Appendix number 1.5 to The Rector UR Resolution No. 12/2019

SYLLABUS

concerning the cycle of education 2022-2028

(date range)

1.1. BASIC INFORMATION CONCERNING THIS SUBJECT / MODULE

Subject / Module	**Neurosurgery**
Course code / module *	**Nch/F**
Faculty of (name of the leading direction)	**Medical College of Rzeszów University**
Department Name	**Medical College of Rzeszów University**
Field of study	**medical direction**
Level of education	**uniform master's studies**
Profile	**practical**
Form of study	**stationary / extramural**
Year and semester	**year V, semester X**
Type of course	**obligatory**
Coordinator	**Prof. A Maciejczak**
First and Last Name of the Teacher	

* - According to the resolutions of the Faculty of Medicine

1.2. Forms of classes, number of hours and ECTS

Lecture	Exercise	Conversation	Laboratory	Seminar	ZP	Practical	Self-learning	**Number of points ECTS**
15	30	-	-	-	-	-	5	**2**

1.3. The form of class activities

☒classes are in the traditional form
☐classes are implemented using methods and techniques of distance learning

1.4. Examination Forms / module (exam, **credit with grade** or credit without grade)

2. REQUIREMENTS

Knowledge in the field of anatomy, histology and immunology

3. OBJECTIVES, OUTCOMES, AND PROGRAM CONTENT USED IN TEACHING METHODS

3.1. Objectives of this course/module

C1	Mastering theoretical knowledge and practical skills regarding the location and symptomatology of diseases of the central and peripheral nervous system.
C2	Acquainting with the specificity of diagnosis and neurosurgical treatment of the most common neurological diseases.
C3	Understanding the consequences of craniocerebral injuries and spine as well as peripheral nerves.

3.2 OUTCOMES FOR THE COURSE / MODULE (TO BE COMPLETED BY THE COORDINATOR)

EK (the effect of education)	The content of the learning effect defined for the subject (module)	Reference to directional effects (KEK)
EK_01	knows the rules for the qualification and performance of basic surgical procedures and invasive diagnostic and therapeutic procedures	F.W3.
EK_02	knows the problems of contemporary image research, in particular: a) radiological symptomatology of basic diseases, b) instrumental methods and imaging techniques used for therapeutic procedures, c) indications, contraindications and preparation of patients for particular types of imaging examinations and contraindications to the use of contrast agents;	F.W10.
EK_03	knows and understands the causes, symptoms, principles of diagnosis and therapeutic treatment in relation to the most common diseases of the central nervous system in the scope of: a) cerebral edema and its consequences, with particular reference to emergencies, b) other forms of intracranial narrowness with their consequences, c) cranial-cerebral injuries, d) vascular defects of the central nervous system, e) tumors of the central nervous system, f) diseases of the spine and spinal cord;	F.W13.
EK_04	knows the principles of suspicion and recognition of brain death.	F.W15.
EK_05	evaluates the condition of unconscious patients in accordance with the applicable international point scales	F.U21.
EK_06	recognizes the symptoms of increasing intracranial pressure	F.U22.

EK_07	he is guided by the good of the patient, placing them in the first place	K.02.

3.3 CONTENT CURRICULUM (filled by the coordinator)

A.   Lectures

Course contents
Organizational and introductory classes. Familiarizing students with problems, pass criteria.
Diseases of the spinal cord
Neurological complications of systemic diseases
Late complications of stroke
Differentiation of states of consciousness disorders
Root teams
Pain, mechanism, treatment
Craniocerebral injuries
Childhood syndromes, hydrocephalus and congenital malformations of the CNS
Neurooncology - the present and future of clinical proceedings.
Cerebrovascular diseases - modern therapy options.

B.   **Exercises**

Course contents
Organizational and introductory classes. Familiarizing students with problems, pass criteria.
Basics of neurosurgical procedures
Distincts of intensive therapy in neurosurgical wards
Surgical treatment of chronic pain syndromes.
Surgical treatment of epilepsy.
Surgical treatment of spasticity.
The most common symptoms and neurological syndromes occurring in patients with proliferative disorders of the nervous system. Principles of the examination of patients with proliferative disorders of the nervous system.
Surgical treatment of central nervous system tumors

Coma of the brain - examination of patients, differentiation of causes, rules of conduct. Treatment of unconscious patients.
Death of the brain.
Cerebrovascular diseases - symptoms, diagnostics, treatment. Case overview.
Vascular cyst after subarachnoid haemorrhage.
Brain abscess and intracranial infections.
Injuries of the central nervous system - symptoms, diagnostics, treatment. Case overview.
Brain edema and intracranial hypertension.
Functional neurosurgery - discussion of techniques, case presentation.

