COURSE DESCRIPTION CARD - SYLLABUS

Course name
Basics of rescue systems organization and pre-medical aid [N1IBiJ1>POSR]

Course

Field of study
Safety and Quality Engineering

Year/Semester
2/3

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
part-time

Requirements
compulsory

Number of hours

Lecture
9

Laboratory classes
9

Other
0

Tutorials
9

Projects/seminars
0

Number of credit points

3,00

Coordinators

Paweł Pawlik

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Lecturers

Prerequisites

The student has a basic knowledge of the issues related to institutions operating within the rescue systems and the role of rescue in safety. The student has the ability to obtain information from the indicated sources and is ready to actively search, systematize and present knowledge in the field of rescue. The student is aware of the need to provide first aid to the injured in accidents, before the arrival of specialized emergency services.

Course objective

Transfer and systematization of basic theoretical knowledge related to the structures and institutions that operate within the rescue systems. Presentation of the legal and organizational dependencies between institutions supporting each other within the rescue systems. Developing the ability to solve problems occurring during preparation for emergency situations and management of selected rescue systems. Transfer of knowledge and practical skills in the field of first aid in situations that threaten human life and health and the development of correct social attitudes in the field of first aid. Preparation for the correct interpretation and understanding of knowledge concerning the essence of first aid, health and life threatening conditions, as well as the principles and standards of its provision.

Course-related learning outcomes

Knowledge:
1. Student knows to an advanced level issues related to the identification, analysis and assessment of risk in the work environment in the context of providing first aid [K1_W03].
2. Student knows the fundamental dilemmas of modern civilization and development trends as well as best practices in providing first aid [K1_W10].

Skills:
1. Student is able to use various techniques to communicate in a professional environment and during a rescue operation [K1_U02].
2. Student is able to recognize systemic and non-technical aspects in engineering tasks, as well as socio-technical, organizational and economic aspects in the context of first aid [K1_U03].
3. Student is able to critically analyze and optimize existing technical solutions to increase the quality and safety of machines and devices [K1_U06].

Social competences:
1. Student is aware of understanding non-technical aspects and effects of engineering activities, including its impact on the environment and the related responsibility for decisions made [K1_K03].
2. Student is able to initiate activities related to the formulation and transfer of information and cooperation in society in the area of rescue operations [K1_K05].
3. Student is able to demonstrate professionalism and follow the principles of professional ethics, promoting respect for diversity and building a culture of safety and quality [K1_K06].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assessment:
a) tutorials: current assessment (on a scale of 2 to 5) of the assigned tasks. Credit after passing at least 3.0. 1st and 2nd approach passing: 56% of the points available.
b) lectures: short test after the second didactic unit - single / multiple-choice test consisting of several questions. Credit after passing at least 3.0. 1st and 2nd approach passing: 56% of the points available.
c) laboratory classes: ongoing assessment (on a scale of 2 to 5) of the tasks performed. Credit after passing at least 3.0. 1st and 2nd approach passing: 56% of the points available.
Summary assessment:
a) tutorials: average of grades of partial tasks; pass after obtaining at least a grade of 3.0. Credit after passing at least 3.0. 1st and 2nd approach passing: 56% of the points available.
b) lectures: final exam in the form of a test carried out during the last lecture. The 45-minute test consists of 15 to 20 questions (single / multiple choice and / or open-ended) with different scores. Credit after passing at least 3.0. 1st and 2nd approach passing: 56% of the points available.
c) laboratory classes: the average of the grades for partial tasks and passing a final test to check the acquired knowledge after obtaining at least a grade of 3.0 (Credit after passing at least 3.0. 1st and 2nd approach passing: 56% of the points available.)

Programme content

The program includes the characteristics of rescue systems such as: KSRG, PRM and the organization of selected types of specialized rescue services and guards. In addition, the characteristics of first aid are included.

Course topics

Lecture:
Rescue in the security system. National Fire and Rescue System (KSRG). State Emergency Medical Services (PRM). Organization of selected types of specialist rescue. Directing and conducting rescue operations. The role and tasks of public administration, services and guards and inspections in the rescue system. Requirements for the creation and operation of a rescue system in an enterprise that poses a threat to the environment. Collaboration between institutions. The role of voluntary and non-governmental organizations in rescue operations. Organization of humanitarian aid.
Tutorials:
Hazard analysis. Rules of conduct in the case of rescue actions and tasks of individual entities. Methods

of assessing preparation for emergency situations. Analysis of the scene of the incident and the rules of segregation at the scene of the incident. Directing and conducting rescue operations. Fire protection elements. Requirements for the creation and operation of a rescue system in an enterprise that poses a threat to the environment. Collaboration between institutions.
Laboratory classes:
Legal aspects of providing first aid. Rules for the use of Automated External Defibrillators (AEDs). Chain of survival. System in Case of Emergency (I.C.E.). Using protective barriers. Checking the safety and approach to the victim. Checking the consciousness of the injured person. Call for help. Unblocking the respiratory tract. Check the victim's breathing. Calling professional medical services. Algorithm for dealing with the unconscious and not breathing a victim (performing Cardiovascular Resistance (CPR) for adults, children and infants). Algorithm for dealing with an unconscious and breathing injured (traumatic and non-traumatic). Treatment of choking. Dressing up hemorrhages and wounds. Procedure in case of injuries (immobilization of upper and lower limbs). Evacuation of the injured from the scene (Rautek's maneuver). Taking the casualty out of the vehicle. Emergency procedures: burns, shock, convulsions, myocardial infarction, fainting, intoxication, diabetes, stroke and others. First aid kit service.

Teaching methods

Lecture: information lecture, seminar lecture, multimedia presentation.
Tutorials: multimedia presentation. The class uses the classic problem method, as well as the method of cases and exercises.
Laboratory classes: Programmed text, case study, problem and activating method. During the classes, an exercise-practical method is used.

Bibliography

Basic:
1. Biniak-Pieróg M.,Zamiar Z. (2013), Organizacja Systemów Ratownictwa, Wtdawnictwo Uniwersytetu Przyrodniczego, Wrocław.
2. Regulacje prawne dotyczace omawianych zagadnień.
3. Skoczylas J. (2011), Prawo ratownicze, Lexis Nexis, Warszawa.
4. Kępka P. (2015), Projektowanie systemów bezpieczeństwa. Bel. Studio Sp. z.o.o , Warszawa.
5. Pabiś A. (2018), Bezpieczeństwo procesowe cz.1, Wydawnictwo Politechniki Krakowskiej, Kraków.
6. Witt M., Dąbrowska A., Dąbrowski M. (red.). (2014), Ratownictwo medyczne. Kwalifikowana pierwsza pomoc. Wydawnictwo naukowe Uniwersytetu Medycznego im. Karola Marcinkowskiego w Poznaniu.
7. Wytyczne resuscytacji z 2021 roku, ILCOR.

Additional:
1. Bienias M., Czerniak K., Ewertowski T. (2019), Preparation of an enterprise for emergency situations, Informatyka Ekonomiczna, nr 3(53), s. 9- 22.
2. Ewertowski T., Lewandowska M., (2021), Wybrane aspekty dydaktyki i szkoleń z zakresu kwalifikowanej pierwszej pomocy w Państwowej Straży Pożarnej wraz z propozycjami podniesienia ich atrakcyjności, Bezpieczeństwo osób starszych w przestrzeni miejskiej. Analiza doświadczeń, wnioski i rekomendacje z uwzględnieniem okresu pandemii SARS-CoV-2, red. Mikołaj Tomaszyk: FNCE, Poznań, s. 517-537.
3. Ewertowski T., Kasprzycka M., Lewandowska M., (2019), Analiza oceny zagrożeń prowadzonych na potrzeby opracowania planu ratowniczego na podstawie wybranych przykładów, Bezpieczeństwo zdrowotne : postępy monitorowania i obrazowania stanu środowiska / red. Jerzy Konieczny, Leonard Dajerling , Uniwersytet im. Adama Mickiewicza w Poznaniu, Poznań, s. 337-353.
4. Ewertowski T., Jacygrad N., Jakowicz A., (2020), Analiza porównawcza elementów planów ratowniczych wybranych powiatów, Zarządzanie kryzysowe wobec wyzwań i zagrożeń dla bezpieczeństwa wewnętrznego państwa red. Katarzyna Śmiałek , Wojskowa Akademia Techniczna, Warszawa, s. 349-366.
5. Andres J. (red.), (2011), Pierwsza Pomoc i resuscytacja krążeniowo-oddechowa. Podręcznik dla studentów (wyd. III), Wydawnictwo Polskiej Rady Resuscytacji, Kraków.
6. Goniewicz M. (2012, Pierwsza Pomoc. Podręcznik dla studentów. Wydawnictwo Lekarskie PZWL, Warszawa.

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	45	2,00