

**UČNI NAČRT PREDMETA / COURSE SYLLABUS**

Ime predmeta:	Kirurški vidiki medicine v izrednih razmerah
Course title:	Surgical view of disaster medicine

Študijski program in stopnja Study programme and cycle	Študijska smer Study option	Letnik Year of study	Semester Semester
Splošna medicina, enovit magistrski študijski program		Peti, šesti	10., 11.
General medicine, Uniform master's degree study program		Fifth, sixth	10th, 11th

Vrsta predmeta (obvezni ali izbirni) /
Course type (compulsory or elective)

izbirni

elective

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
5	40	AV LV RV			45	3

Nosilec predmeta / Course coordinator:

Izr. prof. dr. Andrej Čretnik

Jeziki /Languages:

Predavanja / Lectures: slovenski/slovene

Vaje / Tutorial: slovenski/slovene

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

Prerequisites for enrolling in the course or for performing study obligations:

Vsebina (kratek pregled učnega načrta):

Medicina v izrednih razmerah (disaster medicine) je nova veja medicine, ki se je razvila v zadnjih dveh desetletjih iz Disaster managementa in Emergency medicine v ZDA. V zadnjem desetletju pa so jo prevzele tudi druge države ob povečani nevarnosti mednarodnega terorizma in spremenjenega načina vojaškega delovanja. Študentje se v okviru Medicine v izrednih razmerah seznani s splošnim delom (definicija disastra, katastrofe, družbene krize, vojna, terorizem, množične nesreče), z etičnimi, socialnimi in psihološkimi vidiki disastra, z javnozdravstvenimi vidiki na prehospitalem in hospitalnem nivoju, s specifično obravnavo posebno ogroženih skupin prebivalstva

Content (syllabus outline):

Disaster medicine is a new medical branch which has developed in the last two decades from disaster management and emergency medicine in the USA. During the last decade it has been taken over also by other countries upon increased danger of international terrorism and changed manner of military operation. Students, within disaster medicine, are acquainted with the general part (definitions of disaster, catastrophe, social crisis, war, terrorism, mass disasters), with ethical, social and psychological aspects of disaster, with public health aspects on prehospital and hospital levels, with specific treatment of particularly vulnerable groups of the population (children, pregnant women, the elderly) and

(otroci, nosečnice, starostniki) in z načrtovanjem in izvajanjem medicine v izrednih razmerah na nivoju lokalne skupnosti, države in mednarodnih organizacij. V specialnem delu obravnavamo vojno kirurgijo, množične naravne nesreče, množične mirnodobne nesreče, in nesreče ob terorističnih napadih.

Kot izbirni predmet bomo predavali Kirurške aspekte medicine v izrednih razmerah, mednarodno licenciran nabor znanj in veščin sistematične obravnave hudo poškodovanega (advanced trauma life support) in principe kirurške tehnike Damage control surgery. Le-ta pomeni prilagoditev kirurške ekipe lokalnim tehničnim, kadrovskim in prostorskim danostim in se vklaplja v etapno obravnavo hudo poškodovanih pri množičnih poškodovanih v mirnem času in v vojni. Damage control je uvedla ameriška vojska in danes predstavlja moderni princip oskrbe hudo poškodovanih tudi v mirnodobnih razmerah, tako v perifernih bolnišnicah kot v največjih travma centrih. V okviru te kirurške tehnike se študent seznani s packingom v torakalni in peritonealni votlini pri kirurško nezaustavljivih krvavitvah, s packingom retroperitonealno suprapubično pri kompleksnih poškodbah medenice, seznani se z urgentno levo torakotomijo pri strelnih poškodbah v toraks in abdomen, z ortopedsko damage control tehniko pri kompleksnih poškodbah ekstremitet, itd. S seminarji bomo na terenu proučili postavitev poljske kirurške bolnišnice in principe dela v njej.

with planning and implementation of disaster medicine on the level of local community, state and international organizations. In the special part we address military surgery, mass natural disasters, mass peacetime disasters and disasters upon terrorist attacks.

