



Course syllabus - part A Neurosurgery

48SJ-NEUROS
ECTS: 4.00
CYCLE: 2023Z

SUBJECT MATTER CONTENT

LECTURE

1. Scope of knowledge and skills, which is engaged in neurosurgery. What kind of patients a family doctors direct to a neurosurgeon? To which patients emergency medicine immediately calls neurosurgeon? What should I look for during examining a patient who may need the assistance of neurosurgery? Basics of pathophysiology of intracranial increasing narrowness. 2. Life threatening in neurosurgery. Cranio-cerebral and spinal trauma. 3. Life threatening in neurosurgery. Stroke and bleeding subarachnoid. 4. Neurooncology. 5. Functional Neurosurgery.

SEMINAR

1. Post-traumatic injuries of the Central Nervous System - damage mechanisms (contre coup), physical phenomena accompanying the injury (cavitation phenomenon, angular and linear accelerations, gravity and centrifugal force). Acute cerebral contusion to the formation of intracerebral hematoma. Acute and chronic extradural and subdural hematomas. Hemorrhages of the posterior cranial fossa. Skull-base fractures - nasal and auricular fluid, intracranial air. Transverse and longitudinal fractures of the temporal bone pyramid. Late consequences of injuries - Cerebrasthenia syndrome and Korsakov syndrome, late epilepsy. A reminder of the pathophysiological mechanisms of brain autoregulation. 2. Traumatic injuries of the spine and peripheral nerves, including discopathy, fractures of the spine. Brachial plexus injury. 3. Subarachnoid haemorrhage, intracranial aneurysms and CNS vascular malformations, symptoms, procedures, including surgical treatment of the above mentioned malformation by endovascular or surgical exclusion of the aneurysm from cerebral circulation. Differential diagnosis. 4. Functional neurosurgery. The concept of what it does and the treatment of: a) drugresistant epilepsy b) extrapyramidal system disorders c) spasticity d) pain syndromes e) neuralgia f) torticollis. 5. CNS infections, including intracranial abscesses. Symptoms, methods of diagnosis, radiological diagnostics, elements of conservative and surgical therapy. Pathophysiological, microbiological and pathomorphological basis of development of CNS infection.

CLASSES

1. Management in situations of direct threat to life or damage to the CNS and peripheral nervous system due to the accumulation of the above-mentioned disease processes. 2. Basics of neuroradiological diagnostics 3. Subject and physical and neurological examination of neurosurgical patients. 4. Diagnosis and treatment of head injuries 5. Diagnosis and treatment of spine injuries 6. Pathophysiology, syptomatology and management of increasing intracranial pressure 7. Diagnosis of subarachnoid hemorrhage (SAH) and further pre-hospital and emergency room management after SAH 8. Diagnosis and surgical treatment of patients with SAH 9. Diagnosis and treatment of patients with intracranial tumour 10. Diagnosis and treatment of lumbar discopathy 11. Diagnosis and treatment of cervical discopathy 12. Neurosurgical treatment of pain 13. Specificity of neurosurgical procedures - passive participation in

Legal acts specifying learning outcomes:
672/2020

Disciplines: medical sciences

Status of the

course:Obligatoryjny

Group of courses:B -

przedmioty kierunkowe

Code: ISCED 0912

Field of study:Medicine

Scope of education:

Profile of education:

General academic

Form of studies: full-time

Level of studies: uniform

master's studies

Year/semester: 5/9

Types of classes: Lecture,
Seminar, Classes

Number of hours in semester:Lecture: 10.00,
Seminar: 10.00, Classes:
25.00

Language of instruction:English

Introductory subject:

anatomy, pathophysiology,
physiology, radiology

Prerequisites: knowledge of
anatomy, pathophysiology,
physiology, neurology and
imaging and the clinical
symptoms of diseases of
Nervous system

Name of the organisational unit conducting the

course:Katedra

Neurochirurgii

Person responsible for the realization of the

course:prof. dr hab. n. med.
Wojciech Maksymowicz

e-mail:

wojciech.maksymowicz@uwm.edu.pl

Additional remarks:

selected neurosurgical procedures.

