

## SYLLABUS

CONCERNING THE CYCLE OF EDUCATION 2022-2028

ACADEMIC YEAR 2025-2026

### 1. BASIC INFORMATION CONCERNING THIS SUBJECT

Subject	Emergency Medicine
Course code *	EM
Faculty of (name of the leading direction)	Faculty of Medicine, University of Rzeszow
Department Name	Department of Emergency Medicine and Intensive Care
Field of study	Medicine
Level of education	Uniform master studies
Profile	General academic
Form of study	Full time studies
Year and semester	Year III, semester 6/ Year IV, semester 7
Type of course	Mandatory
Language	English
Coordinator	dr n. o zdr. Grzegorz Kucaba
First and Last Name of the Teachers	dr n. o zdr. Grzegorz Kucaba dr n. med. Przemysław Guła dr n. med. Paweł Musiał

\* - according to the resolutions of Educational Unit

#### 1.1. Forms of classes, number of hours and ECTS

Semester No.	Lecture	Exercise	Conversation	Laboratory	Seminar	Practical	Other	Number of credits ECTS
6	10	20	-	-	-	-	-	2
7	10	20	-	-	-	-	-	2

### 1.2. THE FORM OF CLASS ACTIVITIES

☒ CLASSES ARE IN THE TRADITIONAL FORM

☐ CLASSES ARE IMPLEMENTED USING METHODS AND TECHNIQUES OF DISTANCE LEARNING

### 1.3. EXAMINATION FORMS (EXAM, CREDIT WITH GRADE OR CREDIT WITHOUT GRADE)

## 2. BASIC REQUIREMENTS

KNOWLEDGE OF HUMAN ANATOMY, PHYSIOLOGY AND PATHOPHYSIOLOGY OF THE CIRCULATORY AND RESPIRATORY SYSTEMS

## 3. OBJECTIVES, OUTCOMES, AND PROGRAM CONTENT USED IN TEACHING METHODS

### 3.1. Objectives of this course

C1	Transfer of the rules of conduct and acquisition of basic and advanced rescue skills in various life-threatening conditions in adults and children
C2	Familiarization with the organizational, ethical and psychological aspects of rescue operations.
C3	Dissemination of issues contained in the State Medical Rescue Act.

### 3.2. OUTCOMES FOR THE COURSE

EK (THE EFFECT OF EDUCATION)	THE CONTENT OF LEARNING OUTCOMES DEFINED FOR THE CLASS (MODULE)	REFERENCE TO DIRECTIONAL EFFECTS <a href="#">[1]</a>
EK_01	KNOWS THE GUIDELINES FOR CARDIOPULMONARY RESUSCITATION OF NEWBORNS, CHILDREN AND ADULTS	F.W9.
EK_02	KNOWS THE PRINCIPLES OF FUNCTIONING OF THE INTEGRATED STATE EMERGENCY MEDICAL SERVICE SYSTEM	F.W12.
EK_03	IS ABLE TO RECOGNIZE THE MOST COMMON LIFE-THREATENING CONDITIONS, INCLUDING USING VARIOUS IMAGING TECHNIQUES;	F.U4
EK_04	IS ABLE TO IMMOBILIZE A LIMB TEMPORARILY, INCLUDING CHOOSING THE TYPE OF IMMOBILIZATION IN TYPICAL CLINICAL SITUATIONS AND CHECKING THE CORRECT BLOOD SUPPLY TO THE LIMB AFTER APPLYING AN IMMOBILIZING DRESSING;	F.U6.

EK_05	IS ABLE TO IMMOBILIZE THE CERVICAL AND THORACOLUMBAR SPINE AFTER INJURY;	F.U7.
EK_06	IS ABLE TO TREAT EXTERNAL BLEEDING;	F.U8.
EK_07	IS ABLE TO PERFORM BASIC LIFE SUPPORT (BLS) IN NEWBORNS AND CHILDREN IN ACCORDANCE WITH THE GUIDELINES OF THE EUROPEAN RESUSCITATION COUNCIL (ERC);	F.U9.
EK_08	IS ABLE TO PERFORM BASIC LIFE SUPPORT (BLS) IN ADULTS, INCLUDING THE USE OF AN AUTOMATED EXTERNAL DEFIBRILLATOR, IN ACCORDANCE WITH ERC GUIDELINES;	F.U11.
EK_09	IS READY TO ESTABLISH AND MAINTAIN DEEP AND RESPECTFUL CONTACT WITH THE PATIENT, AS WELL AS TO SHOW UNDERSTANDING FOR IDEOLOGICAL AND CULTURAL DIFFERENCES;	K.01.
EK_10	IS GUIDED BY THE PATIENT'S BEST INTERESTS	K.02.
EK_11	RESPECTS MEDICAL CONFIDENTIALITY AND PATIENT RIGHTS	K.03.
EK_12	TAKES ACTION TOWARDS THE PATIENT BASED ON ETHICAL PRINCIPLES, WITH AWARENESS OF SOCIAL CONDITIONS AND LIMITATIONS RESULTING FROM THE DISEASE	K.04.
EK_13	IS READY TO PERCEIVE AND RECOGNIZE ONE'S OWN LIMITATIONS AND TO MAKE A SELF-ASSESSMENT OF DEFICITS AND EDUCATIONAL NEEDS	K.05.

