## DESCRIPTION OF THE COURSE OF STUDY

Course code		
Name of the course in	Polish	Neurologia
	English	Neurology

### 1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES

1.1. Field of study	Medicine
1.2. Mode of study	Full-time
1.3. Level of study	Uniform master's studies
1.4. Profile of study*	Practical
1.5. Person preparing the course description	dr hab. n. med. Mariola Świderek-Matysiak
1.6. Unit running the course of study	Faculty of Medicine and Health Sciences
1.7. Person/s preparing the course description	dr hab. n. med. Mariola Świderek-Matysiak, dr n.med. Elzbieta Jasińska
1.8. Person responsible for the course of study	dr hab. n. med. Mariola Świderek-Matysiak,
1.9. Contact	

#### 2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

2.1. Affiliation with the module	Non-surgical clinical sciences			
2.2. Language of instruction	English			
2.3. Semesters in which the course of study is offered	7 <sup>th</sup> semester			
2.4. Prerequisites*	The basic knowledge of anatomy and physiology of the			
	nervous system			

## 3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

J. DETRILLED	CHARACTERISTIC	CS OF THE COURSE OF STUDI						
3.1. Form of classes		Lecture-15, classes-15, practical classes-30						
3.2. Place of classes		Courses in the teaching rooms of the UJK,						
		Practical classes: Department of Neurology Regional Hospital (WSSz)						
		and Outpatient Clinic of Neurology RESMEDICA in Kielce						
3.3. Form of assessm	nent	Positive assessment of the case presentation written by a student, pass-						
		ing the practical exam, passing the final exam						
3.4. Teaching metho	ods	Verbal (lecture), viewing (demonstration, case demonstration, movie),						
		practical (neurological examination, differential diagnosis, writing a						
		medical history)						
3.5. Bibliography	Required reading	1. Netter's Concise Neurology –Karl Misulis, Thomas Head						
		2. Neurology – Mark Mumenthaler						
	Further reading	1. K.W.Lindsay, I. Bone – Neurology and neurosurgery illustrated.						
		Churchill Livingstone 2010, 5 <sup>th</sup> edition.						
		2. A.H. Ropper, M.A.Samuels – Adams and Victor's Principles of Neu-						
		rology; McGraw-Hill Education; 10 <sup>th</sup> edition (May 16, 2014)						
		3.E.Louis, S.A. Mayer et al Merritt's Neurology Wolterd Kluwert13 <sup>th</sup> edition, (Oct 3, 2015)						
		4.G.Fuller - <i>Neurological Examination Made Easy</i> Elsevier 2019, 6th edition						
		5. J.S.Kass, E.M.Mizrahi - Neurology secrets. Elsevier 6 <sup>th</sup> edition 2016						

# 4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED LEARNING OUTCOMES

### **4.1.** Course objectives (including form of classes)

- C-1 (knowledge) providing students with knowledge of standards in neurology, familiarization with the principles of conducting interviews and clinical examination, acquiring knowledge about diagnosis and management of both common and rare neurological conditions, familiarize with ethical problems related to patient care, including end-of-life problems, termination of support for people with severe brain damage and palliative choices care.
- C-2 (skills) the acquisition by students of the ability to observe and recognize a neurological condition and interpretation of tests used in neurology: Lumbar Puncture, Carotid Duplex Sonography, Computer Tomography, Magnetic Resonance, neurophysiological assessment: EEG, EMG, VEPs.
- C-3 (social competences) familiarizing students with the specifics of work in neurological clinic and showing the

importance of communication skills, both with patients, families, and the hospital staff and colleagues in and outside the hospital.

