KARTA PRZEDMIOTU

| Discipline code | | 0912-7LEK-C6.8-M | | | | | | |
|--------------------|---------|------------------------------------------|--|--|--|--|--|--|
| N | Polish | Medycyna Ratunkowa i Medycyna Katastrof | | | | | | |
| Name of discipline | English | Emergency Medicine and Disaster Medicine | | | | | | |

1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES

| 1.1. Field of study | medicine |
|------------------------------------------------|------------------------|
| 1.2. Mode of study | Full-time |
| 1.3. Level of study | Uniform Master's study |
| 1.4. Profile of study* | Practical |
| 1.5. Person/s preparing the course description | Paweł Podsiadło |
| 1.6. Contact | wnoz_inm@ujk.edu.pl |

2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

| 2.2. Language of instruction | English |
|------------------------------|---------------------------------------------------|
| 2.4. Prerequisites* | Anatomy, Physiology, Pathology, Surgery, Internal |
| | Medicine, Anesthesiology and intensive Care |

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

| 1.1. Form of | classes | Lectures, seminars, classes | | | | | |
|---------------|------------------|--------------------------------------------------------------------------------|--|--|--|--|--|
| 1.2. Place of | classes | 1)lectures, seminars: teaching rooms | | | | | |
| | | 2)classes: Medical simulation Center UJK, Emergency Department | | | | | |
| 1.3. Form of | assessment | Lectures – Exam, Seminars, Classes –graded credit | | | | | |
| 1.4. Teaching | methods | conventional lecture | | | | | |
| | | conversational lecture | | | | | |
| | | Medical simulations, practical classes in ED | | | | | |
| 1.5. Bibliog | Required reading | - Cydulka RK et al.(eds.) Tintinalli's Emergency Medicine Manual. | | | | | |
| raphy | | McGraw-Hill Education, 2018 | | | | | |
| | | American College of Surgeons. Advanced Trauma Life Support | | | | | |
| | | European Resuscitation Council Guidelines for Resuscitation 2015 | | | | | |
| | | https://cprguidelines.eu | | | | | |
| | Further reading | European Resuscitation Council Guidelines for Resuscitation 2015 | | | | | |
| | | https://cprguidelines.eu | | | | | |

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED LEARNING OUTCOMES

4.1. Course objectives

C-1-WW (knowledge)

- -A familiarisation with the principal elements on the extended level of the subject. It includes the knowledge about life-threatening conditions resulted from illnesses and injuries of particular human systems and organs
- A familiarisation of the students with the planning and organization of medical coverage in industrial, transportation, environmental, chemical and natural disasters as well as military threats

C-2-UW (skills)

- -preparation of the students to implement algorithms of emergency management in the certain life-threatening conditions. Developing the abilities of managing the rescue operation in the rescue team
- preparation of the students to carrying out medical, rescue and evacuation operations in a disaster place and outside of it as well as cooperating with other rescue services

C-3-KW (social skills)

- Forming emphatic attitudes, conscientiousness, discipline, personal involvement into rescue operation in situations of immediate danger to human life or health

4.2. Detailed syllabus

| Lp. | <u>Lectures</u> | | | | | | |
|-----|----------------------------------------------------------------------------------------------|--|--|--|--|--|--|
| W1 | Emergency medicine – what is it? | | | | | | |
| | The golden hour and avoidable deaths; a strategy of load & go vs stay & play; Damage Control | | | | | | |
| | Surgery; The chain of survival in cardiac arrest | | | | | | |
| | Initial assessment: cABC and SAMPLE. | | | | | | |

