



Subject card

Subject name and code	Engineering problems in surgery and orthopedics, PG_00055763						
Field of study	Wybrane zagadnienia z chirurgii i ortopedii dla inżynierów						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Faculty of Mechanical Engineering and Ship Technology -> Wydział Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		Włodzimierz Żychliński				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	15.0	0.0	0.0	45
	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	45		1.0		29.0	75
Subject objectives	Knowledge of the basics of orthopedics and traumatology in terms of human biomechanics.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W12] he/she has basic knowledge in the field of fundamental medical sciences, human body anatomy, and physiology, salvage service		Appropriately assesses the need for first aid, immobilization and assisted locomotion.		[SW2] Ocena wiedzy zawartej w prezentacji [SW3] Ocena wiedzy zawartej w opracowaniu tekstowym i projektowym		
	[K6_U10] he/she is able to assess the human body physic and basic functioning of the body organs, he/she is able to use basic medical knowledge to solve mechanical-medical problems in the scope of the MME study		Correctly evaluates the biomechanics of a healthy and sick person		[SU2] Ocena umiejętności analizy informacji [SU3] Ocena umiejętności wykorzystania wiedzy uzyskanej w ramach przedmiotu		
	[K6_K02] he/she is aware of importance of professional dealing and to fulfill ethics obligations, he/she understands other (non-technical) abilities of mechanical engineering professional, their influence on the society and security of environment, he/she is aware of importance of social cooperation		He ethically approaches the patient and his hardships of life in the personal and social aspect		[SK3] Ocena umiejętności organizacji pracy [SK2] Ocena postępów pracy		
Subject contents	Course content – lecture Issues of basic orthopedic diseases, multi-organ trauma, history of orthopedics, principles of operation of the operating block and sterilization room						
Prerequisites and co-requisites	Knowledge of the anatomy of the musculoskeletal system and its biomechanics						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Activity		100.0%		10.0%		
	Test		51.0%		90.0%		

Recommended reading	Basic literature	Chirurgia Narządu Ruchu Tylman Campbells Operative Orthopaedics Choroby układu ruchu Anderson Reumootropedia Sell
	Supplementary literature	Tom 2. Anatomii Człowieka Bochenek Atlas Anatomii Netter Anatomia i Fizjologia Człowieka Pituch
	eResources addresses	
Example issues/ example questions/ tasks being completed	History of orthopedicsAnatomy of limbs, spine, Multiple organ traumaOsteoarthritisConstruction and use of an orthopedic operating tableOperating block, sterilization room	
Practical activities within the subject	Not applicable	

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