



**Study programme:** Doctoral Academic Studies in Biomedical Sciences

**Course title:** CURRENT ISSUES IN EMERGENCY MEDICINE

**Teacher:** Goran S. Rakić, Ilija Lj. Srdanović, Velibor M. Vasović, Nemanja M. Gvozdenović,

**Course status:** elective

**ECTS Credits:** 20

**Condition:** /

**Course goals:**

The main goals are to increase knowledge and develop general and specific competencies in the field of emergency medicine. Mastering the skills for practical application of acquired knowledge in practice. Mastering of research principles and methodologies in the subject matter, which enables independent and critical thinking and judgment of the role, scope and limitations of specific research methods, the use of literature and its critical analysis.

**Course outcomes:**

Acquisition of interdisciplinary contemporary knowledge in emergency medicine based on scientific research and competencies. Application of integrated interdisciplinary knowledge in practice and research in the field of subjects. Application of analysis and synthesis in establishing a cause-and-effect relationship (injury or disease) and the final outcome of injury or disease.

**Course contents:**

*Theoretical lectures*

1. Application of information technology and access to medical information in the field of Emergency Medicine
2. Difficult airway - new approaches based on scientific evidence
3. Epidemiology of asthma
4. Analgesia and sedation in a hemodynamically unstable patient
5. Induced hypothermia after cardiopulmonary resuscitation: possible side effects
6. Current vasoactive agents in emergency medicine - new approaches based on scientific evidence
7. Early postoperative enteral nutrition after cardiac surgery
8. Minimally invasive hemodynamic monitoring
9. Intraabdominal hypertension and abdominal compartment syndrome in the Intensive Care Unit
10. Biomarkers in emergency medicine – specificity, sensitivity, accuracy
11. Modern approach to mechanical ventilation support
12. Oxidative stress and hypoxia
13. Primary percutaneous coronary intervention in acute myocardial infarction with ST elevation
14. Antibiotic treatment in the Intensive Care Unit (cost-benefit approach)
15. Stroke – is there hope?
16. Status epilepticus – facts and dilemmas
17. Myasthenic crisis. Polyradiculoneuritis - facts and controversies
18. Pain in emergency medicine (importance in the diagnosis and treatment of emergencies)

*Practical lectures*

Practical lectures are held in the form of interactive exercises, "problem-solving" tasks with discussion, seminars with discussion:

1. Algorithm of procedures in patients with chest pain
2. Therapeutic algorithm of acute heart failure
3. Therapeutic protocol for postresuscitation disease
4. Survival analysis after out-of-hospital CPR
5. Survival analysis after in-hospital CPR
6. Analysis of quality of life after out-of-hospital CPR
7. Scoring systems for assessing illness or injury
8. New trends in artificial ventilation (invasive, non-invasive)
9. Procedural sedation and analgesia
10. Emergencies in oncology
11. Differential diagnosis of abdominal pain

**Literature**

1. Tintinalli JE, Kelen GD, Stapczynski JS. Tintinalli's Emergency Medicine: A Comprehensive Study Guide Textbook of Adult

Emergency Medicine, 8th edition. McGraw Hill, 2015.

2. Cameron P (ed), Little M (ed), Jelinek G, Kelly AM, Brown A. Textbook of Adult Emergency Medicine. Churchill Livingstone, 2014.

**Number of active classes**

**Theory: 60**

**Practice: 45**

**Teaching Methods:** Lectures. Discussion seminars. Interactive exercises and "problem solving" exercises

**Assessment of knowledge (maximum number of points 100)**

activity during lectures: 15

seminars: 10

independent research project: 30

written exam: 25

oral exam: 30