Appendix number 1.5 to The Rector UR Resolution No. 12/2019

SYLLABUS

concerning the cycle of education 2020-2026

(date range)

1.1. BASIC INFORMATION CONCERNING THIS SUBJECT / MODULE

Subject / Module	**Emergency medicine**
Course code / module *	**Mr/F**
Faculty of (name of the leading direction)	**Medical College of Rzeszów University**
Department Name	**Medical College of Rzeszów University**
Field of study	**medical direction**
Level of education	**uniform master's studies**
Profile	**practical**
Form of study	**stationary / extramural**
Year and semester	**year IV, semester VIII**
Type of course	**obligatory**
Coordinator	**Dr hab. B Lewandowski**
First and Last Name of the Teacher	

* - According to the resolutions of the Faculty of Medicine

1.2. Forms of classes, number of hours and ECTS

Lecture	Exercise	Conversation	Laboratory	Seminar	ZP	Practical	Self-learning	**Number of points ECTS**
15	20	-	-	10	-	-	-	**2**

1.3. The form of class activities

☒classes are in the traditional form

☐classes are implemented using methods and techniques of distance learning

1.4. Examination Forms / module (exam, **credit with grade** or credit without grade)

2. REQUIREMENTS

Mastering knowledge of physiology and pathophysiology of the cardiovascular and respiratory system

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

3.1. Objectives of this course/module

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

3.2 OUTCOMES FOR THE COURSE / MODULE (TO BE COMPLETED BY THE COORDINATOR)

EK (the effect of education)	The content of the learning effect defined for the subject (module)	Reference to directional effects (KEK)
EK_01	He knows the current guidelines for cardiopulmonary resuscitation of newborns, children and adults	F.W7.
EK_02	He knows the principles of functioning of the integrated state medical emergency system	F.W8.
EK_03	Assumes peripheral puncture	F.U5.
EK_04	He can supply external bleeding	F.U9.
EK_05	Performs basic resuscitation procedures using an automatic external defibrillator and other rescue operations and provides first aid	F.U10.
EK_06	It works according to the current algorithm of advanced resuscitation activities	F.U11.
EK_07	Evaluates the condition of unconscious patients in accordance with the applicable international scales	F.U21.
EK_08	He is guided by the good of the patient, placing them in the first place	K.02.

3.3 CONTENT CURRICULUM (filled by the coordinator)

A. Lectures

Course contents
Introduction to emergency medicine.
Principles of organization and structure of the system of the State Medical Rescue System. System units - organization and function. Legal basis for the operation of medical emergency services in Poland - the State Emergency Medical Services Act.
The role of intensive care in the emergency medical system. A practical assessment of the severity and extent of injury on the basis of applicable scales. Assessing the awareness of the victim. Contemporary concept of organization

of the care system in cranio-cerebral injuries in adults and children. Early management of brain edema.
Pathophysiology, epidemiology of injuries - intervals of mortality in injuries, the concept of "golden hour". Mass accidents and disasters rules of segregation of victims in mass accidents and catastrophes. The order and scope of ad hoc assistance.
Chest damage in multiple injuries in adults and children. Abdominal organ damage in adults and children - blunt abdominal injuries, puncture and gunshot wounds. Principles of rescue proceedings.
Sudden cardiac arrest. Current BLS and ALS standards
Injuries of the spine and spinal cord - the specificity of the procedure at the scene of the accident and during transport. Stroke, intracranial haemorrhage - diagnostics, conduct, therapeutic options in the practice of emergency medicine. Rules for dealing with craniofacial injuries (including the eyeball).
Acute cardiac conditions in emergency medicine. Acute circulatory failure. Myocardial infarction. Life-threatening cardiac arrhythmias. Principles of recognition and treatment of cardiogenic shock.
Rules for the diagnosis and treatment of various types of shock. Principles of conducting fluid therapy and the use of blood and blood products in states of sudden danger to life.
Emergency help for pregnant women in various life-threatening conditions. Body injuries in pregnancy - diagnosis, treatment and transport. The rules for taking delivery in out-of-hospital conditions.
Metabolic and endocrine diseases threatening the patient's life - hypoglycaemia, hyperglycemia, adrenal and thyroid crisis.
Life threatening intoxication with pharmacological agents and toxic substances. Emergency treatment of acute poisoning with drugs, chemicals, toxic (including smoke, carbon monoxide, alcohol) - gastric lavage, neutralization of chemicals. Decontamination rules.
Acute respiratory failure - causes, diagnosis, emergency help. Principles of mechanical ventilation.
Proceedings in life-threatening situations in children.
Damage to the osteoarticular system. Ad hoc procedure and principles of modern immobilization and transport of patients with severe injuries. Emergency help for patients with frostbites, struck by lightning or electricity. Rescue procedure with a person drowning. Pathophysiology drowning, altitude sickness.

