

Faculty of Medicine – University of Rijeka

Course title: Emergency medical conditions I

Course coordinator: prof. Alan Šustić, MD., PhD.

Department: Anesthesiology, Reanimatology and Intensive Care

Study program: Integrated undergraduate and graduate university study of Medicine

Study year: 4th

Academic year: 2021/2022.

SYLLABUS

COURSE DESCRIPTION:

Emergency medicine I is a mandatory course on the 4th year of the Integrated Undergraduate and Graduate Study of Medicine in English. It consists of 8 hours of lectures, 96 hours of exercises, individual assignments and a group seminar paper (7 ECTS credits). The course is held in the premises of the Department for Emergency Medicine, University Hospital Center Rijeka.

Course objectives:

- To adopt theoretical knowledge in the field of internal medicine, neurology, pediatrics, infectious diseases and psychiatry.
- To adopt process of triage, interviewing, physical examination and assessment of emergency level in critically ill patients.
- To understand indications for laboratory, imaging and endoscopic procedures in emergency medicine.
- Students are going to apply knowledge during practical work in Emergency medicine department through 12 hours shifts.

Course content:

- Approach to the emergency patient, importance of anamnestic data and physical examination, basics of emergency medicine and introduction in the most common emergency conditions in internal medicine, neurology, pediatrics, infectious diseases and psychiatry.
- Importance of diagnostic methods in radiology, laboratory diagnostics and endoscopy.
- Basic introduction in other non-surgical medical fields like dermatovenerology and oncology.
- Differential diagnosis and multidisciplinary approach.
- Fieldwork is going to be organized as assistance for medical transportation in ambulance car.

Teaching:

- Classes are organized in the form of lectures and exercises, with individual and group assignments.
- Exercises are supervised by emergency medicine physicians, while students are actively involved in patient management in the Emergency medicine Department.
- Teaching staff will discuss with the students each exercise.
- By completing all teaching activities, the student's attendance on exercises acquires 7.0 ECTS credits.

Assigned reading:

1. Cydulka R.K. et al. Tintinalli's Emergency medicine manual, 18th edition, 2018.
2. Mahadevan S.V., Garmel G.M. Introduction to clinical emergency medicine, Cambridge University press, 2015.
3. ALS manual

Optional/additional reading:

1. Vesna Degoricija i sur. Emergency Medicine, MMM Marketing, Zagreb 2011

COURSE TEACHING PLAN:**Lectures:**

- P1 – Introduction to Emergency medicine
- P2 - Emergency medicine patient – what and how?
- P3 – Laboratory tests and diagnostics in Emergency medicine department
- P4 – Drugs used in Emergencies
- P5 – Differential diagnosis and approach to the patient with chest pain and/or difficulty breathing in EMD
- P6 - Differential diagnosis and approach to the unconsciousness patient in EMD
- P7 – Gastroenterological emergencies
- P8 – Other emergencies

Exercises – practical teaching:

Exercises are organized through 12-hour shifts in the Department for Emergency Medicine, University Hospital Center Rijeka. Students are active participants in the care of patients, learning while working with the doctor on duty.

Individual assignment: Students are required to write two case reports of two patients in whose treatment they participated.

Group assignment: Students are required to write a group seminar paper (1 group = 4 students) on one of the following topics:

1. Differential diagnosis and treatment of patients with chest pain in emergency medicine
2. Differential diagnosis and treatment of patients with abdominal pain in emergency medicine
3. Differential diagnosis and treatment of patients with dyspnea in emergency medicine
4. Approach to jaundice in emergency medicine
5. Approach to a patient with a consciousness disorder in emergency medicine
6. Monitoring in emergency medicine
7. Applications of ultrasound in emergency medicine (FAST protocol)
8. Approach to polytraumatized patient
9. Differential diagnosis and treatment of fever in emergency medicine
10. Approach to a patient with headache in emergency medicine
11. Approach to a patient with CVI in emergency medicine
12. Patient with acute GIT bleeding
13. Patient with respiratory bleeding in emergency medicine
14. Initial treatment of patients with hyperglycemia in emergency medicine
15. Hematology emergencies
16. Laboratory testing in emergency medicine

