



Univerza v Mariboru

Medicinska fakulteta

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Kirurgija
Course title:	Surgery

Študijski program in stopnja Study programme and cycle	Študijska smer Study option	Letnik Year of study	Semester Semester
Dentalna medicina/Dental Medicine 2 stopnja/2nd cycle		3	6.

Vrsta predmeta / Course type

Obvezni/Compulsory

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje Clinical training	Druge oblike študija Other forms of study	Samost. delo Individual work	ECTS
30	15		30		75	5

Nosilec predmeta / Lecturer:

Red. prof. dr. Anton Crnjac
Doc. dr. Miha Antonič (sonosilec)

Jeziki /

Predavanja / Lectures:

Slovenščina/Slovene

Languages:

Vaje / Tutorial:

Slovenščina/Slovene

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

Prerequisites:

Vsebina:

V okviru kirurške propedeutike mora študent obvladati:

- Osnovne postopke klinične preiskave: palpacijo, perkusijo, avskultacijo
- Anamnezo
- Diagnostične postopke
- Klinične veščine: jemanje krvi, dajanje injekcij, katetrizacija sečnega mehurja, venepunkcija, vstavljanje nazogastrične sonde
- Priporočila bolnikom o pooperativnem obdobju
- Komuniciranje

V sklopu kirurgije mora študent obvladati temeljna kirurška znanja iz naslednjih področij:

I. Temeljni kirurški principi

- Etika in kirurgija
- Pogoji za kirurško delo, kirurški instrumenti, kirurški materiali, osnovna operativna tehnika
- Šok, sinkopa, hiperventilacija, elektroliti
- Dezinfekcija in sterilizacija v oralni kirurgiji

Content (Syllabus outline):

In connection with surgical propedeutics the student must be fully acquainted with:

- Basic methods of clinical examination: inspection, palpation, percussion, auscultation
- Anamnesis
- Diagnostic methods
- Clinical skills: venous puncture, application of injections, catheterization of urinary bladder
- Recommendations regarding postoperative period
- Communication

In connection with Surgery the student must master the basic surgical knowledge of the following sections:

Section I. Surgical basic principles

- Ethics in surgery
- Conditions for surgical work, surgical instruments, surgical materials, basic operative technique
- Shock, syncope, hyperventilation, electrolytes
- Disinfection and sterilisation in oral surgery

• • Hematološki principi v kirurgiji • Metabolizem kirurškega bolnika • Celjenje ran • Klinična ocena kirurškega zdravljenja II. Periperativna terapija • Temeljna načela perioperativne terapije • Kirurške okužbe in izbor antibiotika • Kirurški problemi pri imunološko prizadetem bolniku • Kirurški zapleti • Kirurgija starostnika • Anesteziologija • Minimalna invazivna kirurgija • Nove tehnologije v kirurgiji III. Travma in intenzivna kirurška oskrba • Oskrba pri akutnih poškodbah s poudarkom na poškodbah zobovja in obraza • Nujna oskrba mišično-skeletnih poškodb • Opekline • Kirurška intenzivna nega IV. Presajanje in imunologija V. Kirurška onkologija • Biologija tumorjev in tumorski označevalci • Tumori mehkih tkiv in kostni tumorji maksilofacialnega področja VI. Posebna področja kirurgije • Vaskularne in živčne strukture glave in vrata • Osnovni principi v žilni kirurgiji • Osnove plastične in rekonstruktivne kirurgije področja glave • Izbrana pediatrična kirurška stanja • Osnove kirurgije prebavnega trakta • Kirurgija vrata in ščitnice • Minimalna invazivna kirurgija • Nove tehnologije v kirurgiji	• Hematologic principles in surgery • Metabolism in surgical patients • Wound healing • Clinical assessment of surgical outcomes Section II. Perioperative management • Principles of perioperative therapy • Surgical infections and choice of antibiotics • Surgical problems in immunosuppressed patients • Surgical complications • Surgery in elderly • Anesthesiology • Minimally invasive surgery • Emerging technologies in Surgery Section III. Trauma and critical care • Management of acute trauma, with emphasis on dental and maxillofacial injuries • Emergency care of musculoskeletal injuries, • Burns • Surgical critical care Section IV. Transplantation and immunology Section V. Surgical oncology • Tumor biology and tumor markers • Soft tissue tumors and bone tumors of the maxillofacial region Section VI. Special Surgical Topics • Vascular and neurological structures in head and neck region • Basic principles of vascular surgery • Basic principles of plastic and reconstructive surgery of head region • Chosen pediatric surgical conditions • Basics of digestive surgery • Surgery of the neck and thyroid gland • Minimally invasive surgery • 3 New technologies in surgery
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Temeljni literatura in viri / Readings:

1. Smrkolj V. Kirurgija. Celje: Grafika Gracer, 2014.
2. Miloro M, Ghali GE, Larsen PE, Waite P (eds.). Peterson's Principles of Oral and Maxillofacial Surgery, 4. ed., Springer, 2022.

