



Univerza v Mariboru



MEDICINSKA FAKULTETA

## UČNI NAČRT PREDMETA / SUBJECT SPECIFICATION

|                       |             |
|-----------------------|-------------|
| <b>Predmet:</b>       | Nevrologija |
| <b>Subject Title:</b> | Neurology   |

| Študijski program<br>Study programme        | Študijska smer<br>Study field | Letnik<br>Year | Semester<br>Semester |
|---------------------------------------------|-------------------------------|----------------|----------------------|
| Splošna medicina<br>General medicine - EMŠP |                               | 5              | 9                    |

Univerzitetna koda predmeta / University subject code:

| Predavanja<br>Lectures | Seminar<br>Seminar | Sem. vaje<br>Tutorial | klin. vaje<br>clin work | Teren. vaje<br>Field work | Samost. delo<br>Individ. work | ECTS |
|------------------------|--------------------|-----------------------|-------------------------|---------------------------|-------------------------------|------|
| 15                     | 30                 |                       | 15                      |                           | 90                            | 5    |

Nosilec predmeta / Lecturer:

Prof. dr. Tanja Hojs Fabjan

Jeziki /

Predavanja / Lecture:

Slovenski/slovene

Languages:

Vaje / Tutorial:

Slovenski/slovene

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Prerequisites:

## Vsebina:

Študent spozna praktični pristop k nevrološemu bolniku, nevrološko preiskavo, teoretične osnove, ki pomagajo pri postavljanju diagnoze, anatomsko in patološko diagnozo ter posebne preiskovalne metode. Na osnovi naučene nevrološke preiskave in drugih sodobnih metod se uči prepoznavanja najpogostejših nevroloških simptomov in bolezni: možganskožilnih bolezni, njihove dejavnike tveganja, zdravljenje in preprečevanje, znake zvišanega intrakranialnega tlaka – ekspanzivne procese, epilepsijo, demielinizirajoče bolezni osrednjega živčevja, bolezni gibanja (ekstrapiramidne motnje), bolezni motorične ploščice, živčno-mišične bolezni, bolezni hrbtenjače, bolezni perifernih živcev, degenerativne bolezni živčnega sistema, glavobol in različne nevralgije, demenco nevrološkega izvora, infekcije živčevja, poškodbe osrednjega živčevja. Prav tako spoznava nevrološke aspekte pri zastrupitvah, boleznih zasvojenosti in različnih psihiatričnih boleznih.

## Content (Syllabus outline):

The student becomes aware of the empirical access to a neurological patient, neurological investigation, theoretical basis, which help to form the diagnosis, anatomical and pathological diagnosis and special investigation methods. On the basis of the learned neurological investigation and other modern methods he/she learns to recognize the most common neurological symptoms and diseases: cerebrovascular diseases, their risk factors, therapy and prevention, signs of elevated intracranial pressure – expansive processes, epilepsy, demyelinating disease of the central nervous system, movement disorders (extrapyramidal disorders), neuromuscular junction diseases, neuro – muscular diseases, diseases of the spinal cord, diseases of the peripheral nerves, neurodegenerative diseases, headache and different neuralgias, dementia, infections of the nervous system, trauma of the central nervous system. He/she recognizes also neurological aspects of poisoning, disorders of abuse and various psychiatric diseases.

## Temeljni literatura in viri / Textbooks:

- C.D. Marsden, T.J. Fowler, Edward Arnold, Clinical neurology. 1989.
- Brain's clinical neurology, revised by Sir R. Bannister, Oxford, zadnja izdaja.
- R.W.R. Russell, C.M. Wiles, Heinemann. Integrated clinical science-Neurology, 1985.
- Peter Duus. Topical diagnose in neurology: anatomy, psychology, signs, symptoms., Thieme, 1989.
- Lavrič A, ur.: Janko M. Klinična nevrološka preiskava, Medicinski razgledi, Ljubljana, 1996, (osnovni

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>pripomoček za vaje).</p> <ul style="list-style-type: none"> <li>- Vodušek D. Višja živčna dejavnost, Medicinski Razgledi, 31:369-400, 1992</li> <li>- M. Janko: Gibanje, Medicinski Razgledi, Ljubljana, 26:377-349, 1987</li> <li>- M. Janko: Motnje gibanja, 30:55-69, 1991</li> <li>- Tetičkovič, E, Žvan, B. Sodobni pogledi na možganskožilne bolezni. Maribor:Obzorja, 2003.</li> <li>- Tetičkovič, E, Žvan, B. Možganska kap - do kdaj. Maribor: 2007.</li> </ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Cilji:**

Iz predkliničnih predmetov študent povezuje znanja iz patofiziologije, patologije, anatomije in se uči spoznati motnje v delovanju živčevja. Poleg nevrološke preiskave spozna različne diagnostične metode v nevrologiji, njihove prednosti in omejitve, spozna naravo nevroloških okvar in bolezni, predvsem tistih, ki jih kot zdravnik splošne prakse najpogosteje srečuje, njihovo zdravljenje in preprečevanje.

