

COURSE INFORMATION					
Course Title	Code	Semester	COURSE INFORMATION		
			Lecture+Practice+Laboratory Hour	Credits	ECTS
NEUROLOGY (Clinical Clerkship)	MED 505	Phase 5/9-10	20+62	4	4*

* ECTS credits are the university credits of the courses in Yeditepe University, Faculty of Medicine, Undergraduate Medical Education Program

Prerequisites	The student that joins this course, should completed Phase 1, 2, 3 and 4 courses of medical faculty.
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Language of Instruction	English
Course Level	Second Cycle including First Cycle Degree (One Tier Programme)
Course Type	Compulsory
Course Coordinator	Berrin Aktekin, MD Prof.
Instructors	<p><u>Yeditepe University Hospital</u></p> <p>Berrin Aktekin, MD Prof. Emin Özcan, MD Assoc. Prof. Halide Rengin Bilgen Akdeniz, MD Assist. Prof. Yüksel Dede, MD Assist. Prof.</p> <p><u>Fatih Sultan Mehmet Training And Research Hospital</u></p> <p>Eren Gözke, MD Assoc. Prof. Pelın Doğan Ak, MD Burcu Bulut Okay, MD Işıl Kalyoncu Aslan, MD Leyla Ramazanoğlu, MD</p>
Assistants	R. Çağla Akduman, F. Bengül Gölge, Tolga Çetindamar
Goals	To convey necessary knowledge on pathology, symptomatology, clinics and pharmacology of neurological diseases, to equip with skills and attitudes required for an appropriate approach to management of neurological patients

Learning Outcomes	Programme Learning Outcomes	Teaching Methods	Assessment Methods
At the end of this clerkship, the student should be able to:			
1. describe anatomy of the cranial nerves and symptoms of cranial nerve paresis	1,1,3	1,2,3	A, C
2. classify neurological motor and sensory system examination	1,1,3	1,2,3	A, C

3. describe physiologies and pathologies of the consciousness (coma state), explain mechanisms of coma occurrence, neurologic examination of coma patient, diagnostic methods of coma, and treatment options of unconscious patient	1,1,1 - 1,1,2 - 1,1,3 - 1,1,4 - 1,1,6 - 1,1,12	1,2,3,12	A, C
4. state signs and symptoms of spinal cord diseases including partial or complete spinal cord involvement, neurological symptoms and diagnostic options	1,1,1 - 1,1,2 - 1,1,3 - 1,1,4 - 1,1,6 - 1,1,12	1,2,3	A, C
5. explain pathophysiology, diagnostic and treatment methods and pharmacology of basal ganglia and extrapyramidal disorders	1,1,1 - 1,1,2 - 1,1,3 - 1,1,4 - 1,1,6 - 1,1,12	1,2,3,12	A, C
6. classify headaches and with respect to affected anatomical sites, signs and symptoms and describe different treatment options	1,1,1 - 1,1,2 - 1,1,3 - 1,1,4 - 1,1,6 - 1,1,12	1,2,3,12	A, C
7. describe mechanisms of sleep disorders, signs and symptoms, methods of examination, and treatment options of sleep disorders	1,1,1 - 1,1,2 - 1,1,3 - 1,1,4 - 1,1,6 - 1,1,12	1,2,3	A, C
8. explain pathophysiology, signs and symptoms, and different treatment methods of CNS infections	1,1,1 - 1,1,2 - 1,1,3 - 1,1,4 - 1,1,6 - 1,1,12	1,2,3	A, C
9. describe signs, symptoms and examination methods of Dementia, interpret relationship with neurological diseases and anatomical locations of lesions.	1,1,1 - 1,1,2 - 1,1,3 - 1,1,4 - 1,1,6 - 1,1,12	1,2,3	A, C
10. explain signs, symptoms and examination methods of Demyelinating diseases and classify the treatment options	1,1,1 - 1,1,2 - 1,1,3 - 1,1,4 - 1,1,6 - 1,1,12	1,2,3	A, C
11. describe signs, symptoms, examination methods recognize differentia diagnosis and classify the treatment options of epilepsy	1,1,1 - 1,1,2 - 1,1,3 - 1,1,4 - 1,1,6 - 1,1,7 - 1,1,8 - 1,1,9 - 1, 1,10 - 1,1,12	1,2,3,12	A, C
12. describe signs, symptoms, examination methods of cerebrovascular disease and emergency, recognize differential diagnosis and classify treatment options depending on the urgency	1,1,1 - 1,1,2 - 1,1,3 - 1,1,4 - 1,1,6 - 1,1,12 - 2,5,1 - 2,5,4	1,2,3,12	A, C
13. interpret cerebellar diseases	1,1,1 - 1,1,3 - 1,4,1	1,2,3	A, C
14. outline methods of examination in neuro-muscular disorder	1,1,7 - 1,1,8	1,2,3	A, C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 9: Simulation, 12: Case Study
Assessment Methods:	A: Testing B: Presentation C: Homework

