GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Basics of emergency medicine for engineers, PG_00061794		
Field of study	Automation, Robotics and Control Systems		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2026/2027
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	4	Language of instruction	Polish
Semester of study	7	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Biomechatronics -> Faculty of Electrical and Control Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Grzegorz Redlarski	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	20.0	0.0	10.0	30

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	30	5.0	40.0	75

Subject objectives

The aim of the course is for the student to master the principles of practical conduct in situations of sudden threat to the health and/or life of infants, children and adults, requiring quick and decisive intervention until the arrival of a specialized emergency medical team. In addition, the student will learn the rules of conduct in the event of electric shock.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U01] can obtain information from literature, databases and other sources; integrate the information obtained, interpret it and draw conclusions, formulate and justify opinions	Performs and integrates procedures specified in the BLS algorithm - in accordance with the guidelines of the Polish Resuscitation Society.	[SU4] Assessment of ability to use methods and tools
[K6_W10] has basic knowledge related to mechatronics and robotics systems	Performs chest compressions manually or automatically - connected, according to the European Resuscitation Council, using the LUCAS-3 system.	[SW1] Assessment of factual knowledge
[K6_W06] knows the structure of computers and microprocessors and the tasks of operating systems, has basic knowledge of the basics of computer software, drivers, microprocessor technology, design of simple algorithms and the operation of information networks	Selects the resuscitation procedure depending on the specifications of the available hardware and software at the scene.	[SW1] Assessment of factual knowledge

<table>
<tr><td>Subject contents</td><td>Course content – laboratory
Seminar:

Rules of conduct at the scene of the incident: home, public place, work environment (safety assessment, division of tasks - calling for help, starting rescue operations). Rules of conduct in the event of electric shock. Principles of treatment in hypothermia.

Lab:

Exercises on phantoms in the field of cardiopulmonary resuscitation (CPR) in infants, children and adults (cessation of circulation). How to use an AED defibrillator. Exercises on phantoms covering other first aid cases: choking, drowning, drowning and hypothermia, electric shock.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>None.</td></tr>
<tr><td>Assessment methods and criteria</td><td><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Practical exercises on phantoms</td><td>60.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>Resuscitation guidelines 2021, European Resuscitation Council, Niel, Belgium 2021: https://cprguidelines.eu/guidelines-2021</td></tr><tr><td>Supplementary literature</td><td>Inżynieria Biomedyczna, Ryszard Tadeusiewicz, wydawnictwo AGH, Kraków 2008 (in Polish)</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>1. What to do if a family member loses consciousness at home
2. What to do if a person loses consciousness in a public environment in the face of other people brawling
3. What to do in the event of moderate choking by a child or adult in a safe work environment
4. What should be done in a situation of choking of an adult person, with simultaneous loss of consciousness and cessation of circulation and inability to remove the object of choking
5. What activities should be performed with a drowned person in winter conditions - with a person who fell into an ice hole and was pulled out after some time
6. Principles of first aid to a person who was electrocuted</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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