B. **Exercises**

Course contents

Practical assessment of respiratory and circulatory functions. Criteria for the diagnosis of death at the scene of the accident. Basic (BLS) and advanced (ALS) resuscitation procedures in adults and children. Emergency situations. Speeches in selected cases.
Basic (BLS) and advanced (ALS) resuscitation procedures in adults and children Cd. Resuscitation of a pregnant woman, newborn baby. Evaluation of the effectiveness of resuscitation procedures.
Intensive care techniques in emergency medicine. Invasive and non-invasive diagnostics in life-threatening conditions including ultrasound, computed tomography, magnetic resonance imaging, wideoskopii.
Management of unconscious patients, inefficient respiration, after sudden cardiac arrest, victims of road accidents and other emergency events. Elements of patient examination, differential diagnosis, interpretation of imaging examinations
Epidemiology of burns, principles of the severity of thermal injury. Przedlekarska and medical help for event site. Local supply of a burn wound. Practical exercises in the intensive care unit for burns.
Practical classes in the PSP rescue and fire-fighting unit. Securing the accident site against secondary effects, including safety victims and rescuers. Practical tasks emergency medical services at various organizational levels - primary, regional and regional.

C. Seminars

Course contents
Algorithms in myocardial infarction, cardiogenic shock, pulmonary edema, pulmonary embolism and asthmatic condition. Rules of conduct.
Diagnosis and emergency help in multi-organ injuries taking into account cranial and cerebral injuries and spine. Rules for dealing with unconscious patients.
Emergency relief in other urgent conditions in adults and children - management of patients with convulsive syndrome, epilepsy, cerebral infarction, meningitis.
Organization of emergency medical services in the danger zone in the most common cases (in the field of road, technical, chemical and ecological rescue). Principles of cooperation between medical and technical emergency services at the scene of the accident.
The rules of medical protection of mass events - sporting events, artistic events, gatherings. Organization of medical assistance in rare special situations - aviation, marine, construction and ecological accidents.

3.4 TEACHING METHODS

Lecture: multimedia presentation.

Exercises: practical exercises, demonstration, lecture form.

Seminars: multimedia presentation, lecture form.

Student's own work: working with a book, preparing for classes and preparing for the test and exam

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_02	Written test	Lecture
EK_03, EK_04, EK_05, EK_06, EK_07, EK_08	Practical pass	Exercises

4.2 Conditions for completing the course (evaluation criteria)

Lectures (EK_01, EK_02):

1. test pass and open questions:

A: Questions in the field of messages to remember;

B: Questions in the field of speech to understand;

C: Solving a typical written task;

D: Solving an atypical writing task;

- for insufficient solution of tasks only from areas A and B = grade 2.0

- for solving tasks only from areas A and B, the possibility of obtaining max. rating 3.0

- for solving tasks from the area A + B + C, the possibility of obtaining max. evaluation 4.0

- for the solution of tasks in the area A + B + C + D, the possibility of obtaining a rating of 5.0

Knowledge assessment:

Written test

5.0 - has knowledge of each of the contents of education at the level of 90% -100%

4.5 - has knowledge of each of the content of education at the level of 84% -89%

4.0 - has knowledge of each of the content of education at the level of 77% -83%

3.5 - has knowledge of each of the content of education at the level of 70% -76%

3.0 - has knowledge of each of the content of education at the level of 60% -69%

2.0 - has knowledge of each of the contents of education below 60%

Classes, seminars (EK_03, EK_04, EK_05, EK_06, EK_07, EK_08):

1. full participation and activity in the exercises

2. written partial credits

Range of ratings: 2.0 - 5.0

Skill assessment

5.0 - the student actively participates in the classes, is well prepared, knows the rules of conduct very well and acquires basic and advanced skills of rescue

4.5 - the student actively participates in classes, knows the rules of conduct well and has acquired basic and advanced rescue skills

4.0 - the student actively participates in classes, is improved, knows the rules of conduct well and has acquired basic and advanced rescue skills

3.5 - the student participates in the classes, his scope of preparation does not allow for a comprehensive presentation of the discussed problem, he knows the rules of conduct well enough and has acquired basic and advanced rescue skills

3.0 - the student participates in the classes, knows the rules of conduct sufficiently and has acquired basic rescue skills

2.0 - the student passively participates in the classes, the statements are incorrect in substance, do not know the rules of conduct and have not acquired the basic skills of rescue

5. Total student workload required to achieve the desired result in hours and ECTS credits

Activity	Hours / student work
Hours of classes according to plan with the teacher	45
Preparation for classes	7
Participation in the consultations	2
The time to write a paper / essay	
Preparation for tests	8
Participation in colloquia	**1**
Other (e-learning)	-
SUM OF HOURS	**63**
TOTAL NUMBER OF ECTS	**2**

6. TRAINING PRACTICES IN THE SUBJECT / MODUL

Number of hours	-

Rules and forms of apprenticeship	-

6. LITERATURE

READING:

1. Medycyna ratunkowa i katastrof. Wydawnictwo Lekarskie PZWL, Warszawa 2006.
2. Gaszyński W. Intensywna terapia i wybrane zagadnienia medycyny ratunkowej – Repetytorium. Wydawnictwo Lekarskie PZWL, Warszawa 2008.
3. Plantz SH, Wipfler EJ. Medycyna ratunkowa. Wyd. II polskie. Elsevier Urban & Partner, Wrocław 2008.
4. Misiołek H, Knapik P. Pierwsza pomoc medyczna z elementami postępowania specjalistycznego. Śląski Uniwersytet Medyczny, Katowice 2007.

Additional literature:

1. Andres J. Wytyczne resuscytacji, Kraków 2011.
2. Nutbeam T., Daniels R., Procedury zabiegowe, PZWL 2011.
3. J.M. Pines, W.W. Everett, Medycyna ratunkowa. Evidence Based Medicine. wyd. I polskie, red. J. Jakubaszko. Elsevier Urban&Partner .2012.

Acceptance Unit Manager or authorized person