| | EMS system structure, EDs, Trauma Centers, Trauma Team. | |
|-----------|-----------------------------------------------------------------------------------------------|----------|
| W2 | Respiratory failure; oxygen masks, NIV /CPAP, ventilators, ECMO | |
| | Circulation; chest pain differential diagnosis, dysrhythmias, cardiac arrest, pharmacotherapy | |
| | and electrotherapy, manual CPR, MCCD, ECPR | |
| W3 | Haemorrhagic shock | |
| | Traumatic cardiac arrest. Immune response to trauma: SIRS and CARS. | |
| | Limb injuries, abdominal trauma; thoracic trauma;; head injuries | |
| W4 | Central nervous system: stroke - symptoms, time window for thrombolysis and embolectomy | |
| | Syncope, loss of consciousness, convulsions | |
| | Drowning. Lightning injuries. Electrical injuries. Insect sting anaphylaxis. Accidental | |
| | hypothermia. Hyperthermia | |
| W5 | Disaster medicine: multiple and mass casualty incidents; triage; on-site management, | |
| | Terrorist attacks; chemical weapons. | |
| | Gun-shot / blast / crush injuries | <u> </u> |
| Lp. | Seminars / Classes | |
| <u>C1</u> | Airway management; RSI; ETT placement inspection; DOPES; SPEEDBOMB- checklist; | |
| | conicotomy | |
| ~- | Mechanical ventilation monitoring | - |
| <u>C2</u> | Cardiopulmonary resuscitation; BLS-AED algorithm, ALS algorithm; defibrillation, | |
| | cardioversion, transthoracic pacing | - |
| <u>C3</u> | Cardiac arrest in children; | |
| | Resuscitation of babies at birth | |
| - C 4 | Toxidromes; drugs and stimulants; CO poisoning | - |
| <u>C4</u> | Initial assessment of trauma victims | |
| | Spine trauma; immobilization – spineboard, cervical collar, vacuum mattress | |
| | Haemorrhagic shock, volume replacement, peripheral veins cannulation, intraosseous access | |
| | Pain management | - |
| <u>C5</u> | Chest injuries; flail chest management; tension pneumothorax decompression; chest tube | |
| | insertion | |
| | Management of burns | |
| CC | Trauma in children | - |
| <u>C6</u> | Limb injuries; immobilization | |
| | Traumatic brain injuries | |
| | Spinal cord injuries | |

4.3. Intended learning outcomes

| | Intended learning outcomes | Relation to | | | | | |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--|--|--|--|--|
| Code | A student, who passed the course | learning | | | | | |
| Couc | A student, who passed the course | outcomes | | | | | |
| | | outcomes | | | | | |
| | within the scope of KNOWLEDGE : | | | | | | |
| W01 | knows the most common life-threatening conditions in children and the rules of conduct in these states; | E.W6. | | | | | |
| W02 | knows and understands the capabilities and limitations of laboratory tests in emergency situations; | E.W39. | | | | | |
| W03 | knows and understand the causes, symptoms, principles of diagnosis and therapeutic management in relation to the most common diseases requiring surgical intervention, taking into account the individuality of childhood, in particular: a) acute and chronic diseases of the abdominal cavity, b) diseases of the chest, c) diseases of limbs and head, d) bone fractures and injuries of organs; | F.W1. | | | | | |
| W04 | knows the principles of the integrated state system of medical rescue; | F.W8. | | | | | |
| W05 | knows the issues concerning modern imaging tests, in particular: a) basic radiological symptomatology of diseases, b) instrumental methods and imaging techniques used to perform medical treatments, c) the indications, contraindications and preparation of patients to particular types of imaging tests and contraindications the use of contrast agents; | F.W10. | | | | | |
| W06 | knows and understands the causes, symptoms, principles of diagnosis and therapeutic procedures for the most frequent diseases of the central nervous system in terms of: a) a swelling of the brain and its consequences, with particular emphasis on the states of emergency, b) other forms of intracranial narrowness of their consequences, c) cranio-cerebral injuries d) vascular malformations of the central nervous system, e) tumors of the central nervous system, | F.W13. | | | | | |