TEACHING OBJECTIVE

Acquisition of knowledge in the field of pathophysiology, diagnostics and principles of treatment of disease processes (spontaneous and traumatic), causing intracranial cramping, intracranial bleeding, cramping in the spinal canal and damage to the central nervous system as a result of hyperplasia or hematoma, or external pressure. Acquiring knowledge about the proper management in the event of a direct threat to life or damage to the CNS and peripheral nervous system due to the accumulation of the above-mentioned disease processes. Acquiring the Skills of proper qualification for urgent and planned further specialist activities in the field of neurotraumatology, neuro-oncology, brain vascular diseases, spine diseases, surgical treatment of pain including trigeminal neuralgia, drug-resistant epilepsy, dystonia, and Parkinson's disease. Acquiring the ability to carry out basic diagnostics and conservative treatment of pain syndromes related to degenerative changes of the spine and qualification for surgical treatment of discopathy.

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:

Symbols for outcomes related to the discipline:

M/NMA_P7S_KO+, M/NMA_P7S_KR+++ , M/NM++ , M/NMA_P7S_WG+++

Symbols for outcomes related to the field of study:

KA7_KR1+, M/NM_F.W15.+ , M/NM_F.W5.+ , K.4.+ , M/NM_F.W3.+ , M/NM_K.11.+ , M/NM_F.W13.+ , M/NM_E.W14.+ , E.U16.+ , K.5.+ , E.U1.+ , F.U22.+ , C.U11.+ , K.2.+ , M/NM_D.W18.+ , D.U8.+ , F.U21.+ , K.3.+ , B.U10.+ , K.1.+ , KA7_KO1+ , D.U15.+ , D.U12.++ , D.U13.+ , M/NM_K.9.+ , M/NM_K.7.+ , D.U4.+

LEARNING OUTCOMES:

Knowledge:

- W1 -
- W2 -
- W3 -
- W4 -
- W5 -
- W6 -

Skills:

- U1 -
- U2 -
- U3 -
- U4 -
- U5 -
- U6 -
- U7 -
- U8 -
- U9 -
- U10 -
- U11 -
- U12 -

Social competence:

- K1 -
- K2 -

K3 -
K4 -
K5 -
K6 -
K7 -
K8 -
K9 -
K10 -

TEACHING FORMS AND METHODS:

Seminar(W1;W2;W4;W5;W6;U1;U5;U8;U10;U11;U12;K2;K4;K5;K6;K7;K9;K10;):

Classes(W1;W2;W4;U1;U2;U3;U4;U5;U6;U7;U8;U9;U10;U11;U12;K1;K2;K3;K4;K5;K6;K7;K8;K9;K10;):

Lecture(W2;W3;W4;W5;W6;U8;U11;U12;K2;K4;K5;K6;K7;K9;K10;):Multimedia presentation.

FORM AND CONDITIONS OF VERIFYING LEARNING

OUTCOMES:

Lecture (Written exam) - STATIONARY- write answers / if pandemic - ONLINE- oral test, MS Teams -

Seminar (Oral test) - -

Classes (Oral test) - -

BASIC LITERATURE:

1. Lindsay K.W., Bone I., Fuller G., *Neurology and Neurosurgery*,, Wyd. Elsevier, R. 2010

SUPPLEMENTARY LITERATURE:

1. Wojciech Maksymowicz, *Neurochirurgia w zarysie*, Wyd. PZWL, R. 1999

2. Mirosław Ząbek, *Zarys neurochirurgii*, Wyd. PZWL, R. 1999

3. red. W. Kozubski - Lindsay K.W., Bone I., *Urban*, Wyd. Neurologia i Neurochirurgia, R. 2006

4. David N. Louis i inni, *The 2016 World Health Organization Classification of Tumors of the Central Nervous System: a summary*, Wyd. Acta Neuropathol, R. 2016

Detailed description of ECTS credits awarded - part B

48SJ-NEUROS
ECTS: 4.00
CYCLE: 2023Z

Neurosurgery

The number of ECTS credits awarded consists of:

1. Contact hours with the academic teacher:

- participation in: Lecture	10.0 h
- participation in: Seminar	10.0 h
- participation in: Classes	25.0 h
- consultation	5.0
	Total: 50.0 h.

2. Independent work of a student:

self education	50.00 h
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Total: 50.0 h

contact hours + independent work of a student Total: 100.0 h

1 ECTS credit = 25-30 h of an average student's work, number of ECTS credit = 100.0 h : 25.0 h/ECTS = 4.00 ECTS on average: 4.0 ECTS

- including the number of ECTS credits for contact hours with the direct participation of an academic teacher: 0,00 ECTS points,

- including the number of ECTS credits for hours of independent work of a student: