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **SYNCOPE** | Stroke | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **SYNCOPE** | Transient Ischemic Attack | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |
| **TREMOR,**  **URINARY INCONTINENCE** | Stroke | 1.Radiological Imaging in Central Nervous System Emergencies  2.Interventional Neuroradiological Applications | D | Written-Oral |

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| **LEARNING LEVEL** | **EXPLANATION** |
| **E** | Should be able to recognize the emergency and perform emergency treatment, and refer him/her to a specialist when necessary. |
| **PreD** | Should be able to make a preliminary diagnosis and make the necessary preliminary actions and direct them to the specialist. |
| **D** | Should be able to make a diagnosis and have knowledge about the treatment, and should direct them to the specialist by making the necessary preliminary procedures. |
| **DT** | He should be able to diagnose, treat. |
| **F** | Should be able to perform long-term follow-up and control in primary care conditions. |
| **P** | Prevention measures (primary, secondary, tertiary prevention as appropriate/  ones) should be implemented. |

**NEUROLOGICAL SCIENCES BLOCK**  **BASIC BASIC MANAGEMENT PRACTICES**

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| **APPLICATION** | **APPLICATION NAME** | **TERM 5 COURSE NAME** | **LEVEL OF LEARNING** |
| **GED E STORY** | Getting a general and problem-oriented story | Neurological Examination | 3 |
| **GED E STORY** | Assessing mental state | Neurological Examination | 3 |
| **GENERAL AND PROBLEM-ORIENTED PHYSICAL EXAMINATION** | Assessment of consciousness and mental state examination | Neurological Examination | 3 |
| **GENERAL AND PROBLEM-ORIENTED PHYSICAL EXAMINATION** | Eye, fundus examination | Neurological Examination | 1 |
| **GENERAL AND PROBLEM-ORIENTED PHYSICAL EXAMINATION** | Musculoskeletal system examination | Neurological Examination | 3 |
| **GENERAL AND PROBLEM-ORIENTED PHYSICAL EXAMINATION** | Neurological examination | Neurological Examination | 3 |
| **RECORD, REPORD END INFORM** | Ability to edit prescriptions | Neurological Examination | 2 |
| **INTERVENTIONAL AND**  **NON- INTERVENTIONAL**  **APPLICATIONS** | Evaluation of Glasgow Coma Scale | Neurological Examination | 3 |
| **INTERVENTIONAL AND**  **NON- INTERVENTIONAL**  **APPLICATIONS** | To be able to give the patienD E coma position | Neurological Examination | 3 |
| **INTERVENTIONAL AND**  **NON- INTERVENTIONAL**  **APPLICATIONS** | Minimental state examination | Neurological Examination | 3 |
| **GED E STORY** | Getting a general and problem-oriented story | Basic Eye Examination | 2 |
| **GENERAL AND PROBLEM-ORIENTED PHYSICAL EXAMINATION** | Eye and bottom examination | Basic Eye Examination | 3 |

**NEUROLOGICAL SCIENCES BLOCK** **MEASUREMENT AND EVALUATION METHODS**

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| **Exam Type** | **Percentage** |
| **ORAL EXAM PERFORMED AT THE END OF THE CLERKSHIP** | Case-based evaluation and oral exam based on theoretical knowledge at the end of clerkship-40% of the final exam |
| **END OF CLERKSHIP WRITTEN EXAM** | It consists of a total of 50 multiple choice questions.  Multiple choice questions that evaluate clinical information.  40% of the final exam |
| **END OF CLERKSHIP PRACTICAL EXAM** | 20% of the final exam |

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| **LESSON** | **SUBJECT** |
| **Case-Based Learning** | Headache/Dizziness |
| Dementia and Alzheimer's Disease |
| Neuromuscular diseases-myopathies-peripheral neuropathies |
| Brain edema/Multiple sclerosis and neuroimmunological disorders/Cranial nerve diseases |
| Disorders of consciousness/Movement disorders and sleep disorders |
| Epilepsy |
| **Case-Based Learning** | Pediatrics/ROP |
| Diseases of the optic nerves and visual pathways |
| Anomaillerian pupil |
| Nörooftalmaoloji |
| Orbit/Lakrimal |
| Eye traumas |
| Emergency/trauma |

**RECOMMENDED RESOURCES FOR NEUROLOGICAL SCIENCE BLOCK CLERKSHIP**

1. Bradley Neurology in Clinical Practice
2. Neurology Textbook Faculty of Medicine, Istanbul Faculty of Medicine, Department of Neurology. Prof. Dr. Murat Emre
3. Neurology and Neurosurgery Illustrated. Editors: Kenneth W Lindsay, Ian Bon
4. Basic Ophthalmology.Fourth Editon. Renu Jogi

JAYPEE BROTHERS MEDICAL PUBLISHERS (P) LT

5. Basic Eye Diseases 3. Oppression. Editors:P.Aydin ODwyer and Y.Aydin Akova

SOLAR TYPE BOOKSTORES

**6.**Lecture Notes