| | f), diseases of the spine and spinal cord; | |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| W07 | knows the problem of surgical transplantation, indications for the transplantation of irreducibly damaged organs and tissues, and related procedures; | F.W14. |
| | within the scope of ABILITIES : | |
| U01 | assesses patient's general condition, consciousness and awareness; | E.U7. |
| U02 | performs differential diagnosis of the most common diseases in adults and children | E.U12. |
| U03 | assesses and describes the somatic and mental state of patients; | E.U13. |
| U04 | recognizes states of a direct threat to life; | E.U14. |
| U05 | recognizes when a patient is under the influence of alcohol, drugs and other addictive products; | E.U15. |
| U06 | plans diagnostic, therapeutic and preventive procedures; | E.U16. |
| U07 | conducts analysis of the potential side effects of each drug and the interaction between them; | E.U17. |
| U08 | qualifies the patient for home treatment and hospitalization; | E.U20. |
| U09 | defines states in which functional status of the patient's or his/her preferences restrict the treatment in accordance with specific guidelines for the disease; | E.U21. |
| U10 | interprets laboratory tests/results and identifies the reasons for deviations; | E.U24. |
| U11 | plans specialist consultations; | E.U32. |
| U12 | acts correctly in the case of injuries (uses dressing or immobilization, stictches the wound); | E.U36. |
| U13 | recognizes the agony of the patient and pronounces him/her dead; | E.U37. |
| U14 | assists during a typical surgery, prepares the surgical site and locally anesthetizes operated area; | F.U1. |
| U15 | complies with the aseptic and antiseptic rules; | F.U3. |
| U16 | manages simple wounds and changes sterile surgical dressing; | F.U4. |
| U17 | assesses radiological test result in terms of the most common types of fractures, especially fractures of long bones; | F.U7. |
| | performs temporary immobilization of a limb, selects the type of immobilization necessary for use in typical clinical situations and checks blood supply to the limbs after using the | |
| U18 | cast; | F.U8. |
| U19 | manages external bleeding; | F.U9. |
| U20 | performs basic resuscitation with automated external defibrillator and other rescue activities and provides first aid; | F.U10. |
| U21 | acts in accordance with the current algorithm of advanced life support activities; | F.U11. |
| U22 | assesses the condition of the unconscious patient in accordance with applicable international scales; | F.U21. |
| U23 | recognizes the symptoms of increasing intracranial pressure; | F.U22. |

4.4. Methods of assessment of the intended teaching outcomes

| | | Method of assessment (+/-) | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|----------------------------|--|---|-----------------|-------|---|-----------------|---------------------|---|-----------------|---------------------|---|-----------------|-------------|---|-----------------|----------------|---|-----------------|---------|--|--|
| Teaching | | Exam oral/written* | | | | Test* | | | Effort in class* | | | Effort in class* | | | Self-study* | | | Group work* | | | Others* | | |
| outcomes (code) | | Form of classes | | | Form of classes | | | Form of classes | | | Form of classes | | | Form of classes | | | Form of classes | | | Form of classes | | | |
| , , | L | С | | L | С | | L | С | | L | С | | L | С | | L | С | | L | С | | | |
| W01 | x | X | | | | | | | | | | | | | | | | | | | | | |
| W02 | X | X | | | | | | | | | | | | | | | | | | | | | |
| W03 | X | X | | | | | | | | | | | | | | | | | | | | | |
| W04 | X | X | | | | | | | | | | | | | | | | | | | | | |
| W05 | X | X | | | | | | | | | | | | | | | | | | | | | |
| W06 | X | X | | | | | | | | | | | | | | | | | | | | | |
| W07 | X | X | | | | | | | | | | | | | | | | | | | | | |
| U01 | X | X | | | | | | | | | | | | | | | | | | | | | |
| U02 | X | X | | | | | | | | | | | | | | | | | | | | | |
| U03 | X | X | | | | | | | | | | | | | | | | | | | | | |
| U04 | X | X | | | | | | | | | | | | | | | | | | | | | |
| U05 | X | X | | | | | | | | | | | | | | | | | | | | | |
| U06 | X | X | | | | | | | | | | | | | | | | | | | | | |
| U07 | X | X | | | | | | | | | | | | | | | | | | | | | |
| U08 | X | X | | | | | | | | | | | | | | | | | | | | | |

| U09 | X | X | | | | | | | | | | |
|-----|---|---|--|--|--|--|--|--|--|--|--|--|
| U10 | X | X | | | | | | | | | | |
| U11 | X | X | | | | | | | | | | |
| U12 | X | X | | | | | | | | | | |
| U13 | X | X | | | | | | | | | | |
| U14 | X | X | | | | | | | | | | |
| U15 | X | X | | | | | | | | | | |
| U16 | X | X | | | | | | | | | | |
| U17 | X | X | | | | | | | | | | |
| U18 | X | X | | | | | | | | | | |
| U19 | X | X | | | | | | | | | | |
| U20 | X | X | | | | | | | | | | |
| U21 | X | X | | | | | | | | | | |
| U22 | X | X | | | | | | | | | | |
| U23 | x | X | | | | | | | | | | |

| 4.5. | Criteria | of assessment of the intended learning outcomes |
|-----------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | |
| Form | G 1 | |
| of | Grade | Criterion of assessment |
| classes | 3 | 61.69% Attends alosses has difficulties in solving the tasks, needs guidenes and supervision at work |
| | 3 | 61-68% Attends classes, has difficulties in solving the tasks, needs guidance and supervision at work, bases the solution of the task only on the recommended pattern |
| | 3,5 | 69-76% Attends classes, has difficulties in solving the tasks, needs guidance at work, uses |
| _ | 3,0 | stereotypical approach to solve tasks |
| \mathfrak{F} | 4 | 77-84% Takes part in classes, demonstrates involvement, solves tasks independently (uses acquired |
| wykład (W) | | knowledge), adapts accepted patterns to solve tasks |
| W | 4,5 | 85-92% Takes part in classes actively, demonstrates involvement, solves tasks independently. bases |
| | - | the task solution on given information as well as additional sources |
| | 5 | 93-100% Takes part in classes actively, demonstrates involvement, solves tasks independently. bases |
| | | the task solution on given information as well as additional sources, uses innovative ways of solving tasks |
| | 3 | 61-68% Attends classes, has difficulties in solving the tasks, needs guidance and supervision at work, |
| | | bases the solution of the task only on the recommended pattern |
| *(; | 3,5 | 69-76% Attends classes, has difficulties in solving the tasks, needs guidance at work, uses stereotypical approach to solve tasks |
| ćwiczenia (C)* | 4 | 77-84% Takes part in classes, demonstrates involvement, solves tasks independently (uses acquired knowledge), adapts accepted patterns to solve tasks |
| ćwic | 4,5 | 85-92% Takes part in classes actively, demonstrates involvement, solves tasks independently. bases the task solution on given information as well as additional sources |
| | 5 | 93-100% Takes part in classes actively, demonstrates involvement, solves tasks independently. bases the task solution on given information as well as additional sources, uses innovative ways of solving tasks |
| *(| 3 | 61-68% Attends classes, has difficulties in solving the tasks, needs guidance and supervision at work, bases the solution of the task only on the recommended pattern |
| (dw) | 3,5 | 69-76% Attends classes, has difficulties in solving the tasks, needs guidance at work, uses |
|)) | | stereotypical approach to solve tasks |
| 'CZI | 4 | 77-84% Takes part in classes, demonstrates involvement, solves tasks independently (uses acquired |
| Ćwiczenia praktyczne (Cwp)* | | knowledge), adapts accepted patterns to solve tasks |
| ia p | 4,5 | 85-92% Takes part in classes actively, demonstrates involvement, solves tasks independently. bases |
| zeni | <i>,-</i> | the task solution on given information as well as additional sources |
| vić. | 5 | 93-100% Takes part in classes actively, demonstrates involvement, solves tasks independently. bases |
| ý | | the task solution on given information as well as additional sources, uses innovative ways of solving tasks |

5. BALANCE OF ECTS CREDITS – STUDENT'S WORK INPUT

| | Obciążenie studenta |
|------------------------------------------------------------------------------|-----------------------|
| Category | Studia stacjonarne |
| NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/ | 40 |
| Participation in lectures* | 15 |
| Participation in classes, seminars, laboratories* | 25 |
| Preparation in the exam/final test* | |
| Others* | |
| INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/ | 10 |
| Preparation for the lecture* | 10 |
| Preparation for the classes, seminars, laboratories* | |
| Preparation for the exam/test* | |
| Gathering materials for the project/Internet query* | |
| Preparation of multimedia presentation | |
| Others (please specify e.g. e-learning)* | |
| TOTAL NUMBER OF HOURS | 50 |
| ECTS credits for the course of study | 2 |

| Przyjmuję ao realizacji | (data i podpisy osób prowadzących przedmiot w danym roku akademickim) |
|-------------------------|-----------------------------------------------------------------------|
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