



Pomeranian Medical University in Szczecin

SYLLABUS of the MODULE (SUBJECT) General Information

Module title: Neurosurgery	
Module type	<i>Obligatory</i>
Faculty PMU	<i>Faculty of Medicine and Dentistry</i>
Major	<i>Medicine</i>
Level of study	<i>long-cycle (S2J)</i>
Mode of study	<i>full-time studies</i>
Year of studies, semester	<i>Year 5th</i>
ECTS credits (incl. semester breakdown)	<i>1.5</i>
Type/s of training	<i>lectures (5h) / seminars (10h)/ classes (20h)</i>
Form of assessment*	<input type="checkbox"/> graded assessment: <ul style="list-style-type: none"> <input type="checkbox"/> descriptive <input checked="" type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral <input type="checkbox"/> non-graded assessment <input type="checkbox"/> final examination <ul style="list-style-type: none"> <input type="checkbox"/> descriptive <input type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral
Head of the Department/ Clinic, Unit	<i>prof. dr hab. n. med. Leszek Sagan</i>
Tutor responsible for the module	<i>dr n. med. Bartosz Limanówka</i> <i>bartosz.limanowka@pum.edu.pl, 91 425 35 61</i>
Department's/ Clinic's/ Unit's website	<i>https://www.pum.edu.pl/wydzialy/wydzial-medycyny-i-stomatologii/Klinika-Neurochirurgii-i-Neurochirurgii-Dzieciecej</i>
Language	<i>English</i>

* replace ☐ into ☒ where applicable

Detailed information

Module objectives		1. To recognize symptoms and causes of intracranial hypertension and its consequences. 2. To get acquainted with medical issues in the diagnosis and therapeutic methods in neurosurgical diseases, incl.: craniocerebral trauma, cerebral edema, hydrocephalus, vascular diseases, central nervous system tumors, degenerative spine disease. 3. To acquire skills in evaluating condition of unconscious patient. 4. To acquire skills in evaluating neurological condition of child.
Prerequisite /essential requirements	Knowledge	1. Basic knowledge of neuroanatomy and neurophysiology. 2. Knowledge of neurological diseases.
	Skills	1. Practical skills in neurological examination.
	Competences	1. Ability to deal adequately with an inpatient.

Description of the learning outcomes for the subject /module

No. of learning outcome	Student, who has passed the (subject) knows /is able to /can:	SYMBOL (referring the standards)	Method of verification of learning outcomes*
W01	knows and explain causes, symptoms, diagnosis and therapeutic procedures to most frequent diseases of central nervous system, incl.: a) cerebral edema and its consequences, in particular emergency states, b) other forms of intracranial stenosis and its consequences, c) craniocerebral trauma, d) vascular defects of central nervous system, e) neoplastic tumors of central nervous system, f) spondylopathy and myelopathy	K_F.W13	ET
W02	knows rules regarding assumptions and diagnosis of brain death	K_F.W15	ET
W03	knows issues regarding laryngology, phoniatrics and audiology, incl.: a) causes, clinical course, therapeutic procedures, complications and prognosis of otopathy, rhinopathy, nasal sinus diseases, stomatopathy, pharynx and larynx diseases in adults, b) diseases of facial nerve and selected neck structures, c) diagnosis and therapeutic procedures with regard to mechanical injuries to the ear, nose, pharynx and larynx, d) procedures regarding emergency states of otorhinolaryngology, in particular larynx dyspnea, e) diagnosis and therapeutic procedures with regard to disturbance of hearing, voice and speech,	K_F.W12	ET

	f) diagnosis and therapeutic procedures with regard to head and neck neoplasms		
U01	evaluates condition of unconscious patient and classifies according to the international grading systems	K_F.U21	ET
U02	recognizes symptoms of increasing intracranial pressure	K_F.U22	ET
U03	performs basic resuscitation procedures with the help of automatic defibrillator and other rescue operations and provides first aid	K_F.U10	O
U04	monitors post-operation period according to basic life parameters	K_F.U12	O
U05	evaluates result of radiography with regard to most frequent types of fracture, in particular fractures of long bones	K_F.U7	O
U06	assists with performing typical operation, prepares operation area and administers local anesthetic	K_F.U1	O
U07	adheres to rules of asepsis and antisepsis	K_F.U3	O
U08	stems external bleeding	K_F.U9	O
U09	dresses simple wound, puts on and changes sterile surgical dressing	K_F.U4	O
U10	makes circumferential insertion	K_F.U5	O

Table presenting LEARNING OUTCOMES in relation to the form of classes

No. of learning outcome	Learning outcomes	Type of training						
		Lecture	Seminar	Practical	Clinical classes	Simulations	E-learning	Other...
W01	knows and explain causes, symptoms, diagnosis and therapeutic procedures to most frequent diseases of central nervous system, incl.: a) cerebral edema and its consequences, in particular emergency states, b) other forms of intracranial stenosis and its consequences, c) craniocerebral trauma, d) vascular defects of central nervous system, e) neoplastic tumors of central nervous system, f) spondylopathy and myelopathy	X	X		X			
W02	knows rules regarding assumptions and diagnosis of brain death	X	X		X			

