

## Module card

I. GENERAL INFORMATION	
<b>THE WITELON STATE UNIVERSITY OF APPLIED SCIENCES IN LEGNICA DEPARTMENT of health sciences and physical culture</b>	
Field	Emergency Medical Care
Module title	Physiology
Language of lecture	english
ECTS points	4 points
Preliminary conditions:	Basic knowledge of biology at the secondary school level
II. Education aims	
<b>To provide students with knowledge about the functioning of individual human systems. To get acquainted with the methods of basic physiological parameters examination.</b>	
III. Education outcomes	
<p><b>Students will know and understand the neurohormonal regulation of physiological and electrophysiological processes occurring in the body;</b>  <b>The student knows and understands the participation of body systems and organs in maintaining homeostasis;</b>  <b>The student knows and understands the physiology of individual systems and organs of the body;</b>  <b>Students will know and understand the basics of the operation of control systems (homeostasis) and the role of positive and negative feedback;</b></p>	
IV. EDUCATIONAL METHODS	
<b>Assessment method: credit for evaluation, written colloquia, final exam</b>	
<b>Student workload: 100 hours</b>	
V. MODULE TYPE AND CONTENTS	
<p>Lecture and exercise:</p> <p>Introductory information. Life functions of man. Homeostasis. Neurohormonal regulation of vital functions. Autonomic nervous system. Hormones. Thermoregulation. Skeletal, smooth and cardiac muscle function. Blood composition and functions. Haematopoiesis. Functions of red blood cells, white blood cells and platelets. Coagulation and fibrinolysis. Bioelectrical and mechanical function of the heart. Systemic and pulmonary circulation. Coronary circulation. Bioelectrical activity of the cell. Resting and action potentials. Transmission of information between cells. Physiology of the blood and haematopoietic system. Interpretation of morphological, biochemical and coagulology blood test results.</p> <p>Physiology of the cardiovascular system. Measurement of heart rate, pulse and blood pressure. Performance and interpretation of the electrocardiogram. Physiology of the respiratory system. Performance and interpretation of spirometric examination. Gasometric examination. Physiology of exercise. Function of the respiratory system. External and internal respiration. Basics of spirometry and gasometry. Function of the gastrointestinal tract. Digestion and absorption. Motility of the gastrointestinal tract. Liver and pancreas functions. Renal function. Urine excretion. Regulation of water-electrolyte and acid-base balance of the body.</p> <p>Function of the central and peripheral nervous system. Unconditioned and conditioned reflexes. Physiology of sensation and sensory experience. Regulation of posture, balance and movement. Higher nervous activities. Sleep. Physiology of reproduction - sex determination, spermatogenesis and oogenesis, monthly cycle. Physiology of pregnancy and childbirth. Postpartum. Lactation. Physiology of the respiratory system. Performance and interpretation of spirometric examination. Gasometric examination. Physiology of exercise. Physiology of the digestive system.</p>	

Physiology of the excretory system. Water balance. Methods of estimating glomerular filtration rate. Physiology of the nervous system. Reflexes. Study of reflexes in man. Physiology of the sensory organs. Study of teleceptive, exteroceptive, proprioceptive sensation

VII. ECTS POINT BALANCE SHEET - STUDENT'S WORKLOAD

Category	Student's workload
<b>Contact hours</b>	<b>31</b>
Participation in lectures	20
Participation in classes, workshops	10
Exam	1
<b>Independent student's work</b>	<b>69</b>
Preparation for the lecture	10
Preparation for the classes, workshops	12
Preparation for the test	12
Preparation for the exam	15
Preparing the project	20
Preparing multimedia presentation	
<b>Total number of hours</b>	100
<b>ECTS points: 4</b>	

VIII. Recommended literature

- 1.
- 2.
- 3.