As an optional subject we will give lectures on Surgical aspects of disaster medicine, internationally licensed set of knowledge and skills of the systematic treatment of the severely injured (advanced trauma life support) and principles of surgical technique Damage control surgery. This means adjustment of a surgical team to local technical, staff and spatial conditions and is blended into treatment in stages of the severely injured in mass damage in peacetime and in war. Damage control has been introduced by the US army and nowadays represents a modern principle of care of the severely damaged also in peacetime conditions in peripheral hospitals as well as in largest trauma centres. Within this surgical technique a student is acquainted with packing in thoracic and peritoneal cavities in surgically unstoppable bleedings, with packing retroperitoneally suprapubically in complex pelvic injuries, with urgent left thoracotomy in gunshot wounds to the thorax and abdomen with orthopedic damage control technique in complex injuries of extremities, etc. During seminars we will, on the field, study the setting up of a surgical infirmary and principles of working in it.

Temeljni literatura in viri / Reading materials:

- Lennquist Sten ed. Medical Response to Major Incidents and Disasters. A Practical Guide for All Medical Staff. Springer Verlag Berlin Heidelberg 2012. ISBN 978-3-642-21894-1, DOI 10.1007/978-3-642-21895-8
- Smernice za delovanje sistema nujne medicinske pomoči ob množičnih nesrečah. Eds. Dujić D, Simčič B. Ljubljana: MZ; 2013. http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/kakovost/NMP_2013/mnozicne_nesrece/Smernice_NMP_mnozicne_tisk_2.pdf
- American College of Surgeons, Committee on Trauma. Advanced Trauma Life Support for Doctors, Student Course Manual, 10th Edition. Chicago: American College of Surgeons, 2018. (prejme vsak slušatelj, ki se prijavi na ATLS tečaj (odg. oseba za tečaje v RS: Roman Košir)
- R. Komadina, V. Smrkolj: Kirurški vidiki medicine v izrednih razmerah (Medicinska fakulteta, Maribor, 2009)

DOPOLNILNO GRADIVO:

- Vincent, Jean Louis (ur.), et al. *Textbook of critical care*. 7th ed. Philadelphia: Elsevier. 2017.
- Mattox KL, Feliciano DV, Moore EE eds. Trauma, 8th Edition, New York, McGraw-Hill, 2017. ISBN-13: 978-1259860676
- Ciotto GR (ed.): Ciotto's Disaster Medicine 3rd ed. Philadelphia: Elsevier, 2024.

Cilji in kompetence:

Študent se seznani s principi damage control kirurgije, z veščinami ATLS (Advanced Trauma Life Support), s postavitvijo poljske vojaške bolnišnice, s principi etapnega kirurškega zdravljenja.

Objectives and competences:

Principles of damage control surgical techniques, skills of ATLS, packing of body cavities, organization of field hospital.

Predvideni študijski rezultati:

Znanje in razumevanje:

- damage control kirurške tehnike
- razumevanje ATLS
- stopenjska oskrba v sanitetni službi

Prenesljive/ključne spretnosti in drugi atributi:

- packing (pakiranje) telesnih votlin
- ATLS – večšine oživljanja
- organizacija stopenjske oskrbe pri množičnih nesrečah
- organizacija poljske bolnišnice

Intended learning outcomes:

Knowledge and Understanding:

- damage control surgery
- ATLS
- from stage to stage organization of medical field service

Transferable/Key Skills and other attributes:

- packing, external fixation of long bone fractures
- skills of resuscitation
- triage

Metode poučevanja in učenja:

- predavanja
- seminarji
- terenski seminar

Learning and teaching methods:

- lectures
- seminars
- field seminars

Načini ocenjevanja:

Delež (v %) /
Share (in %)

Assessment methods:

Način (pisni izpit, ustno izpraševanje, naloge, projekt)

- pisni izpit

ŠTUDIJSKE OBVEZNOSTI ŠTUDENTOV:

udeležba na terenskem seminarju, na vaji
Zdravstvene službe Slovenske vojske

POGOJI ZA PRISTOP K POSAMEZNEMU
PREVERJANJU ZNANJA:

pisna seminarska naloga

100 %

Type (examination, oral, coursework, project):

- written examination

ACADEMIC OBLIGATIONS OF STUDENTS:

participation at the field exercise of Medical
service of Slovenian army

REQUIREMENTS FOR ACCESS TO INDIVIDUAL
KNOWLEDGE CHECKING:

written seminar

Reference nosilca / Course coordinator's references:

LAUFER, Kevin, PETEK, Karina, RAKUŠA, Sofia, RAKUŠA, Matej, RAKUŠA, Martin, ČRETNIK, Andrej. Traumatic brain injury during the SARS-CoV-2 pandemics in Slovenia : a single center study. *Journal of clinical medicine*. 2022, vol. 11, issue 23, str. [1]-10. ISSN 2077-0383. <https://doi.org/10.3390/jcm11237017>, <https://www.mdpi.com/2077-0383/11/23/7017>, DOI: [10.3390/jcm11237017](https://doi.org/10.3390/jcm11237017). [COBISS.SI-ID [131184899](https://www.cobiss.si/id/131184899)], [JCR, SNIP, WoS, Scopus]

ČRETNIK, Andrej, FEKONJA, Anita. The use of selective laser melting in mandibular retrognathia correction. *Metals*. Sep. 2022, vol. 12, issue 9, str. [1]-10, ilustr. ISSN 2075-4701. <https://doi.org/10.3390/met12091544>, <https://www.mdpi.com/2075-4701/12/9/1544>, DOI: [10.3390/met12091544](https://doi.org/10.3390/met12091544). [COBISS.SI-ID [122131203](https://www.cobiss.si/id/122131203)], [JCR, SNIP, WoS, Scopus]

FEKONJA, Anita, ČRETNIK, Andrej. Comparison of craniofacial morphology in individuals with and without hypodontia with a special focus on the number of congenitally missing teeth. *Frontiers in public health*. 2022, [vol.] 10, str. 1-9. ISSN 2296-2565. <https://www.frontiersin.org/articles/10.3389/fpubh.2022.1013862/full>, <https://doi.org/10.3389/fpubh.2022.1013862>, DOI: [10.3389/fpubh.2022.1013862](https://doi.org/10.3389/fpubh.2022.1013862). [COBISS.SI-ID [130493187](https://www.cobiss.si/id/130493187)], [JCR, SNIP, WoS, Scopus]

KAFTANDZIEV, Igor, BAKOTA, Bore, TRPESKI, Simon, ARSOVSKI, Oliver, SPASOV, Marko, ČRETNIK, Andrej. The effect of the ankle syndesmosis reduction quality on the short-term functional outcome following ankle fractures. *Injury*. 2021, vol. 52, suppl. 5, str. s70-s74, ilustr. ISSN 1879-0267.

<https://www.sciencedirect.com/science/article/pii/S0020138321003569?via%3Dihub>,

<https://doi.org/10.1016/j.injury.2021.04.047>, DOI: [10.1016/j.injury.2021.04.047](https://doi.org/10.1016/j.injury.2021.04.047). [COBISS.SI-ID [63598595](#)], [JCR, SNIP, WoS do 5. 1. 2023: št. citatov (TC): 1, čistih citatov (CI): 1, čistih citatov na avtorja (CIAu): 0,17, [Scopus](#) do 17. 12.

2022: št. citatov (TC): 2, čistih citatov (CI): 2, čistih citatov na avtorja (CIAu): 0,33]

BAKOTA, Bore, ČRETNIK, Andrej. Advances in trauma and reconstructive surgery in Croatia despite the covid-19 pandemic. *Injury*, ISSN 1879-0267, 2021, vol. 52, suppl. 5, str. S1-S2.

<https://doi.org/10.1016/j.injury.2021.08.021>, <https://www.sciencedirect.com/science/article/pii/S0020138321007221?via%3Dihub>, doi: [10.1016/j.injury.2021.08.021](https://doi.org/10.1016/j.injury.2021.08.021). [COBISS.SI-ID [79373315](#)], [JCR, SNIP, WoS do 7. 10. 2021: št. citatov

(TC): 0, čistih citatov (CI): 0, čistih citatov na avtorja (CIAu): 0, [Scopus](#) do 7. 10. 2021: št. citatov (TC): 0, čistih citatov (CI): 0, čistih citatov na avtorja (CIAu): 0]

[tip COBISS: 1.03 Kratki znanstveni prispevek]

[uvrstitev revije v MBP (2021): SCIE, Scopus, CINAHL, GEOREF, MEDLINE, PUBMED, SPORTDISCUS]

JCR IF: 2.687, SNIP IF: 1.546