## 4.2. Detailed syllabus (including form of classes)

#### A. Lectures

1. Clinical syndromes in neurology - 3h Headache and facial pain - 1 h

2. Stroke -2h

Epilepsy and other episodic disorders of neurologic function – 2h

3. Demyelinating diseases – 1h

Parkinson disease and other common extrapyramidal diseases—2h

Motor neuron disease -1h

4. Polyradiculitis and polyneuropathy – 1,5 h

Myopathy, myositis and disorder of neuromuscular transition – 1.5h

#### B. Classes

- 1. The importance of medical interviev in neurology. Knowledge and consolidation of knowledge about the neurological diseases, neurological tests and assessment of the functional state of a neurological patient.
- 2. Diagnostic methods used in neurology: computed tomography, magnetic resonance imaging, cerebrospinal fluid examination, carotid and vertebral artery tests, neurophysiological tests.
- 3. Differential diagnosis of neurological diseases.
- 4. Intensive therapy in neurology. Rules for the management of patients after head trauma, with brain tumors, intracranial haemorrhage, status epilepticus,, Guillain Barre syndrom
- 3. Diagnosis and treatment of vascular diseases of the brain and spinal cord.
- 4. Diagnosis and treatment of extrapyramidal system diseases, neurodegenerative diseases, neuromuscular diseases, demyelinating diseases, spinal diseases and radiculopthy
- 5. Prevention of nervous system diseases.
- 6. Rules for the treatment of acute and chronic pain
- 7. Neurological symptoms in internal diseases.
- 8. Rules of rehabilitation treatment.

### C. Practical Classes:

- 1. Approach to diagnosis. Neurological examination: reflexes, symptoms and neurological syndromes. Examination of the unconscious patient and assessment of life-threatening conditions.
- 2. Management of suspected stroke, neuroinfection, status epilepticus, intoxication, psychoactive substances, consequences of craniocerebral trauma, myasthenic crisis, and relapses of multiple sclerosis.
- 3. Principles of diagnostics and treatment of basic neurological diseases.
- 4. Differential diagnosis of the most common neurological diseases.
- 5. Behavioral disorders, confusion and agitation in neurological diseases methods of management and immediate patient protection.

# 4.3 Intended learning outcomes

Code	A student, who passed the course	Relation to teach- ing outcomes
	within the scope of <b>KNOWLEDGE</b> , the graduate knows and understands:	
W01	environmental and epidemiological conditions for the most common diseases;	E.W1.
W02	basic neurological syndromes;	E.W13.
W03	causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases of the nervous system, including:  1) headaches: migraine, tension headaches and bands headaches and trigeminal neuralgia of nerve V;  2) vascular diseases of the brain, in particular the stroke;  3) epilepsy;  4) infection of the nervous system, in particular meningitis, Lyme disease, HSV encephalitis, neurotransmitter disorders;  5) dementia, in particular in Alzheimer's disease, frontotemporal dementia, vascular	E.W14.

dementia, and other types of dementia;
6) diseases of the basal ganglia, in particular Parkinson's disease;
7) demyelinating diseases, in particular multiple sclerosis;
8) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis and sciatica;
9) cranio-cerebral trauma, in particular concussion;

	within the scope of <b>ABILITIES</b> , the graduate knows how to:							
U01	conduct full and targeted physical examination of the adult patient;	E.U3.						
U02	conduct indicative study of hearing and sight as well as the otoscopic examination;	E.U6.						
U03	assess patient's general condition, consciousness and awarenes;	E.U7.						
U04	perform differential diagnosis of the most common diseases in adults and children;	E.U12.						
U05	assess and describe the somatic and mental state of patients;	E.U13.						
U06	recognize states of a direct threat to life;	E.U14.						
U07	plan diagnostic, therapeutic and preventive procedures;	E.U16.						
U08	conduct analysis of the potential side effects of each drug and the interaction between them;	E.U17.						
U09	qualify the patient for home treatment and hospitalization;	E.U20.						
U10	recognize states in which functional status of the patient's or his/her preferences restrict the treatment in accordance with specific guidelines for the disease;	E.U21.						
U11	interpret laboratory tests/results and identify the reasons for deviations;	E.U24.						
U12	assist when the following procedures and medical treatments are performed:  1) transfusions of blood and blood products,  2) drainage of the pleural cavity,  3) puncture of the pericardium,  4) puncture of the peritoneal cavity,  5) lumbar puncture,  6) needle biopsy,  7) epidermal tests,  8) intradermal and scarification tests and interpret their results;	E.U30.						
U13	plan specialist consultations;	E.U32.						
U14	evaluate decubitus and apply appropriate dressings;	E.U35.						
U15	comply with the aseptic and antiseptic rules;	F.U3.						

