INFORMATION ABOUT THE COURSE

First aid

1. Basic information

Field of studies field of medical and health sciences, discipline: medical sciences **Unit responsible for the field of studies** Faculty of Medicine Bydgoszcz University of Science and Technology **Level of studies** Uniform master's studies **Profile of studies** General academic **Form of studies** Full-time	**Studies cycle** …….. **Course code** 17-EMS-FAD-SP1 **Language** English **Obligatory** Yes

Prerequisites	None
Introductory courses	None
Coordinator	Robert Włodarski, PhD

Study period	**Form of assessment** **Form and hours of classes**	**ECTS credits**
Winter semester	Passing with a grade Simulation exercise 15h	1.0

2. Learning outcomes

Code	**Description of learning outcomes**	**Learning outcomes reference**
Knowledge (student knows and understands):		
K1	The graduate knows and understands the consequences of exposing the human body to chemical and physical factors and the principles of prevention	C.W13.
K2	The graduate knows and understands the principles of disinfection, sterilization, and aseptic procedures	C.W17.
K3	The graduate knows and understands the symptoms of the most common acute poisonings with selected groups of drugs, alcohols, and other psychoactive substances, fungi, and heavy metals	C.W36.
K4	Graduates know and understand the basic principles of diagnostic and therapeutic procedures in cases of poisoning	C.W37.
K5	Graduates know and understand the specifics and role of verbal communication (conscious construction of messages) and non-verbal communication (e.g., facial expressions, gestures, management of silence and space)	D.W7.

K6	Graduates know and understand patient rights and the concept of patient welfare	D.W16.
K7	Graduates know and understand the concepts of patient safety and safety culture and their organizational, communication, and management aspects.	D.W20.
K8	Graduates know and understand the rules of conduct in case of exposure to potentially infectious material	E.W34.
K9	The graduate knows and understands the guidelines for cardiopulmonary resuscitation of newborns, children, and adults	F.W9.
K10	The graduate knows and understands the most common life-threatening conditions in children and adults and the principles of management in these conditions, in particular in: 1) sepsis 2) shock 3) hemorrhages 4) water-electrolyte and acid-base disorders 5) poisoning 6) burns, hypo- and hyperthermia 7) other acute conditions of: a) cardiovascular, b) respiratory, c) neurological, d) renal, e) oncological and hematological, f) diabetological and endocrinological, g) psychiatric, h) ophthalmological, i) ENT, j) gynecological, obstetric, and urological	F.W10.
Abilities (student can do/perform):		
A1	Graduates are able to respect patient rights.	D.U3.
A2	Graduates are able to recognize their own emotions and manage them in their relationships with others in order to perform their work effectively despite their own emotional reactions.	D.U8.
A3	Graduates are able to use open-ended and closed-ended questions, paraphrasing, clarification, internal and final summaries, signaling, active listening (e.g., picking up and recognizing signals sent by the interlocutor, verbal and nonverbal techniques) and facilitation appropriately to the situation (encouraging the interlocutor to speak)	D.U10.
A4	The graduate is able to adapt the manner of verbal communication to the patient's needs, expressing themselves in an understandable way and avoiding medical jargon	D.U11.
A5	The graduate is able to recognize and analyze difficult situations and challenges related to communication, including crying, strong emotions, anxiety, interruptions, awkward and sensitive issues, silence, withdrawal, aggressive and demanding behavior, and deal with them in a constructive manner	D.U12.
A6	Graduates are able to collect information from adults, including the elderly, using biomedical and patient perspective skills	E.U1.
A7	The graduate is able to collect information from a child and their guardians, using skills related to the content, process, and perception of communication, taking into account the biomedical perspective and the patient's perspective	E.U2.

