

Course description

Part 1

General information about the course		
1. Major of study: medicine	2. Study level: unified MSc	
	3. Form of study: intramural	
4. Year: IV	5. Semester: VIII	
6. Course name: neuroscience		
7. Course status: required		
8. Course contents and assigned learning outcomes		
Provide the integrated modern understanding of the human nervous system, with the special emphasis on functional aspects of nervous system organization, as well as to have students to apply this knowledge to problems and case studies relevant to clinical neuroscience Learning outcomes / reference to learning outcomes indicated in the standards For knowledge – student knows and understands: A.W.1; A.W.2; A.W.3; A.W.6; B.W.17; B.W.20; B.W.25; C.W.15; C.W.33; C.W.34; C.W.42 For skills student can do: A.U.5; B.U.10; C.U.11; For social competencies student is ready to: notice and recognize own limitations and make self-assessment of educational deficits and needs; make use of objective sources of knowledge; formulate conclusions from own measures and observations; efficient cooperation with others		
9. Number of hours for the course		75
10. Number of ECTS points for the course		5
11. Methods of verification and evaluation of learning outcomes		
Learning outcomes	Methods of verification	Methods of evaluation*
Knowledge	Grade credit – MCQ	*
Skills	Observation	*
Competencies	Observation	*

* The following evaluation system has been assumed:

Very good (5,0) – the assumed learning outcomes have been achieved and significantly exceed the required level

Better than good (4,5) – the assumed learning outcomes have been achieved and slightly exceed the required level

Good (4,0) – the assumed learning outcomes have been achieved at the required level

Better than satisfactory (3,5) – the assumed learning outcomes have been achieved at the average required level

Satisfactory (3,0) – the assumed learning outcomes have been achieved at the minimum required level

Unsatisfactory (2,0) – the assumed learning outcomes have not been achieved

Course description

Part 2

Other useful information about the course		
12. Name of Department, mailing address, e-mail: Department of Physiology, School of Medical Sciences in Katowice, 18 Medyków St., 40-752 Katowice; jkowalik@sum.edu.pl ; mlaryszbrysz@sum.edu.pl		
13. Name of the course coordinator: Joanna Lewin-Kowalik		
14. Prerequisites for knowledge, skills and other competencies: Completing the Anatomy, Histology and Physiology courses on the medical level		
15. Number of students in groups	In accordance with the Senate Resolution	
16. Study materials	Presentations prepared and provided by instructor	
17. Location of classes	Lectures and seminars: rooms provided by Dean's Office	
18. Location and time for contact hours	Department of Physiology, room 514 Mondays 10.a.m.-1 p.m.	
19. Learning outcomes		
Number of the course learning outcome	Course learning outcomes	Reference to learning outcomes indicated in the standards
P_W01 / C_K01	Knows and understands anatomic terminology	A.W.1
P_W02 / C_K02	Knows and understands structure of human nervous system	A.W.2
P_W03 / C_K03	Knows and understands topographic relations between elements of nervous system	A.W.3
P_W04 / C_K04	Knows and understands stages of nervous system development	A.W.6
P_W05 / C_K06	Knows and understands ways of communication between cells and between cell and extracellular matrix, as well as signaling pathways	B.W.17
P_W06 / C_K06	Knows and understands mechanism of excitation and conduction in nervous system as well as higher nervous functions	B.W.20
P_W07 / C_K07	Knows and understands connection between factors disturbing balance of biological processes and physiologic and pathophysiologic changes	B.W.25
P_W08 / C_K08	Knows and understands consequences of exposure of human to biological and chemical factors	C.W.15
P_W09 / C_K09	Knows and understands intrinsic and extrinsic pathogens	C.W.33
P_W10 / C_K10	Knows and understands clinical features of most common diseases of nervous system	C.W.34
P_W11 / C_K11	Knows and understands basic therapeutic approaches, with emphasis on molecular and genetic	C.W.42

P_U01 / C_S01	Can use anatomic and histologic terminology	A.U.5
P_U02 / C_S02	Can use databases including internet ones and seek for information using available tools	B.U.10
P_U03 / C_S03	Can link image of tissue and organ injury to clinical features of nervous system diseases	C.U.11
20. Forms and topics of classes		Number of hours
21.1. Lectures		
Short overview and development of nervous system – norms and pathology		2
Cell biology of neurons – structure and function		2
Types of synapses and neurotransmitters		2
Information processing – receptors and somatosensory system		2
Motor system – motor centers and pathways		2
Supraspinal control of movement		2
Visual system		2
Auditory system. Vestibular system		2
Chemical senses: smell and taste		2
Autonomic (vegetative) nervous system		2
Central regulation of visceral functions		2
Limbic system. Brainstem. Consciousness. Sleep		2
Cerebral cortex. Higher cortical functions		2
Conditioned reflexes. Unconditioned reflexes		2
Physiology of language.		2
22.2. Seminars		
Short overview and development of nervous system – norms and pathology		3
Cell biology of neurons – structure and function		3
Types of synapses and neurotransmitters		4
Information processing – receptors and somatosensory system		4
Motor system – motor centers and pathways		3
Supraspinal control of movement		3
Visual system		4
Auditory system. Vestibular system		4
Chemical senses: smell and taste		2
Autonomic (vegetative) nervous system		2
Central regulation of visceral functions		2
Limbic system. Brainstem		2
Consciousness. Sleep		2
Cerebral cortex. Higher cortical functions		2
Conditioned reflexes. Unconditioned reflexes		2
Physiology of language		2
Modern concepts in neurobiology		1
24. Readings		
Nolte's the Human Brain by <u>Todd W. Vanderah, Douglas S. Gould</u>		
Functional Neuroscience by <u>Oswald Steward</u>		
Rapid Review Neuroscience by <u>James A. Weyhenmeyer, Eve A. Gallman</u>		
25. Detail evaluation criteria		
In accordance with the recommendations of the inspection bodies Completion of the course – student has achieved the assumed learning outcomes Detail criteria for completion and evaluation of the course are specified in the course regulations		

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