



**SYLLABUS of the MODULE (SUBJECT)**  
**General Information**

<b>Module title: Neurosurgery</b>	
Module type	Obligatory
Faculty PMU	Faculty of Medicine and Dentistry
Major	Dentistry
Level of study	long-cycle (S2J)
Mode of study	full-time studies
Year of studies, semester	Year 4 <sup>th</sup> , semester 7th
ECTS credits (incl. semester breakdown)	1
Type/s of training	lectures (5h) / seminars (5h) / classes (3h)
Form of assessment*	<input checked="" type="checkbox"/> graded assessment: <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 <input type="checkbox"/> descriptive <input type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral
Head of the Department/ Clinic, Unit	prof. dr hab. n. med. Leszek Sagan
Tutor responsible for the module	dr n. med. Bartosz Limanówka bartosz.limanowka@pum.edu.pl
Department's/ Clinic's/ Unit's website: <a href="https://www.pum.edu.pl/studia_iii_stopnia/informacje_z_jednostek/wmis/katedra_neurochirurgii/">https://www.pum.edu.pl/studia_iii_stopnia/informacje_z_jednostek/wmis/katedra_neurochirurgii/</a>	
Language	English

\* replace  into  where applicable

### Detailed information

<b>Module objectives</b>		<p>1. To recognize symptoms and causes of intracranial hypertension and its consequences.</p> <p>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.</p> <p>3. To acquire skills in evaluating condition of unconscious patient.</p>
Prerequisite /essential requirements	Knowledge	<p>1. Basic knowledge of neuroanatomy and neurophysiology.</p> <p>2. Knowledge of neurological diseases.</p>
	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 understands principles of management in multi-organ injuries	E.W4.	ET
W02	knows and understands life-threatening states	E.W18.	ET
W03	knows and understands cases in which the patient should be referred to the hospital	E.W20.	ET
U01	is able to identify normal and pathological structures and organs in additional imaging examination (X-ray, USG, computer tomography)	E.U5.	O
U02	is able to identify life-threatening risk	E.U8.	O
U03	is able to recognize symptoms of brain injury and cerebrovascular disease, dementia and consciousness disturbances	E.U10.	ET
U04	is able to diagnose headaches, facial pains and neurological diseases in adults and children that posing problems in dental practice	E.U11.	O
K01	is ready to establish and maintain deep and respectful contact with the patient as well as to show understanding for ideological and cultural differences	K.1.	O
K02	is ready to be guided by the patient wellbeing	K.2.	O
K03	is ready to respect physician-patient privilege and patient's rights	K.3.	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 understands principles of management in multi-organ injuries	X			X			
W02	knows and understands life-threatening states	X			X			
W03	knows and understands cases in which the patient should be referred to the hospital	X			X			
U01	is able to identify normal and pathological structures and organs in additional imaging examination (X-ray, USG, computer tomography)				X			
U02	is able to identify life-threatening risk	X			X			
U03	is able to recognize symptoms of brain injury and cerebrovascular disease, dementia and consciousness disturbances	X			X			
U04	is able to diagnose headaches, facial pains and neurological diseases in adults and children that posing problems in dental practice	X			X			
K01	is ready to establish and maintain deep and respectful contact with the patient as well as to show understanding for ideological and cultural differences				X			
K02	is ready to be guided by the patient wellbeing				X			
K03	is ready to respect physician-patient privilege and patient's rights				X			

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	Teaching programme	No. of hours	References to learning outcomes
<b>Winter semester</b>			
<b>Lectures</b>			
TK01	Lecture 1: Intracranial hypertension. Unconscious patient evaluation.	1	W01, W02, W03, U01, U02, U03
TK02	Lecture 2: Spine diseases	1	W03, U01
TK03	Lecture 3: Intracranial hemorrhages	1	W01, W02, W03, U01, U02, U03
TK04	Lecture 4: Head trauma	1	W01, W02, W03, U01, U02, U03
TK05	Lecture 5: Head trauma in children	1	W01, W02, W03, U01, U02, U03
<b>Seminars</b>			
TK01	Seminar 1: Tumors of the central nervous system	1	W02, W03, U01, U02
TK02	Seminar 2: Intracranial vascular malformations	1	W02, W03, U01, U02, U03

TK03	Seminar 3: Surgical treatment of intracranial hematomas	1	W01, W02, W03, U01, U02, U03
TK04	Seminar 4: Trigeminal neuralgia	2	W03, U01, U04
<b>Practical classes</b>			
TK01	Clinical class 1: Psychological examination of unconscious patients and affected by craniocerebral trauma, subarachnoid haemorrhage and spine degeneration.	1	W01, W02, W03, U01, U02, U03, U04, K01, K02, K03
TK02	Clinical class 2: B Psychological examination of unconscious patients and affected by neoplastic tumors of central nervous system. Craniotomy show in the operating room.	2	W02, W03, U01, U02, U03, U04, K01, K02, K03

<b>Booklist</b>
Obligatory literature:
1. Greenberg M.S. (ed.): Handbook of neurosurgery. Thieme Medical Publishers, 2019.
Supplementary literature:
2. Winn H.R. (ed.): Youmans Neurological Surgery. Elsevier, 2016.

<b>Student's workload</b>	
Form of student's activity (in-class participation; activeness, produce a report, etc.)	Student's workload [h]
	Tutor
Contact hours with the tutor	13
Time spent on preparation to seminars/ practical classes	5
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	33
<b>ECTS credits for the subject (in total)</b>	<b>1</b>
<b>Remarks</b>	

\* Selected examples of methods of assessment:

EP – written examination

EU – oral examination

ET – test examination

EPR – practical examination

K – colloquim

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 – multimedia presentation

other...