

MED 5008–Neurosurgery

Course Name	Code	Semester	Type of course	Theory (hours)	Group work (hours)	ECTS
Neurosurgery	MED 5008	X	Mandatory	20	36	4
Faculty, the educational program and education level	Faculty of Medicine, one-cycle Educational Program “Medicine”					
Author (s)	Kaya Kilic –Assistant Professor Mob.tel.: 05424255386; E-mail: kayakilic@Yahoo.com Consultation day and time - individually					
Educational course format	Lecture Group Work					
Educational course Loading	Total: 120 hours Contact hours: 60 h. that includes: 1. Lecture – 20 h 2. Group work – 36 h 3. Midterms – 2 h 4. Final exam -2 h Independent work – 60 h					
Prerequisites	MED 1006 – Nervous System, MED 4004 – General Surgery I					
The purpose (s) of tutorial course/modules	The learning course aims to explain the role and necessity of Neurosurgery, as a separate field of Medicine and to give basic knowledge of Neurosurgery to the students: cerebrovascular surgery, spinal surgery, intracranial hypertension and hernia, intracranial tumors, head injuries, peripheral nerves surgery.					
Teaching and learning methods	Lecture - Face-to-Face - verbal contact, slides for the lecture will be provided with Power Point Demonstration –models, simulators, slides and other visual aids; Report preparation and presentation in group with the following discussion and analysis of it; Discussion – questions and answers, answers analysis supported with practical facts; Analyses and synthesis –detailed discussion of aimed problem, assessment of each others point of view; Practical skills on the base of neurosurgical department of clinic: clinical pictures, diagnostics and treatment of neurosurgical chronic and acute diseases, neurosurgical operation assistance, post-operative patients care. Brief-inquire –short questions and answers Work with additional literature: additional literature, periodical issues and internet information technology sources; Consultation –individual support work with students (weekly)					

Assessment criteria	Maximum score- 100: 1. Midterm assessment -60 , that includes: 1.1. Attendance -10 scores 1.2. Activity – 20 scores: 1.2.1. Practical skills on the base of neurosurgery cabinet of clinic –(13x1)= 13 score 1.2.2. Brief-inquire (7 X 1 = 7 scores); -1 score- the question is answered fully and reasonably; -0.5 score - incomplete answers; -0 score -no answer. 1.2.3. Medical documentation management - 10 scores 1.3. Midterm Exam – 20 scores Example of Medical Documentation Management and Assessment– max 10 scores 10-9 scores- the task is understood properly, medical history component, clinical picture and diagnostics data, diagnosing and the treatment scheme is adequate and all the steps are described in consequential order; list of drugs is appointed properly with correct name and dozes; 8-7 scores - the task is completely understood, medical history component, clinical picture and diagnostics data, diagnosing and the general steps treatment is assembled in consequential order; 6-5 scores -the task is completely understood, but medical history component, clinical picture and diagnostics data, diagnosing and the general steps treatment is assembled in no consequential order; 4-3 scores – the task is not completely understood, medical history component, clinical picture and diagnostics data, diagnosing and the general steps treatment is assembled in no consequential order; 2-1 score – Student demonstrates misunderstanding and no complete skills of medical history taking 0 score- Student is not able to complete the task Midterm Exam – 20 scores Written test -20 question, 1 score for each – max. 20; Minimal scores of midterm assessment (for final exam) – is 11. 2. Final Exam -40 scores Is held in the written test form (test consists of 40 questions, each question is rated as 1 score). The final exam would accounted as passed in case of maximum 70% or more ($40 \times 70 / 100 = 28$ scores). Credit will be given to the student if he has collected at minimum 51 scores out of 100. Student's assessment has to be done in the following way: Positive rate: • (A) Excellent- 91 or more scores; • (B) Very Good- 81-90 scores; • (C) Good- 71-80 scores; • (D) Satisfactory- 61-70 scores; • (E) Enough- 51-60 scores; Negative rate: • (FX) Failure - 41-50 scores, which means that a student needs to work more and an independent and considerable further work is required to pass the exam once again to be re-awarded; • (F) Fail – 40 scores or less, which means that the student's diligence is not sufficient and student
---------------------	---

