
Course title: PHYSIOLOGY

ECTS credit allocation (and other scores): 8

Semester: autumn

Level of study: ISCED-7 - second-cycle programmes (EQF-7)

Branch of science: Medical and health sciences

Language: English

Number of hours per semester: 78

Course coordinator/ Department and e-mail: Agnieszka Skowrońska, agnieszka.skowronska@uwm.edu.pl

Type of classes: classes and lectures

Substantive content

CLASSES: Electrical activity: resting membrane potentials and action potentials of neurons relative. Study of spinal reflexes. Sensory physiology. EEG. Physiology of muscles, tetanic contractions of muscles. Electromyography. Electro-oculography. Structure and function of Heart muscles. Composition of blood. Hemostasis: clotting and bleeding time tests. ABO/Rh Blood Group typing, the RH system. Peripheral circulation. Measurements of the artery blood pressure. 12 Peripheral circulation: Arterial palpation of the radial, ulnar, brachial and carotid pulses; simultaneously registration of the ECG and pulse. Thermoregulation: warm, cold, temperature and thermography.

LECTURES: Introduction to Physiology. Principles of regulation of Physiology as an integrative science. Organization of the nervous system. Skeletal, cardiac and smooth muscle. The limbic system. Memory processing. Sensory physiology. Reflex pathways in the brain. Autonomic sympathetic and parasympathetic pathways. Role of the autonomic division in homeostasis. Physiology of blood. The immune system. Hemostasis and tissue repair. Cardiovascular system. The heart as a pump.

Learning purpose: This course is designed to provide students with an understanding of the function and regulation of the human body.

On completion of the study programme the graduate will gain:

Knowledge: Knows the activities and mechanisms of regulation of all organs and systems of the human body.

Skills: Performs simple functional tests assessing the human body.

Social Competencies: Accepts responsibility for decisions made in the course of professional activities, including in terms of their own safety and that of others.

Basic literature: 1). Arthur C. Guyton, Guyton and Hall. "Textbook of Medical Physiology," 13th Revised Edition, wyd. Elsevier, 2016; 2). Costanzo L.S., Physiology, Sixth Edition, wyd. Elsevier, 2017

Supplementary literature: Costanzo L.S., BRS Physiology, Seventh Edition, wyd. Wolters Kluwier, 2018

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 80

Student's independent work: 120