

**DESCRIPTION OF COURSE UNIT FOR DOCTORAL STUDIES
AT VILNIUS UNIVERSITY**

Scientific Area/eas, Field/ds of Science	Medical and Health Sciences (M 000): Medicine (M 001); Public Health (M 004); Nursing (M 005)			
Faculty, Institute, Department/Clinic	Faculty of Medicine Institute of Clinical Medicine Clinic of Neurology and Neurosurgery			
Course unit title (ECTS credits, hours)	Neurologic Vascular Surgery 7 credits (189 hours)			
Study method	Lectures	Seminars	Consultations	Self-study
Number of ECTS credits	-	-	1	6
Method of the assessment (in 10 point system)	<p>Examination. Exams are conducted in written and oral forms. Two questions on the topics given in the course unit description are asked by the commission. The doctoral student is given time to prepare a written answer. Answers are given orally. The maximum score for each question is 5 points, the total score is the sum of the scores for both questions, rounded to the nearest whole number. The depth of knowledge of the topic, the application of the latest knowledge, the ability to present and discuss it are assessed.</p>			
PURPOSE OF THE COURSE UNIT				
Acquire basic knowledge of the extracranial and intracranial diagnostics of pathology and surgical treatment in vascular diseases				
THE MAIN TOPICS OF COURSE UNIT				
<p>Methods and assessment of cerebral circulation. Epidemiology, localization, etiopathogenesis of arterial aneurysms. Variants and diagnostics of the clinical course of arterial aneurysms. Subarachnoid hemorrhage. Cerebrovascular spasm: etiopathogenesis, manifestation, diagnosis, treatment. Surgical treatment of arterial aneurysms. Time of surgery. Endovascular surgery. Classification, clinical forms, course and diagnostics of arteriovenous malformations. Treatment of arteriovenous malformations. Diagnosis and treatment of cavernous malformations (cavernomas, angiomas). Etiopathogenesis, manifestation and diagnostics of carotid-cavernous fistula. Venous malformations: classification, manifestation, diagnostics and treatment. Dural arteriovenous fistulae: classification, manifestation, diagnosis and treatment. Etiopathogenesis of hemorrhagic stroke, surgical classification. Manifestation, diagnostics of hemorrhagic strokes of various localizations. Indications and methods of surgical treatment of hemorrhagic stroke. Ventricular hemorrhage drainage. Causes, frequency and etiopathogenesis of ischemic strokes. Risk factors.</p>				
RECOMMENDED LITERATURE SOURCES				
<ol style="list-style-type: none"> 1. Winn H. (ed). Youmans and Winn Neurological Surgery. 8th edition. Elsevier, 2022 2. Quinones-Hinojosa A (ed.). Schmidek&Sweet operative neurosurgical techniques: indications, methods, and results. 7th edition. Elsevier. 2021. 3. Budrys V (red.). Klinikinė neurologija. 2as leidimas. Vaistų žinios. 2009. 4. Budrys V. Urgentinė neurologija. Vilnius: Vaistų žinios, 2011 5. Greenberg MS (ed). Handbook of neurosurgery, 9th edition. Thieme. New York. 2019. 6. Spetzler RF, Kalani MYS, Nakaji P (eds). Neurovascular Surgery, 2nd edition. Thieme. 2015 				

7. Dumont AS (ed). Brain Arteriovenous Malformations and Arteriovenous Fistulas. Thieme. 2018
8. July J (ed). Neurovascular Surgery. Springer. 2019.
9. Lawton MT. Seven Bypasses. Thieme. 2018
10. Macdonald RL (ed). Neurosurgical Operative Atlas. Vascular Neurosurgery. 3rd edition. Thieme. 2019.

CONSULTING LECTURERS

1. Coordinating lecturer: Robertas Kvaščevičius (Assist. Prof. Dr.).

2. Saulius Ročka (Prof. Dr.).

3. Aidanas Preikšaitis (Assist. Prof. Dr.).

APPROVED:

By Council of Doctoral School of Medicine and Health Sciences at Vilnius University:
29th of September 2022

Chairperson of the Board: Prof. Janina Tutkuviene