



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 2022		Academic year of realisation of subject		2025/2026		
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 -> Wydziały Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Grzegorz Redlarski				
	Teachers						
Lesson types and methods of instruction	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_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		
	[K6_U03] can prepare and present a presentation on the problems and results of an engineering task		Performs subsequent stages of first aid and selects the appropriate procedure depending on the circumstances. Performs first aid procedures in groups, assuming various functions.		[SU1] Assessment of task fulfilment		
	[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		

Subject contents	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.		
Prerequisites and co-requisites	None.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Practical exercises on phantoms	60.0%	100.0%
Recommended reading	Basic literature	Resuscitation guidelines 2021, European Resuscitation Council, Niel, Belgium 2021: https://cprguidelines.eu/guidelines-2021	
	Supplementary literature	Inżynieria Biomedyczna, Ryszard Tadeusiewicz, wydawnictwo AGH, Kraków 2008 (in Polish)	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none">1. What to do if a family member loses consciousness at home2. What to do if a person loses consciousness in a public environment in the face of other people brawling3. What to do in the event of moderate choking by a child or adult in a safe work environment4. 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 choking5. 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 time6. Principles of first aid to a person who was electrocuted		
Work placement	Not applicable		

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