COURSE CONTENT		
WEEK	SUBJECT	Study Materials
1	Lecture Semiology	Materials for the course provided by instructor
1	Lecture Headaches	Materials for the course provided by instructor
1	Lecture Medula Spinalis Disorder	Materials for the course provided by instructor
1	Lecture Coma	Materials for the course provided by instructor
1	Lecture Dementia	Materials for the course provided by instructor
1	Lecture Cerebrovascular Diseases	Materials for the course provided by instructor
1	Lecture Motor Neuron Diseases	Materials for the course provided by instructor
1	Lecture Peripheral Nerve Diseases	Materials for the course provided by instructor
2	Lecture Demyelinating Disorders	Materials for the course provided by instructor
2	Lecture Sleep Disorders	Materials for the course provided by instructor
2	Lecture Movement Disorders	Materials for the course provided by instructor
2	Lecture CNS Infections	Materials for the course provided by instructor
2	Lecture Epilepsy	Materials for the course provided by instructor
2	Lecture EEG	Materials for the course provided by instructor
2	Lecture Neuromuscular Junction Disorders	Materials for the course provided by instructor
3	Practice Neurologic Examination and Semiology	Materials for the course provided by instructor
3	Practice Neurologic Examination in virtual patient	Materials for the course provided by instructor
3	Practice Inpatient visits	Materials for the course provided by instructor
3	Practice Clinical Experience in Outpatient Clinic	Materials for the course provided by instructor
3	Laboratory EEG	Materials for the course provided by instructor
3	Laboratory ENMG	Materials for the course provided by instructor

3	Laboratory Video-EEG Monitoring	Materials for the course provided by instructor
3	Laboratory Intraoperative Neurophysiological Monitoring	Materials for the course provided by instructor
3	Laboratory Sleep Polysomnography	Materials for the course provided by instructor
3	Assessment Session	Materials for the course provided by instructor
3	Program Evaluation Session Review of the Exam Questions, Evaluation of the Program	Materials for the course provided by the instructor

NCC 2014 - Essential Medical Procedures (National Core Curriculum)	Performance Level
Mental status evaluation	3
Consciousness assessment and psychiatric examination	3
Eye, fundus examination	3
Neurological examination	4
Performing lumbar puncture	2
Minimal status examination	3

RECOMMENDED SOURCES	
Textbook	<ul style="list-style-type: none"> Bradley and Daroff's Neurology in Clinical Practice, 2-Volume Set, 8th Edition DeJong's The Neurologic Examination 8th Edition Duus' Topical Diagnosis in Neurology: Anatomy – Physiology İstanbul Üniversitesi Tıp Fakültesi Nöroloji, 4. Baskı
Additional Resources	<ul style="list-style-type: none"> Lecture notes

ASSESSMENT	
Questions Types (Pencil-Paper Tests)	Proportion (in Pencil-Paper Tests)
Multiple Choice Questions	50%
Extended Matching Questions	20%
Key Feature Questions	15%
Essay Questions	15%
Total	100 %
Other Assessment Methods and Tools	Proportion (in Pass/Fail Decision)
Oral Exam (OE)	30%

Direct Observation of Procedural Skills (DOPS)	2,5%
Evaluation of Case Presentation	2,5%
Evaluation of Preparation Skills of Patient's File Global Evaluation of Student's Performance 2,5%	2,5%
Global Evaluation of Student's Performance	2,5%
Total	40 %
Pass/Fail Decision	Proportion (in Pass/Fail Decision)
Pencil-Paper Tests	60%
Other Assessments Methods and Tools	40%

MATERIAL SHARING	
Documents	Via google classroom
Assignments	Student ppt presentations
Exams	Not shared

COURSE CATEGORY	Expertise/Field Courses
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COURSE'S CONTRIBUTION TO PROGRAM						
	PODG.1. Basic Professional Competencies	Contribution				
	POD.1.1. Clinical Competencies	1	2	3	4	5
PO.1.1.1.	values preventive health services, offers primary prevention (i.e. prevention of diseases for the protection of health), secondary prevention (i.e. early diagnosis and treatment) tertiary prevention (i.e. rehabilitation) and quaternary prevention (i.e. prevention of excessive and unnecessary diagnosis and treatment) services, provides consultancy on these issues.					X
PO.1.1.2.	employs a patient-centered approach in patient management.					X
PO.1.1.3.	recognizes most frequently occurring or significant clinical complaints, symptoms, signs, findings and their emergence mechanisms in clinical conditions.					X
PO.1.1.4.	takes medical history from the applicant himself/herself or from the individual's companions.					X