4.4. Methods of assessment of the intended learning outcomes																						
		Method of assessment (+/-)																				
Teaching	Exam oral/written*  Form of classes				Test*			Project*			Effort in class*			Self-study*			Group work*			Others*		
outcomes (code)				Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			
	L	С		L	С		L	С		L	С		L	С		L	С		L	С		
W01	+									+	+											
W02	+									+	+											
W03	+									+	+											
U01					+					+	+											
U02					+					+	+											
U03					+					+	+											
U04					+					+	+											
U05					+					+	+											
U06					+					+	+											
U07					+					+	+											
U08					+					+	+											
U09					+					+	+											
U10					+					+	+											
U11					+					+	+											
U12					+					+	+											
U13					+					+	+											
U14					+					+	+											
U15					+					+	+											
K01										+	+											

K02					+	+					

<sup>\*</sup>delete as appropriate

4.5. Crit	eria of a	ssessment of the intended learning outcomes
Form of classes	Grade	Criterion of assessment
	3	61-68% Student w stopniu dostatecznym zna objawy chorób neurologicznych, przeprowadza badanie neurologiczne.
	3,5	69-76% Student w stopniu dostatecznym zna podstawowe objawy chorób neurologicznych, przeprowadza badanie neurologiczne, planuje terapie.
lecture (L)	4	77-84% Student w stopniu dobrym zna patogenezę, objawy chorób neurologicznych, przeprowadza diagnostykę różnicową i badanie neurologiczne, planuje terapie.
lectu	4,5	85-92% Student w stopniu ponad dobrym zna etiologie, patogenezę i objawy chorób neurologicznych, przeprowadza diagnostykę różnicową i badanie neurologiczne, planuje terapie. Ma dobry kontakt z pacjentem i personelem.
	5	93-100% Student doskonale zna patogenezę, objawy chorób neurologicznych, przeprowadza diagnostykę różnicową, badanie neurologiczne i planuje terapie. Nawiązuje bardzo dobry kontakt z pacjentem i personelem
	3	Student w stopniu dostatecznym zna objawy chorób neurologicznych, przeprowadza badanie neurologiczne. 61-68%
	3,5	Student w stopniu dostatecznym zna podstawowe objawy chorób neurologicznych, przeprowadza badanie neurologiczne, planuje terapie. 69-76%
; (C)*	4	Student w stopniu dobrym zna patogenezę, objawy chorób neurologicznych, przeprowadza diagnostykę różnicową i badanie neurologiczne, planuje terapie.
classes (C)*	4,5	Student w stopniu ponad dobrym zna etiologie, patogenezę i objawy chorób neurologicznych, przeprowadza diagnostykę różnicową i badanie neurologiczne, planuje terapie. Ma dobry kontakt z pacjentem i personelem. 77-84%
	5	Student doskonale zna patogenezę, objawy chorób neurologicznych, przeprowadza diagnostykę różnicową, badanie neurologiczne i planuje terapie. Nawiązuje bardzo dobry kontakt z pacjentem i personelem 93-100%
*	3	61-68%
others ()*	3,5	69-76%
ers (	4	77-84%
the	4,5	85-92%
0	5	93-100%

# 5. BALANCE OF ECTS CREDITS – STUDENT'S WORK INPUT

Category	Student's workload Full-time studies
NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/	60
Participation in lectures*	15
Participation in classes, seminars, laboratories*	45
Preparation in the exam/final test*	
Others*	
INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/	40
Preparation for the lecture*	5
Preparation for the classes, seminars, laboratories*	20
Preparation for the exam/test*	15
Gathering materials for the project/Internet query*	
Preparation of multimedia presentation	
Others (please specify e.g. e-learning)*	
TOTAL NUMBER OF HOURS	100
ECTS credits for the course of study	4

<sup>\*</sup>delete as appropriate

Accepted for execution (date and legible signatures of the teachers running the course in the given academic year)