**Objectives:**

The student links knowledge from preclinical subjects pathophysiology, pathology, anatomy and he/she learns how to recognize a disorder in the functions of the nervous system. Besides neurological investigation he/she recognizes various diagnostic methods in neurology, their advantages and disadvantages; he/she recognizes the nature of the neurological disorders and diseases, especially those, a doctor of a general practice meets, their therapy and prevention.

**Predvideni študijski rezultati:**

Znanje in razumevanje:  
Razumevanje patofizioloških mehanizmov najpogostejših nevroloških bolezni in sindromov.  
Znanje (vključno o urgenci) nevroloških stanj, ki jih zdravnik splošne medicine najpogosteje srečuje.

Prenesljive/ključne spretnosti in drugi atributi:  
Obvladovanje nevrološkega statusa.  
Sposobnost aktivnega vključevanja v različne projekte.

**Intended learning outcomes:**

Knowledge and Understanding:  
Understanding the pathophysiology of the most frequent neurological diseases and syndromes.  
Knowledge (including of the urgency) of neurological diseases, that a doctor of general practice the most frequently meets.

Transferable/Key Skills and other attributes:  
The proficiency of the neurological investigation.  
The ability of active participation in different projects

**Metode poučevanja in učenja:**

Predavanja.  
Vaje.  
Seminarji.

**Learning and teaching methods:**

Lectures.  
Practices.  
Seminars.

**Načini ocenjevanja:**

Delež (v %) /  
Weight (in %)

**Assessment:**

|                                                          |              |                                                            |
|----------------------------------------------------------|--------------|------------------------------------------------------------|
| Način (pisni izpit, ustno izpraševanje, naloge, projekt) |              | Type (examination, oral, coursework, project):             |
| izpit (opravljen seminar pogoj za pristop k izpitu)      | <b>100 %</b> | Exam (completed seminar is condition for approach to exam) |

**Reference nosilca / Lecturer's references:**

BEYOND Study Group, O'CONNOR, Paul, FILIPPI, Massimo, ARNASON, Barry, ŠEGA, Saša, **HOJS-FABJAN, Tanja**. 250 [micro]g or 500 [micro]g interferon beta-1b versus 20 mg glatiramer acetate in relapsing-remitting multiple sclerosis. *Lancet neurol. (Print)*, 2009, vol. 8, issue 10, str. 889-897

LIZROVA PREININGEROVA, Jana, BAUMHACKL, Ulf, CSEPANY, Tunde, CZAPLINSKI, Adam, DEISENHAMMER, Florian, DERFUSS, Tobias, **HOJS-FABJAN, Tanja**, FAZEKAS, Franz, FUCHS, Siegrid, HAVRDOVA, Eva, HORVAT-LEDINEK, Alenka, ILLES, Zsolt, ŠEGA, Saša, KLIMOVA, Eleonora, KOMOLY, Samuel, KURČA, Egon, LINNEBANK, Michael, LISY, Lubomir, MARES, Jan, PROCHAZKOVA, Lubica, CSILLA, Rozsa, SZILASIOVA, Jarmila, STOURAC, Pavel, TALAB, Radomir, TURČÁNI, Peter, VACHOVA, Marta, VECSEI, Laszlo, VODUŠEK, David B., ZAPLETALOVA, Olga, BERGER, Thomas.  
Recommendations for the use of prolonged-release fampridine in patients with multiple sclerosis (MS). *CNS neurosci. ther. (Print)*, May 2013, vol. 19, iss. 5, str. 302-306.