3.4   TEACHING METHODS

4 METHODS AND EVALUATION CRITERIA

4.1 Methods of verification of learning outcomes

Symbol of effect	Methods of assessment of learning outcomes (Eg.: tests, oral exams, written exams, project reports, observations during classes)	Form of classes
EK_ 01 EK_02 EK_03 EK_04	Pass with oral or written assessment	Lectures
EK_ 01 EK_02 EK_03 EK_04	Written or oral test of individual material batches	Exercises
EK_05 EK_06 EK_07	Practical credit - case study	Exercises

4.2 Conditions for completing the course (evaluation criteria)

Lectures: 1. test pass and open questions or oral test: A: Questions in the field of messages to remember;   B: Questions in the field of speech to understand;   C: Solving a typical written task;   D: Solving an atypical writing task;   - for insufficient solution of tasks only from areas A and B = grade 2.0   - for solving tasks only from areas A and B, the possibility of obtaining max. rating 3.0

- for solving tasks from the area A + B + C, the possibility of obtaining max. evaluation 4.0

- for the solution of tasks in the area A + B + C + D, the possibility of obtaining a rating of 5.0

Knowledge assessment (EK_01, EK_02, EK_03, EK_04):

5.0 - has knowledge of the education content at the level of 93% -100%

4.5 - has knowledge of the content of education at the level of 85% -92%

4.0 - has knowledge of the content of education at the level of 77% -84%

3.5 - has knowledge of the content of education at the level of 69% -76%

3.0 - has knowledge of the content of education at the level of 60% -68%

2.0 - has knowledge of the educational content below 60%

Exercises, seminars:

1. full participation and activity in the exercises

2. written partial credits

Knowledge assessment (EK_01, EK_02, EK_03, EK_04):

Written test

5.0 - has knowledge of the education content at the level of 93% -100%

4.5 - has knowledge of the content of education at the level of 85% -92%

4.0 - has knowledge of the content of education at the level of 77% -84%

3.5 - has knowledge of the content of education at the level of 69% -76%

3.0 - has knowledge of the content of education at the level of 60% -68%

2.0 - has knowledge of the educational content below 60%

Skills assessment (EK_05, EK_06)

5.0 - the student actively participates in the classes, is well prepared, at a very good level he mastered knowledge in the field of neurosurgery diagnosis and treatment of the most common neurological diseases

4.5 - the student actively participates in the classes, has a good knowledge of the diagnosis and treatment of neurosurgery of the most common neurological diseases

4.0 - the student actively participates in classes, is improved, has a good level of knowledge in the field of neurosurgery diagnosis and treatment of the most common neurological diseases

3.5 - the student participates in the classes, his scope of preparation does not allow for a comprehensive presentation of the discussed problem, he has sufficient knowledge of the diagnosis and neurosurgical treatment of the most common neurological diseases at a sufficient level.

3.0 - the student participates in the classes, has sufficient knowledge of the diagnostic and neurosurgical treatment of the most common neurological diseases, is often corrected

2.0 - the student passively participates in the classes, the statements are incorrect in substance, the theoretical and practical knowledge in the field of neurosurgery is insufficient	

5. Total student workload required to achieve the desired result in hours and ECTS credits

Activity	Hours / student work
Hours of classes according to plan with the teacher	45
Preparation for classes	5
Participation in the consultations	2
The time to write a paper / essay	-
Preparation for tests	-
Participation in colloquia	**-**
Other (e-learning)	**-**
SUM OF HOURS	**52**
TOTAL NUMBER OF ECTS	**2**

6. TRAINING PRACTICES IN THE SUBJECT / MODUL

Number of hours	-
Rules and forms of apprenticeship	-

6. LITERATURE

READING:
1. Neurologia i neurochirurgia, Kenneth W. Lindsay, Ian Bone, Geraint Fuller, red. wyd. pol. Wojciech Kozubski Elsevier Urban & Partner, 2013
2. Neurochirurgia czynnościowa, Marek Harat 2007,
3. Urazy czaszki i mózgu. Rozpoznawanie i opiniowanie, Jan Głowacki, Zdzisław Marek Krakowskie Wydawnictwo Medyczne, 2000

Additional literature:
1. Prusiński: "Neurologia praktyczna". PZWL 2001
2. R. Podemski: "Kompendium neurologii." Via Medica 2008

Acceptance Unit Manager or authorized person