### 3.3. CONTENT CURRICULUM

#### A. Problems of the lecture

<b>Course contents – SEMESTER VI</b>
1. Introduction to emergency and disaster medicine
2. Pathophysiology, epidemiology of injuries - mortality ranges in injuries, the concept of the "golden hour".
3. The role of intensive care in the emergency medical system. Practical assessment of the severity and extent of body injuries based on applicable scales. Assessment of the victim's consciousness.
4. Sudden cardiac arrest. Current guidelines for advanced life-saving procedures - ALS
5. Acute respiratory failure - causes, diagnosis, emergency care. Principles of mechanical ventilation.

6. Acute cardiac conditions in emergency medicine. Acute circulatory failure. Myocardial infarction. Life-threatening cardiac arrhythmias. Principles of recognition and treatment of cardiogenic shock.
7. Principles of recognition, differentiation and treatment of shock. Principles of fluid therapy and the use of blood and blood products in life-threatening emergencies.
8. Life threatening metabolic and endocrine diseases - hypoglycemia, hyperglycemia, adrenal and thyroid crisis.
9. Stroke, intracranial hemorrhage - diagnosis, treatment, therapeutic options in emergency medicine practice.
10. Craniocerebral injuries in adults and children. Early treatment of cerebral edema. Principles of treatment in facial injuries, including the eyeball.
11. Chest injuries in adults and children. Principles of diagnosis, differentiation and emergency treatment.
12. Injuries of the abdominal organs in adults and children - blunt abdominal trauma, stab and gunshot wounds. Principles of diagnosis, differentiation and emergency treatment.
13. Spine and spinal cord injuries - specificity of treatment at the scene of the accident and during transport.
14. Injuries of the musculoskeletal system. Emergency procedures and principles of modern immobilization and transport of patients with serious bodily injuries.
15. Emergency care for pregnant women in various life-threatening conditions. Bodily injuries in pregnant women - diagnosis, treatment and transport. Principles of delivery in out-of-hospital conditions.
16. Procedures for life-threatening conditions in children.
<b>Course contents – SEMESTER VII</b>
1. Mass casualties and disasters - principles of triage of victims in mass casualties and disasters. Order and scope of emergency care provided.
2. Triage systems and kits used in mass casualties. Role and tasks of the hospital emergency department in the event of a mass casualty and disaster.
3. Chemical disasters, Radiation disasters, Radiation syndromes. Principles of international cooperation and assistance in the event of disasters, Human rights in emergency situations in the light of Polish and international law
4. Environmental hazards - frostbite, altitude sickness, drowning and diving accidents. Electric shock and lightning.
5. Life-threatening poisoning with pharmacological agents and toxic substances. Emergency treatment in acute poisoning with drugs, chemicals, toxic agents (including fumes, carbon monoxide, alcohol) - gastric lavage, neutralization of chemical agents. Principles of decontamination.

## B. Problems of auditorium, seminar, laboratory and practical classes

Course contents – semester VI
1. In-hospital cardiac arrest – resuscitation team concept and EWS early warning scale
2. Passive oxygen therapy
3. Securing the airway – non-invasive and invasive methods – oropharyngeal airway, nasopharyngeal airway, supraglottic devices
4. Performing a patient examination according to the ABCDE scheme Communication and transfer of information according to the SBAR protocol
5. Procedure for a patient with respiratory failure
Course contents – semester VII
1. Trauma assesment
2. Critical interventions in injuries – decompression of a tension pneumothorax, securing massive hemorrhages (pressure bandage), stabilization of a flaccid chest
3. Traumatic cardiac arrest – HOTT protocol
4. Organization of medical assistance in mass casualty events and disasters