A8	The graduate is able to collect information in a situation threatening health and life using the SAMPLE scheme (S – Symptoms (symptoms), A – Allergies, M – Medications, P – Past medical history, L – Last meal, E – Events prior to injury/illness)	E.U3.
A9	Graduates are able to recognize the symptoms of risky and harmful alcohol use and problematic use of other psychoactive substances, symptoms of addiction to psychoactive substances and behavioral addictions, and propose appropriate therapeutic and medical treatment	E.U11.
A10	The graduate is able to recognize conditions requiring hospital treatment	E.U12.
A11	The graduate is able to perform medical procedures and treatments, including: 1) measurement and assessment of basic vital functions (temperature, heart rate, blood pressure) and monitoring them using a cardiac monitor and pulse oximeter	E.U14.
A12	The graduate is able to determine the death of a patient	E.U16.
A13	The graduate is able to temporarily immobilize a limb, including selecting the type of immobilization in typical clinical situations and checking the correct blood supply to the limb after applying an immobilizing dressing	F.U6.
A14	The graduate is able to immobilize the cervical and thoracolumbar spine after injury	F.U7.
A15	The graduate is able to treat external bleeding	F.U8.
A16	The graduate is able to perform basic life support (BLS) on newborns and children in accordance with the guidelines of the European Resuscitation Council (ERC)	F.U9.
A17	The graduate is able to perform basic life support (BLS) procedures in adults, including the use of an automated external defibrillator, in accordance with ERC guidelines	F.U11.
A18	The graduate is able to recognize medical problems and determine priorities in medical treatment.	O.U1.
A19	The graduate is able to recognize life-threatening conditions requiring immediate medical intervention.	O.U2.
A20	The graduate is able to implement appropriate and safe therapeutic procedures and predict their effects.	O.U4.
A21	Graduates are able to communicate with patients and their families in an atmosphere of trust, taking into account the needs of the patient, and convey unfavorable information using the principles of professional communication.	O.U7.
A22	Graduates are able to communicate within a team and share knowledge.	O.U8.

Social skills (the student is ready to):		
S1	Graduates are ready to be guided by the patient's well-being	O.K2.
S2	Graduates are ready to draw conclusions from their own measurements or observations	O.K8.
S3	Graduates are ready to accept responsibility for decisions made in the course of their professional activities, including in terms of their own safety and that of others.	O.K11.

3. Programme contents

No.	Programme contents	Form of studies	Learning outcomes covered by the programme content
1	Simulation exercises during which students will learn the principles of cardiopulmonary resuscitation, first aid for victims, and selected nursing procedures. Simulation exercises include: 1. Dealing with an unconscious victim, assessing the victim according to the ABC scheme, safe position, calling for medical help. 2. Techniques for clearing the airways without instruments. 3. Assisted ventilation: mouth-to-mouth, mouth-to-nose, mouth-to-mouth/nose, pocket mask, self-inflating bag with mask. 4. Chest compression technique. 5. Technique for performing cardiopulmonary resuscitation in adults and children. 6. Use of an automated external defibrillator. 7. Rules for providing first aid in life-threatening situations (choking, loss of consciousness, fainting, chest pain, stroke, seizures). 8. Principles of assessing a conscious patient according to the ABC scheme and collecting basic medical history. 9. Principles of performing selected nursing procedures (measuring blood pressure, obtaining intravenous access, administering drugs by various routes). 10. Ethical issues related to performing cardiopulmonary resuscitation.	Simulation exercise	K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, S1, S2, S3
2	1. Specific characteristics of trauma patients. Assessment of morbidity and injury mechanism—consequences. Life-threatening and immediate life-threatening conditions. Patient examination according to the ABCDE (C-ABCDE) scheme. Physical examination according to the SAMPLE scheme. Decision-making and patient information management. Communication with the patient. Shock: definition, types, first aid for patients in shock. 2. Principles of teamwork – roles, communication, feedback. Principles of assessing and securing the scene. Organization of rescue operations. Trauma assessment according to the ITLS scheme. Most common injuries, symptoms, how to examine specific areas of the body.	Simulation exercise	K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, S1, S2, S3

