



JAGIELLONIAN
UNIVERSITY
IN KRAKÓW

Human Physiology

Educational subject description sheet

Basic information

Field of study University-wide Courses in English		Education cycle 2025/26	
Speciality -		Realization year	
Organizational unit Zajęcia ogólnouczelniane		Subject code ZOOENS.D100000.14661.25	
Study level dowolny poziom		Lecture languages english	
Study form full-time degree programme		Disciplines Medical Sciences	
Education profile General academic		ISCED classification 0917 Traditional and complementary medicine and therapy	
Mandatory elective		USOS code ZO-114-P	
Subject coordinator	Agata Ptak-Belowska		
Lecturer	Agata Ptak-Belowska		
Period Winter semester	Examination exam	Number of ECTS points 2.0	
	Activities and hours E-learning (lecture): 30, including: • Asynchronous classes: 30		

Goals

C1	The major goal of the Physiology course is to provide the clear and up-to-date knowledge on the functions and regulations of the human body for students.
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Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge - Student knows and understands:			
W1	clinical application of genetics;		written exam
W2	human vital signs;		written exam
W3	CNS basic functions.		written exam
Skills - Student can:			
U1	analyze full blood count results;		written exam
U2	understand the role of hormones;		written exam
U3	analyze principles of GI tract.		written exam
Social competences - Student is ready for:			
K1	use biological and ecological concepts in the context of human - living environment.		written exam

Calculation of ECTS points

Activity form	Activity hours*
E-learning (lecture)	30
analysis of literature given by the teacher	15
preparation for the exam	15
Student workload	Hours 60
	ECTS 2.0

* hour means 45 minutes

Study content

No.	Course content	Subject's learning outcomes
1.	Physiology of skeletal and smooth muscle and the functions of circulating blood.	W1, W2, K1
2.	Background necessary to understand the impulse conduction and stimulation in peripheral and central nervous system, higher functions and basic functions of centers in the brain and other centers of central nervous system in order to understand the homeostatic control of body organs and brain special senses.	W2, W3, K1
3.	Relevant physical laws explaining the blood flow and gaseous molecules flow along with factors affecting endothelial resistance in circulatory blood vessels and the term of air resistance in airways of respiratory tract.	W1, W2, W3, U1, U2, U3, K1
4.	Functions and regulatory mechanisms of all organs and systems of human body including muscular system, cardiovascular and respiratory systems, gastrointestinal tract, endocrine and urinary systems, skin surface system physiology, their interactions and dependence.	W2, W3, U1, U2, U3, K1

No.	Course content	Subject's learning outcomes
5.	Metabolic profile of major organs and systems.	U1, K1
6.	Acid-base balance, the mechanism of buffer functions and their significance for the future medical practice.	U1, K1
7.	Digestive tract enzymes, the mechanism of gastric acid formation and secretion, pancreatic functions, bile synthesis, release and circulation, the course and mechanism of digestion and absorption process of food products and gastrointestinal disorders.	U1, K1
8.	The process of food intake and the consequences of bad nutrition leading to nutritional disorders such as cachexia, obesity and unbalanced diet.	U3, K1
9.	Hormones and their regulation, release and mechanism of action and hormonal disturbances and disorders.	U2, K1

Course advanced

Teaching methods :

e-learning methods

Activities	Examination methods	Credit conditions
E-learning (lecture)	written exam	The online exam consists of 30 single-choice questions.

Entry requirements

None

Literature

Obligatory

1. Brak / None

Optional

1. Brak / None