17. Basics of ECG in emergency medicine
18. Interpreting ABG results emergency medicine
19. Shock and shock management in emergency medicine
20. Algorithm for the management of anaphylaxis and anaphylactic shock
21. Resuscitation algorithm (ALS protocol)
22. Triage in emergency medicine
23. Respiratory emergencies
24. Psychiatric emergencies
25. Urological emergencies
26. Arterial hypertension in emergency medicine
27. Neurosurgical emergencies
28. Imaging in ED
29. Neurological emergencies
30. Bleeding in patients on oral anticoagulant therapy
31. Bleeding from the upper GIT
32. Acute pancreatitis
33. Acute and chronic liver failure
34. Initial approach to the patient with acute myocardial ischemia
35. Pulmonary edema and acute management
36. Aortic syndrome
37. Pulmonary thromboembolism, recognition and acute care
38. Therapy application in emergency medicine (inhalation, sublingual, IV, IO, CVK)
39. Emergency medicine drugs
40. Fluid therapy
41. Approach and management of intoxicated patient
42. Legal medical problems in emergency medicine

Individual case reports and group seminar papers are submitted using official e-mail addresses (@medri.uniri.hr) via the Merlin e-learning system.

Student's obligations:

Attendance on exercises and work with doctors at the Emergency medicine department is mandatory. Individual and group assignments described above are mandatory.

Communication between the teaching staff and students will take place through the Merlin e-learning system or through e-mail (in this case use of official e-mail addresses (@medri.uniri.hr) is mandatory.

Student assessment:

Final written exam consists of 30 questions (30% of final grade) and is mandatory for all students. Attendance at the scheduled 8 shifts and timely submitted case reports and group seminar paper is mandatory for passing the course and participating in the written exam. In exceptional cases, students are allowed to switch on call scheduled shifts, however, requests need to be approved by the teaching staff. Maximum number of students in each scheduled shift is two, due to space restrictions in Emergency medicine Department.

In case of missed scheduled shift, compensation is possible at a later date (in September), with the prior approval from the teaching staff.

Students who have achieved a minimum of 40 points during the course can take the written final exam. Students who have achieved 30-39 points during the course can take an oral colloquium in which they can achieve a maximum of 10 points in order to be able to take the final written exam. Students who have achieved less than 30 points or 30% of the total grade during classes and do not have the right to take the final exam, have the right to take a corrective written colloquium which will be held between I. and II. exam period (the date of the corrective written colloquium will be defined later in agreement with the students). These students can achieve a maximum final grade of sufficient (2).

During classes, students can achieve a maximum of 70% of the grade (70 points):

1. Seminar paper brings a maximum of 20% of the grade (20 points).
2. Each case report brings a maximum of 10% of the grade, while 2 case reports bring a max of 20% of the grade (20 points)
3. Attendance at lectures brings a maximum of 10% of the grade (10 points)
4. Attendance at exercises with a signed table of clinical skills brings a maximum of 20% of the grade (20 points).

The final exam consists of 30 questions. Each correctly answered question equals 1 point.

Other remarks (related to the course) which are important for students:

Course content and all information related to the course as well as exam dates can be found on the Merlin e-learning system and on the web pages of the Department of Anesthesiology, Reanimatology and Intensive care.

All student inquiries, regarding the course and possible problems, remarks and inquiries are provided exclusively using the official e-mail addresses (@medri.uniri.hr) or via the Merlin e-learning system. It is possible to arrange consultations with the teaching staff during working hours.

Seminar papers and case reports are submitted through the Merlin e-learning system.