Cilji in kompetence:

Cilj predmeta je pridobiti temeljna znanja kirurške prakse.

Predvideni študijski rezultati:**Znanje in razumevanje:**

- Kirurško propedeutiko spozna študent dentalne medicine v približno enakem

Objectives and competences:

The objective is to acquire the basic principles of surgical practice.

Intended learning outcomes:**Knowledge and Understanding:**

Surgical propedeutics is introduced to a student of dental medicine in approximately the same extent as it is to a

obsegu kot študent medicine. Pridobi veščine, kako iz anamnestičnih podatkov in preiskav stopenjsko graditi diagnozo ter načrtovati zdravljenje	medical student. A student of dental medicine acquires skills how to, from anamnestic data and tests, gradually build diagnosis of surgical illness or injuries which are connected primarily with the dental organ and maxillofacial region and plan the treatment. .
Metode poučevanja in učenja:	Learning and teaching methods:
Predavanja Seminarji (obvezno) Klinične vaje (obvezno)	Lectures Seminars (obligatory) Clinical training (Work in the wards (obligatory))
Načini ocenjevanja:	Delež (v %) / Weight (in %) Assessment:
Način (pisni izpit, ustno izpraševanje, naloge, projekt): projektno delo, seminarska naloga: - Pisni izpit Izpit je pisni. - POGOJ ZA PRISTOP K IZPITU:opravljeni seminarji vsaj 80% in klinične vaje vsaj 80%	Type (examination, oral, coursework, project): project work, report: - Written examination The exam is written. - REQUIREMENTS FOR ACCESS TO EXAMINATION:Completed seminars and clinical practice
Reference nosilca / Lecturer's references:	
ANTON CRNJAC: 1. PRIMOŽIČ, Mateja, KRAVANJA, Gregor, KNEZ, Željko, CRNJAC, Anton, LEITGEB, Maja. Immobilized laccase in the form of (magnetic) cross-linked enzyme aggregates for sustainable diclofenac (bio)degradation. <i>Journal of cleaner production</i>. [Print ed.]. 1 Dec. 2020, vol. 275, str. 1-16. ISSN 0959-6526. DOI: 10.1016/j.jclepro.2020.124121. [COBISS.SI-ID 27965955], [JCR, SNIP, WoS do 8. 11. 2022: št. citatov (TC): 41, čistih citatov (CI): 39, čistih citatov na avtorja (CIAu): 7,80, Scopus do 4. 1. 2023: št. citatov (TC): 46, čistih citatov (CI): 44, čistih citatov na avtorja (CIAu): 8,80] 2. KAMARAJAH, S.K., NEPOGODIEV, Dmitri, BEKELE, A., CECCONELLO, I., EVANS, R.P.T., GUNER, A., GOSSAGE, J.A., HARUSTIAK, T., HODSON, J., ISIK, A., et al., GAČEVSKI, Goran (927), CRNJAC, Anton (927), HORVAT, Samo (927), et al., Oesophago-Gastric Anastomotic Audit (OGAA) Collaborative. Mortality from esophagectomy for esophageal cancer across low, middle, and high income countries: an international cohort study. <i>European journal of surgical oncology</i>. 2021, vol. 47, issue 6, str. 1481-1488, ilustr. ISSN 1532-2157. https://www.sciencedirect.com/science/article/pii/S0748798320312257?via%3Dihub, https://doi.org/10.1016/j.ejso.2020.12.006, DOI: 10.1016/j.ejso.2020.12.006. [COBISS.SI-ID 59513347], [JCR, SNIP, WoS do 3. 11. 2022: št. citatov (TC): 7, čistih citatov (CI): 7, čistih citatov na avtorja (CIAu): 0,25, Scopus do 9. 12. 2022: št. citatov (TC): 6, čistih citatov (CI): 6, čistih citatov na avtorja (CIAu): 0,22] 3. SKOK, Kristijan, HLADNIK, Gaja, GRM, Anja, CRNJAC, Anton. Malignant pleural effusion and its current management : a review. <i>Medicina</i>. 2019, vol. 55, iss. 8, str. [1]-21, ilustr. ISSN 1648-9144. https://doi.org/10.3390/medicina55080490, https://www.mdpi.com/1010-660X/55/8/490, DOI: 10.3390/medicina55080490. [COBISS.SI-ID 6754879], [JCR, SNIP, WoS do 24. 11. 2022: št. citatov (TC): 32, čistih citatov (CI): 32, čistih citatov na avtorja (CIAu): 8,00, Scopus do 28. 12. 2022: št. citatov (TC): 34, čistih citatov (CI): 34, čistih citatov na avtorja (CIAu): 8,50] 4. SKOK, Kristijan, VIDOVIČ, Damjan, GAČEVSKI, Goran, VEINGERL, Bojan, AUDA, Jure, CRNJAC, Anton. Surgical treatment in severely immunocompromised patient with invasive fungal infection = Kirurško zdravljenje imunokompromitiranega bolnika z invazivno glivično okužbo. <i>Acta medico-biotechnica : AMB</i>. [Tiskana izd.]. 2020, vol. 13, [no.]. 1, str. 59-63, ilustr. ISSN 1855-5640. http://actamedbio.mf.um.si/revija/2020/01_amb24_clanek_189-18.pdf. [COBISS.SI-ID 20154115]	