PO.1.1.5.	does general and focused physical and mental examination.					X
PO.1.1.6.	interprets findings in medical history, physical and mental examination.					X
PO.1.1.7.	employs diagnostic procedures that are used frequently at the primary health care level.					X
PO.1.1.8.	selects tests that have evidence-based high efficacy at the primary health care level and interprets results.					X
PO.1.1.9.	makes clinical decisions using evidence-based systematic data in health care service.					X
PO.1.1.10.	performs medical interventional procedures that are used frequently at the primary health care level.					X
PO.1.1.11.	manages healthy individuals and patients in the context of health care services.					X
PO.1.1.12.	keeps medical records in health care provision and uses information systems to that aim.					X
	POD.1.2. Competencies related to Communication					
PO.1.2.1.	throughout his/her career, communicates effectively with health care beneficiaries, co-workers, accompanying persons, visitors, patient's relatives, care givers, colleagues, other individuals, organizations and institutions.					X
PO.1.2.2.	collaborates as a team member with related organizations and institutions, with other professionals and health care workers, on issues related to health.					X
PO.1.2.3.	recognizes the protection and privacy policy for health care beneficiaries, co-workers, accompanying persons and visitors.					X
PO.1.2.4.	communicates with all stakeholders taking into consideration the socio-cultural diversity.					X
	POD.1.3. Competencies Related to Leadership and Management					
PO.1.3.1.	manages and leads within the health care team in primary health care organization.				X	
PO.1.3.2.	recognizes the principles of health management and health sector economy, models of organization and financing of health care services.				X	
PO.1.3.3.	recognizes the resources in the health care service, the principles for cost-effective use.				X	
	POD.1.4. Competencies related to Health Advocacy					
PO.1.4.1.	recognizes the health status of the individual and the community and the factors affecting the health, implements the necessary measures to prevent effects of these factors on the health.					X
PO.1.4.2.	recognizes and manages the health determinants including conditions that prevent access to health care.					X
	POD.1.5. Competencies related to Research					
PO.1.5.1.	develops, prepares and presents research projects				X	
	POD.1.6. Competencies related to Health Education and Counseling					
PO.1.6.1.	provides consultancy services and organizes health education for the community to sustain and promote the health of individual and community.					X
	PODG.2. Professional Values and Perspectives					X
	POD.2.1. Competencies related to Law and Legal Regulations					

PO.2.1.1.	performs medical practices in accordance with the legal framework which regulates the primary health care service.			X		
POD.2.2. Competencies Related to Ethical Aspects of Medicine						
PO.2.2.1.	recognizes basic ethical principles completely, and distinguishes ethical and legal problems.					X
PO.2.2.2.	pays importance to the rights of patient, patient's relatives and physicians, and provides services in this context.					X
POD.2.3. Competencies Related to Social and Behavioral Sciences						
PO.2.3.1.	relates historical, anthropological and philosophical evolution of medicine, with the current medical practice.					X
PO.2.3.2.	recognizes the individual's behavior and attitudes and factors that determine the social dynamics of the community.					X
POD.2.4. Competencies Related to Social Awareness and Participation						
PO.2.4.1.	leads community with sense of responsibility, behavior and attitudes in consideration of individual behaviors and social dynamics of the community, and if there is a necessity, develops projects directed towards health care services.					X
POD.2.5. Competencies Related to Professional Attitudes and Behaviors						
PO.2.5.1.	displays a patient-centered and holistic (biopsychosocial) approach to patients and their problems.					X
PO.2.5.2.	respects patients, colleagues and all stakeholders in health care delivery.					X
PO.2.5.3.	displays the proper behavior in case of disadvantaged groups and situations in the community.					X
PO.2.5.4.	takes responsibility for the development of patient safety and healthcare quality.					X
PO.2.5.5.	evaluates own performance as open to criticism, realizes the qualifications and limitations.					X
PODG.3. Professional Development and Self-Worth						
PODG.3.1. Personal Development and Values						
PO.3.1.1.	embraces the importance of lifelong self-learning and implements .					X
PO.3.1.2.	embraces the importance of updating knowledge and skills; searches current advancements and improves own knowledge and skills.					
PO.3.1.3.	uses English language at least at a level adequate to follow the international literature and to establish communication related to the profession.					
POD.3.2. Competencies Related to Career Management						
PO.3.2.1.	recognizes and investigates postgraduate work domains and job opportunities.				X	
PO.3.2.2.	recognizes the application requirements to postgraduate work/job domains, and distinguishes and plans any requirement for further training and work experience.				X	
PO.3.2.3.	prepares a resume, and recognizes job interview methods.				X	
POD.3.3. Competencies Related to Protection and Development of Own Physical and Mental Health						
PO.3.3.1.	implements the rules of healthy living.					X

PO.3.3.2.	displays appropriate behavior specific to work under stressful conditions.					X
PO.3.3.3.	uses self-motivation factors.					X

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity or day	Duration (Hour)	Total Workload (Hour)
Course Duration (3 weeks)	15	5.5	82.5
Hours for off-the-classroom study (Pre-study, practice, review/week)	15	2	30
Homework	1	2	2
Exam	2	1	2
Total Work Load			116.5
Total Work Load / 30 (h)			3.88
ECTS Credit of the Course			4