Anatomy and Physiology 1. (2 ECTS)

Oktatás célja

Aim of the subject
To acquire basic physiological and sportphysiological knowledge on anatomical bases with a complex approach. The first semester positions the topic in the system of life sciences, discusses the structure and function of the cells and tissues, covers the nervous and muscle systems as well as those of the circulatory and breathing system. Finally, it is about the foundations of sports physiology.

Acquired competencies

Knowledge
• Knowledge about the body composition, about the main organ systems and their functions.
• Knows the cellular bases of the vital functions, the structure and operation of the cells.
• Being familiar with the anatomical structure and the functions of the internal organs (i.e. the cardio-vascular, respiratory, gastro-intestinal, excretory, reproductive systems).
• Knows the structure and main elements of the nervous system.
• Knows the structure of the motor system and the bases of motor regulation.
• Has some knowledge about the basic sport physiological processes.

Attitude
• Applies physiological approach to physical activity and leisure.
• In his/her work observes anatomical features and physiological needs.
• Requires constant renewing of the anatomical and physiological knowledge especially regarding sport physiological processes.

Abilities
• He/she takes notice about anatomical-physiological points of view when planning a given activity
• He/she can judge about a physiological feasibility of a given leisure/sport activity.
• Has enough knowledge to solve sports-physiological tasks.

Tantárgy tartalma

Major topics
6. The internal environment and the homeostasis. Fluid compartments and distribution.

7. Structure and operation of the heart: atria, ventricles, in- and output. The mechanical cardiac cycle: systole and diastole. The wind-cassel function. Stimulation and conduction in the heart. Autonomy of the heart. ECG. Regulation of the cardiac functions: mechanical aspects, ions, hormones, neuronal effects.


9. Regulation of the blood circulation. Autoregulation, local factors, hormonal effects, neuronal influence, and their relationships.


**Planned teaching methods**
Lecture with slides. Individual learning from a textbook. Consultation if necessary.

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**Számonkérési és értékelési rendszere**

**Requirements and evaluation**
Knowledge of the material.
Understanding the relationships.
Reproducing figures and tables.

Evaluation: exam mark (1 to 5)

The evaluation criteria:
- Knowledge of concepts.
- The most important anatomical details name.
- Physiological relationships and operational knowledge learned and cheese.
- Systematic knowledge.

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**Irodalom**

**Compulsory literature**