

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

<b>Prerequisites</b>	The student that joins this course, should completed Phase 1, 2, 3 and 4 courses of medical faculty.
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<b>Language of Instruction</b>	English
<b>Course Level</b>	Second Cycle including First Cycle Degree (One Tier Programme)
<b>Course Type</b>	Compulsory
<b>Course Coordinator</b>	Berrin Aktekin, MD Prof.
<b>Instructors</b>	<p><u>Yeditepe University Hospital</u></p> <p>Berrin Aktekin, MD Prof. Rana Karabudak, MD Prof. Emin Özcan, MD Assoc. Prof. Halide Rengin Bilgen Akdeniz, MD Assist. Prof. Yüksel Dede, MD</p> <p><u>Fatih Sultan Mehmet Training And Research Hospital</u></p> <p>Eren Gözke, MD Assoc. Prof. Pelin Doğan Ak, MD Burcu Bulut Okay, MD Işıl Kalyoncu Aslan, MD Leyla Ramazanoğlu, MD</p>
<b>Assistants</b>	
<b>Goals</b>	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. <b>describe</b> anatomy of the cranial nerves and symptoms of cranial nerve paresis	1,1,3	1,2,3	A, C
2. <b>classify</b> neurological motor and sensory system examination	1,1,3	1,2,3	A, C

3. <b>describe</b> 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. <b>state</b> 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. <b>explain</b> 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. <b>classify</b> 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. <b>describe</b> 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. <b>explain</b> 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. <b>describe</b> 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. <b>explain</b> 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. <b>describe</b> 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. <b>describe</b> 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. <b>interpret</b> cerebellar diseases	1,1,1 - 1,1,3 - 1,4,1	1,2,3	A, C
14. <b>outline</b> methods of examination in neuro-muscular disorder	1,1,7 - 1,1,8	1,2,3	A, C

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

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

3	<b>Laboratory</b> Video-EEG Monitoring	Materials for the course provided by instructor
3	<b>Laboratory</b> Intraoperative Neurophysiological Monitoring	Materials for the course provided by instructor
3	<b>Laboratory</b> Sleep Polysomnography	Materials for the course provided by instructor
3	<b>Assessment Session</b>	Materials for the course provided by instructor
3	<b>Program Evaluation Session</b> 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	
<b>Textbook</b>	<ul style="list-style-type: none"> <li>Bradley and Daroff's Neurology in Clinical Practice, 2-Volume Set, 8th Edition</li> <li>DeJong's The Neurologic Examination 8th Edition</li> <li>Duus' Topical Diagnosis in Neurology: Anatomy – Physiology</li> <li>İstanbul Üniversitesi Tıp Fakültesi Nöroloji, 4. Baskı</li> </ul>
<b>Additional Resources</b>	<ul style="list-style-type: none"> <li>Lecture notes</li> </ul>

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%
<b>Total</b>	<b>100 %</b>
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%
<b>Total</b>	<b>40 %</b>
<b>Pass/Fail Decision</b>	<b>Proportion  (in Pass/Fail Decision)</b>
Pencil-Paper Tests	60%
Other Assessments Methods and Tools	40%

<b>MATERIAL SHARING</b>	
<b>Documents</b>	Via google classroom
<b>Assignments</b>	Student ppt presentations
<b>Exams</b>	Not shared

<b>COURSE CATEGORY</b>	Expertise/Field Courses
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<b>COURSE'S CONTRIBUTION TO PROGRAM</b>						
	<b>PODG.1. Basic Professional Competencies</b>	<b>Contribution</b>				
	<b>POD.1.1. Clinical Competencies</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>PO.1.1.1.</b>	<b>values</b> preventive health services, <b>offers</b> 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, <b>provides</b> consultancy on these issues.					X
<b>PO.1.1.2.</b>	<b>employs</b> a patient-centered approach in patient management.					X
<b>PO.1.1.3.</b>	<b>recognizes</b> most frequently occurring or significant clinical complaints, symptoms, signs, findings and their emergence mechanisms in clinical conditions.					X
<b>PO.1.1.4.</b>	<b>takes</b> medical history from the applicant himself/herself or from the individual's companions.					X

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

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

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

<b>ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION</b>			
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
<b>Total Work Load</b>			116.5
<b>Total Work Load / 30 (h)</b>			3.88
<b>ECTS Credit of the Course</b>			4