Pikija, Slaven, Magdič Jožef, **Hojs FabjanTanja**. Calcifications of Vertebrobasilar Arteries on CT:Detailed Distribution and Relation to Risk Factors in 245 Ischemic Stroke Patients. *Biomed Res Int*, 2013, vol. 2013, str. [1]-7

**HOJS FABJAN Tanja**, Hojs Radovan. Stroke and renal dysfunction. *European Journal of Internal Medicine*, 2013

FAZEKAS, Franz, BERGER, Thomas, **HOJS-FABJAN, Tanja**, HORVAT-LEDINEK, Alenka, GÁBOR, Jakab, KOMOLY, Samuel, KRAUS, Jörg, KURČA, Egon, KYRIAKIDES, Theodoros, LISY, Lubomir, MILANOV, Ivan, PANAYIOTOU, Panayiotis, ŠEGA, Saša, TALAB, Radomir, TRAYKOV, Latchezar, TURČÁNI, Peter, VASS, Karl, VELLA, Norbert, HAVRDOVA, Eva. Fingolimod in the treatment algorithm of relapsing remitting multiple sclerosis : a statement of the Central and East European (CEE) MS Expert Group. *Wien. med. Wochenschr. (1946)*, 2012, [Vol.] 162, [no.] [15/16], str. 354-366.

PENKO, Meta, **HOJS-FABJAN, Tanja**, BEVC, Sebastjan, KANIČ, Vojko, HOJS, Radovan. A prospective study about impact of renal dysfunction and morbidity and mortality on cardiovascular events after ischemic stroke. *Cardiol. J. (Print)*, 2013

**HOJS-FABJAN, Tanja**, PENKO, Meta, HOJS, Radovan. Cystatin C, creatinine, estimated glomerular filtration, and long-term mortality in stroke patients. *Ren. fail.*, 2013

**HOJS-FABJAN, Tanja**. Predicting short-term (30-day) mortality in patients with ischemic stroke using the baseline score of the National Institutes of Health Stroke Scale = Lestvica NIHSS (National Institutes of Health Stroke Scale) in kratkoročna (30-dnevna) umrljivost bolnikov z ishemično možgansko kapjo. *Acta medico-biotechnica*, 2012, vol. 5, no. 1, str. 46-53.

FAZEKAS, Franz, BAJENARU, Ovidiu, BERGER, Thomas, **HOJS-FABJAN, Tanja**, HORVAT-LEDINEK, Alenka, GÁBOR, Jakab, KOMOLY, Samuel, KOBYS, Tetiana, KRAUS, Jörg, KURČA, Egon, KYRIAKIDES, Theodoros, LISY, Lubomir, MILANOV, Ivan, NEHRYCH, Tetyana, MOSKOVKO, Sergii, PANAYIOTOU, Panayiotis, ŠEGA, Saša, SOKOLOVA, Larysa, TALAB, Radomir, TRAYKOV, Latchezar, TURČÁNI, Peter, VASS, Karl, VELLA, Norbert, VOLOSHYNÁ, Nataliya, HAVRDOVA, Eva. How does fingolimod (gilenya) fit in the treatment algorithm for highly active relapsing-remitting multiple sclerosis?. *Frontiers in Neurology*. [Online ed.], May 2013, vol. 4, article 10, str. 1-14.

**HOJS-FABJAN, Tanja**, HOJS, Radovan. Polyneuropathy in hemodialysispatients: The most sensitiveelectrophysiologicalparametersanddialysisadequacy. *Wien. klin. Wochenschr., Suppl.*, 2006, jg. 118, suppl. 2, str. 29-34.

International Stroke Trial Collaborative Group, GRAD, Anton, MEGLIČ, Bernard, ŠVIGELJ, Viktor, **HOJS-FABJAN, Tanja**. The international stroke trial (IST): a randomized trialof aspirin, subcutaneous heparin, both, or neither among 19 435 patients with acute ischaemic stroke. *Lancet (Br. ed.)*. [Printed.], May 1997, vol. 349, no. 9065, str. 1569-1581.

TOPMAT-MIG-303 investigators, DIENER, Hans-Christoph, AGOSTI, Reto, ALLAIS, Gianni, BERGMANS, Paul, BUSSONE, Gennaro, DAVIES, Brendan, ERTAS, Mustafa, LANTERI-MINET, Michel, REUTER, Uwe, SÁNCHEZ DEL RÍO, Margarita, SCHOENEN, Jean, SCHEALEN, Susanne, VAN OENE, Joop, POGAČNIK, Tomaž, **HOJS-FABJAN, Tanja**. Cessationversuscontinuationof 6-monthmigraine preventive therapywithtopiramate (PROMPT): a randomised, double-blind, placebo-controlledtrial. *Lancet neurol. (Print)*, Dec. 2007, vol. 6, no. 12, str. 1054-1062.