



## Subject card

Subject name and code	Anatomy and physiology, PG_00047816						
Field of study	Biomedical Engineering						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2021/2022		
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	1	Language of instruction			Polish		
Semester of study	1	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Biomedical Engineering -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Mariusz Kaczmarek					
	Teachers	dr hab. inż. Mariusz Kaczmarek dr Karolina Kondej					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	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	4.0	41.0	75		
Subject objectives	The aim of the course is to familiarize students with the basics of human physiology and anatomy. The student should learn basics of the anatomy of the human body and the functioning of cells, organs and parts of the human body.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_W91] has basic knowledge of physical culture, anatomy and physiology, and recognizes physical activity as a component of culture in its broad sense (sport and recreation)	He has knowledge of anatomy and physiology and understands the aspects of physical activity in maintaining health well-being.			[SW1] Assessment of factual knowledge		
	[K6_W51] Knows and understands, to an advanced extent, selected aspects of human anatomy and physiology, constituting general knowledge related to the field of study	He has knowledge of anatomy and physiology and understands the technical aspects of life signals measurement methods.			[SW1] Assessment of factual knowledge		
Subject contents	1st Human anatomy and physiology basic concepts, feature the history of anatomy and physiology 2nd Basis of individual development of human embryology 3rd Human being as a whole 4th Plan for the human body 5th The organism as a set of systems: cell, tissue, body 6th Organs and their functions in the human body 7th Cells of the human body: the construction and development 8th Cell function of the human body 9th Tissue differentiation and distribution, their types and characteristics 10th The functioning of the tissues 11th Skeletal system anatomy / osteology / connections and bone / syndesmologia / 12th Anatomy of the muscular / miologia / 13th Musculoskeletal Physiology - Disorders 14th Anatomy of the central nervous system, peripheral and autonomic 15th Physiology of the central nervous system, peripheral and autonomic 16th Anatomy and physiology of the sense organs 17th Anatomy and physiology of the common shell - skin 18th Anatomy cardiovascular heart and vascular / blood vessels and lymph / 19th Physiology of cardiovascular heart function 20th Physiology of cardiovascular function in the vascular system 21st Anatomy of the respiratory system 22nd Respiratory Physiology 23rd The role of circulatory and respiratory gas transport 24th Anatomy of the digestive system 25th Physiology of the digestive system digestion 26th Metabolism and energy. Nutrition 27th Anatomy and physiology of the urinary system 28th Anatomy and physiology of the genital system 29th Blood and lymph building elements and their functions in the human body 30th Anatomy and physiology of the endocrine glands						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Midterm colloquium	51.0%	40.0%
	Activity/presence	60.0%	60.0%
Recommended reading	Basic literature	<p>A. Bochenek: Anatomia człowieka. T 1-4. PZWL Warszawa 2004</p> <p>A. Myśliwski: Podstawy cytofizjologii i histocytofizjologii. AMG, 2005, wyd. VII,</p> <p>B.K. Gołąb : Anatomia i fizjologia człowieka: podręcznik dla studentów wydziałów farmacji, zdrowia publicznego, analityki medycznej, pielęgniarstwa, biologii i nauki o Ziemi, studiów kosmetycznych i innych. Łódź. Jaktorów: Wydaw. Ośrodek Doradztwa i szkolenia, 1997</p> <p>Histologia, pod red. K. Ostrowskiego, PZWL Warszawa 1995</p> <p>J. Sokołowska-Pituchowa: Anatomia człowieka podręcznik dla studentów medycyny. PZWL Warszawa 2006</p> <p>W. Sawicki: Histologia. PZWL Warszawa 2008</p> <p>W.Z. Traczyk, A. Trzebski: Fizjologia człowieka z elementami fizjologii stosowanej i klinicznej. PZWL. Warszawa. 2001</p>	
	Supplementary literature	<p>William F. Ganong: Fizjologia : Podstawy fizjologii lekarskiej. PZWL Warszawa 1994</p> <p>W.Z. Traczyk: Fizjologia człowieka w zarysie. PZWL Warszawa 2006</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		