COURSE SCHEDULE (FOR ACADEMIC YEAR 2021. / 2022.) *

Date	Lectures (Time and place)	Seminars (time and place)	Exercises- practical teaching (time and place)	Teacher
19.10.2021.	L1 + L2 (17:00-19:00) KBC Rijeka lecture hall or online through MS Teams			prof.dr.sc. A. Šustić, dr.med. izv.prof.dr.sc. Alen Protić, dr.med. dr. sc. Ivana Žitinić, dr.med. Ana Tancabel, dr.med.
23.11.2021.	L3 (17:00-18:00) KBC Rijeka lecture hall or online through MS Teams			prof.dr.sc. A. Šustić, dr.med. izv.prof.dr.sc. Alen Protić, dr.med. dr. sc. Ivana Žitinić, dr.med. Ana Tancabel, dr.med.
14.12.2021.	L4 (17:00-18:00) KBC Rijeka lecture hall or online through MS Teams			prof.dr.sc. A. Šustić, dr.med. izv.prof.dr.sc. Alen Protić, dr.med. dr. sc. Ivana Žitinić, dr.med. Ana Tancabel, dr.med.
08.02.2022.	L5 (17:00-18:00) KBC Rijeka lecture hall or online through MS Teams			prof.dr.sc. A. Šustić, dr.med. izv.prof.dr.sc. Alen Protić, dr.med. dr. sc. Ivana Žitinić, dr.med. Ana Tancabel, dr.med.
15.03. 2022.	L6 (17:00-18:00) KBC Rijeka lecture hall or online through MS Teams			prof.dr.sc. A. Šustić, dr.med. izv.prof.dr.sc. Alen Protić, dr.med. dr. sc. Ivana Žitinić, dr.med. Ana Tancabel, dr.med.
12.04.2022.	L7 (17:00-18:00) KBC Rijeka lecture hall or online through MS Teams			prof.dr.sc. A. Šustić, dr.med. izv.prof.dr.sc. Alen Protić, dr.med. dr. sc. Ivana Žitinić, dr.med. Ana Tancabel, dr.med.
10.05.2022.	L8 (17:00-18:00) KBC Rijeka lecture hall or online through MS Teams			prof.dr.sc. A. Šustić, dr.med. izv.prof.dr.sc. Alen Protić, dr.med. dr. sc. Ivana Žitinić, dr.med. Ana Tancabel, dr.med.
According to the duty schedule	NA	NA	Department for Emergency Medicine, University Hospital center Rijeka – Sušak locality	prof.dr.sc. A. Šustić, dr.med. izv.prof.dr.sc. Alen Protić, dr.med. dr. sc. Ivana Žitinić, dr.med. Ana Tancabel, dr.med.
According to the duty schedule	NA	NA	Department for Emergency Medicine, University Hospital center Rijeka – Sušak locality	prof.dr.sc. A. Šustić, dr.med. izv.prof.dr.sc. Alen Protić, dr.med. dr. sc. Ivana Žitinić, dr.med. Ana Tancabel, dr.med.
According to the duty schedule	NA	NA	Department for Emergency	prof.dr.sc. A. Šustić, dr.med. izv.prof.dr.sc. Alen Protić, dr.med.

			Medicine, University Hospital center Rijeka – Sušak locality	dr. sc. Ivana Žitinić, dr.med. Ana Tancabel, dr.med.
According to the duty schedule	NA	NA	Department for Emergency Medicine, University Hospital center Rijeka – Sušak locality	prof.dr.sc. A. Šustić, dr.med. izv.prof.dr.sc. Alen Protić, dr.med. dr. sc. Ivana Žitinić, dr.med. Ana Tancabel, dr.med.
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* Please check the supplementary table.

List of lectures, seminars and exercises:

	LECTURES (topics)	Teaching hours	Location
L1	Introduction to Emergency medicine	1	KBC Rijeka lecture hall or online trough MS Teams
L2	Emergency medicine patient – what i how?	1	KBC Rijeka lecture hall or online trough MS Teams

L3	Laboratory tests and diagnostics in Emergency medicine department	1	KBC Rijeka lecture hall or online trough MS Teams
L4	Drugs used in Emergencies	1	KBC Rijeka lecture hall or online trough MS Teams
L5	Differential diagnosis and approach to the patient with chest pain and/or difficulty breathing in EMD	1	KBC Rijeka lecture hall or online trough MS Teams
L6	Differential diagnosis and approach to the unconsciousness patient in EMD	1	KBC Rijeka lecture hall or online trough MS Teams
L7	Gastroenterological emergencies	1	KBC Rijeka lecture hall or online trough MS Teams
L8	Other emergencies	1	KBC Rijeka lecture hall or online trough MS Teams
	Total hours of lectures	8	KBC Rijeka lecture hall or online trough MS Teams

	SEMINARS (topics)	Teaching hours	Location
	Not applicable		
	Total hours of seminars		

	EXERCISES – practical teaching	Teaching hours	Location
E1	12-hours shift in Department for Emergency	12	Department for Emergency Medicine, University Hospital center Rijeka
E2	12-hours shift in Department for Emergency	12	Department for Emergency Medicine, University Hospital center Rijeka
E3	12-hours shift in Department for Emergency	12	Department for Emergency Medicine, University Hospital center Rijeka
E4	12-hours shift in Department for Emergency	12	Department for Emergency Medicine, University Hospital center Rijeka
E5	12-hours shift in Department for Emergency	12	Department for Emergency Medicine, University Hospital center Rijeka – Sušak locality
E6	12-hours shift in Department for Emergency	12	Department for Emergency Medicine, University Hospital center Rijeka – Sušak locality
E7	12-hours shift in Department for Emergency	12	Department for Emergency Medicine, University Hospital center Rijeka – Sušak locality
E8	12-hours shift in Department for Emergency	12	Department for Emergency Medicine, University Hospital center Rijeka – Sušak locality
	Total hours of exercises	96	

	EXAM DATES
1.	22.06.2022.
2.	11.07.2022.
3.	05.09.2022.
4.	21.09.2022.