### 3.4. DIDACTIC METHODS

**LECTURE:** PROBLEM-BASED LECTURE, LECTURE WITH MULTIMEDIA PRESENTATION, TRANSFER OF EXTENDED KNOWLEDGE IN THE FIELD OF FIRST AID

**EXERCISES:** SIMULATION, GROUP WORK (SOLVING PROBLEM TASKS, DISCUSSION), DIDACTIC GAMES

## 4. METHODS AND EVALUATION CRITERIA

### 4.1. METHODS OF VERIFICATION OF LEARNING OUTCOMES

Symbol of effect	Methods of assessment of learning outcomes (Eg.: tests, oral exams, written exams, project reports, observations during classes)	FORM OF CLASSES
EK_01 - EK_08	FINAL TEST: WRITTEN TEST	LECTURE
EK_01 – EK_08	OBJECTIVE STRUCTURED CLINICAL EXAMINATION: PRACTICAL TEST	EXCERCISES
EK_09 – EK_13	OBSERVATION	LECTURES/EXCERCISES

#### 4.2. CONDITIONS FOR COMPLETING THE COURSE (EVALUATION CRITERIA)

**ATTENDANCE AT ALL FORMS OF CLASSES (EXERCISES, LECTURES) IS OBLIGATORY**

**KNOWLEDGE ASSESSMENT (EK\_01 - EK\_08):**

**WRITTEN TEST EXAM FROM LECTURES: 38 SINGLE-CHOICE QUESTIONS**

5.0 – DEMONSTRATES KNOWLEDGE OF THE EDUCATIONAL CONTENT AT A LEVEL OF 93%-100%

4.5 – DEMONSTRATES KNOWLEDGE OF THE EDUCATIONAL CONTENT AT A LEVEL OF 85%-92%

4.0 – DEMONSTRATES KNOWLEDGE OF THE EDUCATIONAL CONTENT AT A LEVEL OF 77%-84%

3.5 – DEMONSTRATES KNOWLEDGE OF THE EDUCATIONAL CONTENT AT A LEVEL OF 69%-76%

3.0 – DEMONSTRATES KNOWLEDGE OF THE EDUCATIONAL CONTENT AT A LEVEL OF 60%-68%

2.0 – DEMONSTRATES KNOWLEDGE OF THE EDUCATIONAL CONTENT BELOW 60%

**ASSESSMENT OF PRACTICAL SKILLS (EK\_01-EK\_08):**

PRACTICAL PART ACCORDING TO THE OSCE COURSE ASSESSMENT REGULATIONS

**ASSESSMENT OF SOCIAL COMPETENCES (EK\_09-EK\_13):**

- CONTINUOUS ASSESSMENT BY THE TEACHER (OBSERVATION)
- DISCUSSION DURING CLASSES
- OPINIONS OF PATIENTS, COLLEAGUES

**THEORETICAL ASSESSMENT – WEIGHT 1**

**PRACTICAL ASSESSMENT – WEIGHT 1**

#### 5. TOTAL STUDENT WORKLOAD REQUIRED TO ACHIEVE THE DESIRED RESULT IN HOURS AND ECTS CREDITS

Activity	The average number of hours to complete the activity
Contact hours (with the teacher) resulting from the study schedule of classes	60
Contact hours (with the teacher) participation in the consultations, exams	5
Non-contact hours - student's own work (preparation for classes, exam, writing a paper, etc.)	45
SUM OF HOURS	110
TOTAL NUMBER OF ECTS	4

*\* IT SHOULD BE TAKEN INTO ACCOUNT THAT 1 ECTS POINT CORRESPONDS TO 25-30 HOURS OF TOTAL STUDENT WORKLOAD.*

## 6. TRAINING PRACTICES IN THE SUBJECT

NUMBER OF HOURS	NONE
RULES AND FORMS OF APPRENTICESHIP	NONE

## 7. LITERATURE

BASIC LITERATURE: <ol style="list-style-type: none"><li>1. EUROPEAN RESUSCITATION COUNCIL GUIDELINES 2021, CHAPTER 2, 3, 5, 6, 7, 9, 10, 12 <a href="https://cprguidelines.eu/guidelines-2021">HTTPS://CPRGUIDELINES.EU/GUIDELINES-2021</a></li><li>2. EMERGENCY MEDICINE: DIAGNOSIS AND MANAGEMENT, ANTHONY F. T. BROWN, MIKE CADOGAN, CRC PRESS, 2020</li><li>3. International Trauma Life Support for Emergency Care Providers, Roy L. Alson, Kyee Han, John E. Campbell Pearson Education 2019</li></ol>
ADDITIONAL LITERATURE

Acceptance Unit Manager or authorized person