	has to learn the subject all over again. Student can pass the additional exam during the same semester. The time interval between the final and the additional exams should be not less than 10 days.
The basic literature	1. ADVANCED NEUROSURGICAL NAVIGATION. EDITED BY: EBEN ALEXANDER, ROBERT J. MACIUNAS. THIEME. 1999
The auxiliary literature	2. EDITED BY: ROBERT B.DAROFF, GERALD M.FENICHEL, JOSEPH JANCOVIC, JOHN C.MAZZIOTTA. BRADLEY'S NEUROLOGY IN CLINICAL PRACTICE (VOLUME,I- II) NEUROSURGICAL DISORDERS, ELSEVIER SAUNDERS,VI, 2012. 3. EDITED BY: EBEN ALEXANDER, ROBERT J. MACIUNAS SURGICAL DISODERS OF THE PERIPHERAL NERVES , SPRINGER, II, 2005; 4. ANN J.MOORE, DAVID WNEWELL NEUROSURGERY PRINCIPLES AND PRACTICE , SPRINGER, 2005; 5. EDITED BY: ZOHER GHOGAWALA, AJIT A KRISHANEY, MICHAEL P.STEINMETZ, H.HUNT BATJER, EDWARD C. THE EVIDENCE FOR NEUROSURGERY , CASTLE BARNS HARLEY SHREWSBURY UK, 2012

The tutorial/training course content

Nº	Subjects	Lecture (hour)	Work in group (hour)
1	Craniocerebral trauma, its classification, general principles of conservative and surgical treatment. Computer tomography, angiography and radiography of the brain	4	8
2	The methods of paraclinical investigation in neurosurgery: 1) lumbar puncture, indications, contraindications, methods of execution 2) suboccipital puncture, indications, contraindications, methods of execution 3) puncture of the lateral ventricles of the brain, methods of execution 4) myelography, ascending and descending myelography 5) pneumography. Petriculography and pneumoencephalography	4	8
3	Traumatic injury of the spine and spinal cord, the mechanism of trauma, classification. Osteochondrosis of the spine, the stages of development, operational neurosurgery.	4	6
	Mid-term exam		2
4	Craniocerebral and vertebro-cerebrospinal trauma. Open (penetrating and non-penetrating) and closed trauma; brain concussion; brain contusion without press (three degrees of severity) and traumatic press on the brain; clinic, diagnostics, the strategy of treatment. Intracranial insult; epidural, subdural and intracerebral hematoma. Surgical treatment	4	8
5	Tumors of the brain; histological and surgical classification. the surgery of peripheral nerve, the technique of neurolysis .	4	6
	Final Exam		2

Learning Outcomes

Criteria	Competences
Knowledge and Understanding	After completion of the course the student will have a deep and thorough knowledge of : • neurosurgical diseases classification; • neurosurgical diseases investigation methods (laboratory and instrumental: X-Rays, CT, MRT); • neurosurgical patients preparation for operation and post-operation care.
Applying knowledge	After the completion of the learning course the student should have the skills necessary for the work with neurosurgical patient. Particularly, he/she will be able to collect anamnesis, examination of patient, to plan the research, to interpret the results of research, to carry on differential diagnosis, to set the diagnosis and plan the treatment, to carry on medical documentation, to have the talks with patient and his/her relatives about the disease and to give explanations; will be able to carry on neurosurgical and plastic processing of the wounds of brain soft tissues, as well as to suture – “Hippocrates suture”, to perform paravertebral blockade during acute lumbogluteal radiculitis. Student is able to aware of research methods significance regarding of nosology (lumbar and suboccipital puncture, echoencephalography, electroencephalography, radiography, angiography of the brain, etc.)
Communication Skills	Student will be able to manage the different form of academic and scientific information from different sources (classic and electronic library, the Internet) to work fast and look for the relevant information effectively. These found materials has to be planned, processed, analyzed, and to make the best use for the report with the proper conclusions as in in writing, as well as in verbal form. Student can working in group, has watching, listening, summarizing, asking and answering questions abilities, is able to participate in the discussion. During the education process the professional and friendly relationship has to be formed with the older (professors / teachers) and younger (this and other groups students) colleagues, communication with any person regardless of their social, cultural, religious or ethnic affiliation.