MIHA ANTONIČ:

1. ANTONIČ, Miha, DJORDJEVIĆ, Anže, KŠELA, Juš. Oxidative stress after on-pump cardiac surgery in patients with preoperative renal dysfunction. *The Heart surgery forum*. 2024, vol. 27, no. 2, str. e119–e125, ilustr. ISSN 1522-6662. <https://journal.hsforum.com/index.php/HSF/article/view/6997>, <https://doi.org/10.59958/hsf.6997>, DOI: [10.59958/hsf.6997](https://doi.org/10.59958/hsf.6997). [COBISS.SI-ID [186499843](https://doi.org/10.59958/hsf.6997)]
2. KŠELA, Juš, RUPERT, Lea, DJORDJEVIĆ, Anže, ANTONIČ, Miha, AVBELJ, Viktor, JUG, Borut. Altered heart rate turbulence and variability parameters predict 1-year mortality in heart failure with preserved ejection fraction. *Journal of cardiovascular development and disease*. Jul. 2022, vol. 9, issue 7, str. [1]-12, ilustr. ISSN 2308-3425. <https://doi.org/10.3390/jcdd9070213>, <https://www.mdpi.com/2308-3425/9/7/213>, DOI: [10.3390/jcdd9070213](https://doi.org/10.3390/jcdd9070213). [COBISS.SI-ID [114003459](https://doi.org/10.3390/jcdd9070213)]
3. DJORDJEVIĆ, Anže, ŠUŠAK, Stamenko, KOTNIK, Petra, GORENJAK, Mario, KNEZ, Željko, ANTONIČ, Miha. Effect of ascorbic acid on cardiac surgery-associated acute kidney injury incidence. *The thoracic and cardiovascular surgeon*. 2022, vol. 70, issue 7, str. 566-574, ilustr. ISSN 1439-1902. <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0042-1744262>, DOI: [10.1055/s-0042-1744262](https://doi.org/10.1055/s-0042-1744262). [COBISS.SI-ID [110108163](https://doi.org/10.1055/s-0042-1744262)]
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4. ANTONIČ, Miha, PETROVIČ, Rene, GORIŠEK MIKSIĆ, Nina. Thermoactive nitinol clips as primary and secondary sternal closure after cardiac surgery - first experience in Slovenia. *Acta clinica Croatica*. 2021, vol. 60, no. 3, str. 435-440, ilustr. ISSN 1333-9451. http://actaclinica.eu/wordpress/wp-content/uploads/2022/01/14_antonic_2019-168.pdf, DOI: [10.20471/acc.2021.60.03.14](https://doi.org/10.20471/acc.2021.60.03.14). [COBISS.SI-ID [94184963](https://doi.org/10.20471/acc.2021.60.03.14)]
5. ROBIČ, Boris, ANTONIČ, Miha, DJORDJEVIĆ, Anže, INTIHAR, Urška, PETROVIČ, Rene, ŽELEZNIK, Jernej, GREGORIČ, Igor. Current status of short-term mechanical circulatory support. *Surgery and surgical endoscopy : official journal of the Slovenian Society for Endoscopic Surgery*. Dec. 2023, vol. 5, no. 2, str. 10-15, ilustr. ISSN 2591-2275. [COBISS.SI-ID [178404867](https://doi.org/10.20471/acc.2021.60.01.17)]
6. DJORDJEVIĆ, Anže, ŠUŠAK, Stamenko, VELICKI, Lazar, ANTONIČ, Miha. Acute kidney injury after open-heart surgery procedures. *Acta clinica Croatica*. 2021, vol. 60, no. 1, str. 120-126. ISSN 1333-9451. <https://hrcak.srce.hr/259905>, DOI: [10.20471/acc.2021.60.01.17](https://doi.org/10.20471/acc.2021.60.01.17). [COBISS.SI-ID [70352387](https://doi.org/10.20471/acc.2021.60.01.17)]