	3. First aid and rescue in thermal injuries (burns, hyperthermia), chemical injuries, electrical injuries. Environmental hazards of biological origin. 4. Organization of rescue operations in multiple and mass incidents. Rescue tactics. Communication in difficult conditions. Medical triage. Management and logistics of rescue operations. Incidents involving CBRN materials.		
3	Providing medical assistance to a casualty in a life-threatening condition of external origin: 1. Head, spinal and long bone injuries 2. Practical skills: a. removing a motorbike helmet b. use of an orthopaedic collar and board c. use of a pick-up stretcher and vacuum mattress d. immobilisation of limb fractures and dislocations (Kramer splint, vacuum splint, alternative methods of fracture immobilisation) 3. Neurogenic shock - symptoms and diagnosis and treatment 4. Penetrating injuries (wounds, external haemorrhage management) 5. Thoracic injuries (flaccid chest, rib fracture) 6. Abdominal and pelvic injuries 7. Burns 8. Practical skills: a. securing evisceration b. performing pelvic stabilisation c. dressing burns	Simulation exercise	K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, S1, S2, S3
4	Management of the patient in immediate life-threatening conditions: 1. Cardiopulmonary resuscitation 2. Communication with the dispatch centre 3. Simulation exercises on trainers and simulators a. confirmation of cardiac arrest b. rapid assessment and identification of heart rhythm c. principles of safe manual defibrillation d. safe position e. cardiopulmonary resuscitation 4. Simulated scenarios - cardiopulmonary resuscitation using manual defibrillator, instrumented upper airway management and identification of reversible causes of cardiac arrest	Simulation exercise	K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, S1, S2, S3
5	Exercises in assisting victims with various injuries learnt in previous classes - simulated scenarios.	Simulation exercise	K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, S1, S2, S3

4. Methods of verifying and assessing the learning outcomes achieved by the student

Winter semester

Form of studies		
Simulation exercise	**Methods of studies form:**	
	Discussion, Demonstration, Case study, Group work	
	Methods of verification:	**Involvement:**
	Activity	20%
	Observation	20%
	Case study	20%
	Written test	40%
	Conditions for passing the course:	
	Successful completion of the module requires the following conditions: 1. the absence of unexcused and unmade up absences from classes 2. preparation for classes according to previously known issues and active participation in classes 3. passing of a test examination: single-choice test, 30 questions within 20 minutes. Detailed assessment criteria according to the guidelines in the Academic Regulations.	

Learning outcomes	**Methods of verification**			
	Written test	Case study	Activity	Observation
K1	X	X	X	X
K2	X	X	X	X
K3	X	X	X	X
K4	X	X	X	X
K5	x	X	X	X
K6		X	X	X
K7		X	X	X
K8		X	X	X
K9	x	X	X	X
K10		X	X	X

A1		X	X	X
A2		X	X	X
A3		X	X	X
A4		X	X	X
A5		X	X	X
A6		X	X	X
A7		X	X	X
A8		X	X	X
A9		X	X	X
A10		X	X	X
A11		X	X	X
A12		X	X	X
A13		X	X	X
A14		X	X	X
A15		X	X	X
A16		X	X	X
A17		X	X	X
A18		X	X	X
A19		X	X	X
A20		X	X	X
A21		X	X	X
A22		X	X	X
S1		X	X	X
S2		X	X	X
S3		x	x	x

5. Student workload – balance of hours and ECTS credits

Students activity		**Student workload Number of hours**
Classes conducted with the direct participation of an academic teacher or other persons conducting classes	Simulation Exercise	15
Student's own work	Preparing for classes	3

	Studying literature	2
	Preparing for a test	5
Total student workload		25
ECTS		1

One (teaching) hour is 45 minutes.

6. Literature

The list of required and recommended literature will be provided by the lecturer at the first meeting.