W03	knows issues regarding laryngology, phoniatrics and audiology, incl.: a) causes, clinical course, therapeutic procedures, complications and prognosis of otopathy, rhinopathy, nasal sinus diseases, stomatopathy, pharynx and larynx diseases in adults, b) diseases of facial nerve and selected neck structures, c) diagnosis and therapeutic procedures with regard to mechanical injuries to the ear, nose, pharynx and larynx, d) procedures regarding emergency states of otorhinolaryngology, in particular larynx dyspnea, e) diagnosis and therapeutic procedures with regard to disturbance of hearing, voice and speech, f) diagnosis and therapeutic procedures with regard to head and neck neoplasms	X	X		X			
U01	evaluates condition of unconscious patient and classifies according to the international grading systems	X	X		X			
U02	recognizes symptoms of increasing intracranial pressure	X	X		X			
U03	performs basic resuscitation procedures with the help of automatic defibrillator and other rescue operations and provides first aid				X			
U04	monitors post-operation period according to basic life parameters				X			
U05	evaluates result of radiography with regard to most frequent types of fracture, in particular fractures of long bones				X			
U06	assists with performing typical operation, prepares operation area and administers local anesthetic				X			
U07	adheres to rules of asepsis and antisepsis				X			
U08	stems external bleeding				X			
U09	dresses simple wound, puts on and changes sterile surgical dressing				X			
U10	makes circumferential insertion				X			

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	Teaching programme	No. of hours	References to learning outcomes
Lectures			
TK01	Lecture 1: Intracranial hypertension. Examination of an unconscious patient.	1	W01, W02, U01, U02
TK02	Lecture 2: Spine diseases	1	W01, W03
TK03	Lecture 3: Intracranial hemorrhages	1	W01, W02, U01, U02
TK04	Lecture 4: Head trauma	1	W01, W02, U01, U02

TK05	Lecture 5: Head trauma in children	1	W01, W02, U01, U02
Seminars			
TK01	Seminar 1: Tumors of the central nervous system.	2	W01, W03, U01
TK02	Seminar 2: Intracranial vascular malformations	2	W01, W02, U01, U02
TK03	Seminar 3: Surgical treatment of intracranial hematomas	2	W01, W02, U01, U02
TK04	Seminar 4: Surgical treatment of spine diseases	2	W01, W03
TK05	Seminar 5: Surgical treatment of central nervous system defects in children	2	W01, U01
Practical classes			
TK01	Clinical class 1: Psychical examination of unconscious patients and affected by craniocerebral trauma, subarachnoid haemorrhage and spine degeneration.	5	W01, W02, W03, U01, U02, U03, U04, U05, U06, U07, U08, U09, U10
TK02	Clinical class 2: Psychical examination of unconscious patients and affected by neoplastic tumors of central nervous system. Craniotomy show in the operating room.	5	W01, W02, W03, U01, U02, U03, U04, U05, U06, U07, U08, U09, U10
TK03	Clinical class 4: Psychical examination of infants and older children affected by hydrocephalus and tumors of central nervous system.	5	W01, W02, W03, U01, U02, U03, U04, U05, U06, U07, U08, U09, U10
TK04	Clinical class 4: Psychical examination of infants and older children affected by congenital defects of central nervous system. Craniotomy show in the operating room.	5	W01, W02, W03, U01, U02, U03, U04, U05, U06, U07, U08, U09, U10

Booklist

Obligatory literature:

1. Greenberg M.S. (ed.): Handbook of neurosurgery. Thieme Medical Publishers, 2016.

Supplementary literature:

2. Winn H.R. (ed.): Youmans Neurological Surgery. Elsevier, 2016.

Student's workload

Form of student's activity (in-class participation; activeness, produce a report, etc.)	Student's workload [h]
	Tutor
Contact hours with the tutor	35
Time spent on preparation to seminars/ practical classess	15
Time spent on reading recommended literature	10
Time spent on writing report/making project	0

Time spent on preparing to colloquium/ entry test	0
Time spent on preparing to exam	5
Other	0
Student's workload in total	65
ECTS credits for the subject (in total)	1.5
Remarks	

* Selected examples of methods of assessment:

EP – written examination

EU – oral examination

ET – test examination

EPR – practical examination

K – colloquium

R – report

S – practical skills assessment

RZC – practical classes report, incl. discussion on results

O – student's active participation and attitude assessment

SL – lab report

SP – case study

PS - assessment of student's ability to work independently

W – entry test

PM – multimedial presentation

other...