Physiology of sport and exercise - opis przedmiotu

Informacje ogólne

Nazwa przedmiotu	Physiology of sport and exercise
Kod przedmiotu	16.1-WB-P-PhS-S20
Wydział	Wydział Nauk Biologicznych
Kierunek	WNB - oferta ERASMUS
Profil	-
Rodzaj studiów	Program Erasmus
Semestr rozpoczęcia	semestr zimowy 2020/2021

Informacje o przedmiocie

Semestr	1
Liczba punktów ECTS do zdobycia	3
Typ przedmiotu	obowiązkowy
Język nauczania	angielski
Sylabus opracował	• dr hab. Mariusz Naczk, prof. UZ

Formy zajęć

Forma zajęć	Liczba godzin w semestrze (stacjonarne)	Liczba godzin w tygodniu (stacjonarne)	Liczba godzin w semestrze (niestacjonarne)	Liczba godzin w tygodniu (niestacjonarne)	Forma zaliczenia
Laboratorium	15	1	-	-	Zaliczenie na ocenę
Wykład	15	1	-	-	Zaliczenie na ocenę

Cel przedmiotu

The aim of the course is to: familiarize the student and his understanding of the principles of the functioning of the human body during physical exercise with different characteristics, acquainting the student with the physiological principles of recreational and sports training. After classes, the student should know and understand the impact of various forms of training on the body and the impact of the lack of physical activity on the human body. In addition, the student knows the tests to assess the physical performance of a person and can choose the appropriate to assess the performance in individual sports. Familiarizing the student with physiological changes occurring in the human body from birth to late old age. The student understands the influence of the environment in which he performs physical effort on the human body.

Wymagania wstępne

Knowledge of human anatomy, especially the structure of the muscular system, the position of individual muscles, knowledge of human biochemistry, knowledge of the physiology of the human body.

Zakres tematyczny

Lectures:

1.Principles of physical training:

- The basic principles of training
- Strength training
- Endurance training

2.Adaptation for strength training

- Strength training and its impact on the level of physical fitness
- Mechanism of muscle strength increase
- Pain and muscle spasms
- Strength training for a special group of people

3.Adaptation for aerobic and anaerobic training

- Adaptation for aerobic training
- Adaptation for anaerobic training
- The specificity of training and cross-training

4.Effort in a cold and warm environment

- Body temperature regulation
- A physiological response to training in a hot climate
- Health risk when training in a hot climate
- Acclimatization to exercise in a warm climate
- Effort in a cold environment

- Reaction to physiological effort in a cold environment
- Health risk when exercising in a cold environment

5.Physical effort in an alpine environment

- Environmental conditions in high mountain conditions
- Physiological reactions when staying in high mountain conditions
- Physical effort and sport in high mountain conditions
- Acclimatization - long-term staying in high mountain conditions
- Health risk when staying in high mountain conditions
- Optimization of sports training

6.Health training

- Principles of AHA, WHO and ACSM
- The best form of physical activity for health improve

7.Health training in elderly, aerobic and strength training for elderly

Class:

1. Sports training and its rules.
2. Strength training methods and their physiological consequences including developmental age.
3. Methods of endurance training their physiological consequences including developmental age. High-mountain training, rules, goals and legitimacy of application in selected sports. Cessation of training and its consequences for aerobic and anaerobic capacity.
4. Overtraining.
5. Starting states of the organism.
6. Thermoregulation during rest and efforts with different characteristics and in different weather conditions.
7. Health training

Metody kształcenia

Lecturers and laboratories, discussions and analysis on the results of experiments, individual students readings of laboratory documentation.

Efekty uczenia się i metody weryfikacji osiągania efektów uczenia się

Opis efektu	Symbole efektów	Metody weryfikacji	Forma zajęć
Is able to use technically advanced equipment and apparatus used in the assessment of aerobic, anaerobic capacity, muscle strength, body composition and other		• test egzaminacyjny z progami punktowymi	• Wykład • Laboratorium
Is able to present and explain problems in the field of physical education and health protection, knows the principles applicable to the dosage of physical exercise, understands the importance of volume, intensity of training and the importance of optimal rest for obtaining supercompensation		• dyskusja • test • eksperyment	• Wykład • Laboratorium
Bearing in mind the physiological limitations of students, demonstrates activity and creativity in self-determination of priorities and takes actions to implement specific tasks or tasks, is determined to pursue the goal of improving the health of the society through properly organized and conducted physical activity		• dyskusja	• Laboratorium
Describes measurement methods in the sciences of physical culture. He can apply in practice advanced methods and techniques for conducting exercise tests. The student (s) has knowledge that allows him to interpret the results of performance tests. Is able to assess the level of the examined capacity, explain to the researcher what is its level and can suggest and implement training methods that will improve the test's efficiency.		• dyskusja • test • eksperyment	• Laboratorium
Aware of the role of physical activity in current times, it can motivate people of all ages to undertake pro-health activities and active participation in physical activity		• dyskusja • test • eksperyment	• Wykład • Laboratorium
Has an extensive knowledge of the physiological and biological foundations of health sciences and physical culture sciences. It allows him to assess the state of the body during exercise. Student is able to assess and explain the risks resulting from improper dosing of physical effort		• sprawdzian z progami punktowymi	• Laboratorium
Has a detailed knowledge of the structure and functions of the human body in the fields of health and physical education, the student is eager to read scientific articles on the physiology of physical efforts and sports physiology and has the ability to verify and reliable, objective assessment presented in them information		• dyskusja	• Laboratorium

Opis efektu	Symbole efektów	Metody weryfikacji	Forma zajęć
Knowing the body's response to various forms of physical exertion, it is able to take care of its own safety and those under care in educational, recreational, health and sports activities		• dyskusja • test egzaminacyjny z progami punktowymi • eksperyment	• Wykład • Laboratorium

Warunki zaliczenia

Laboratories: credit for the assessment includes the material of the exercise, the condition for passing is the student receives at least 3 positive partial marks of five questions that are asked during the test, to get a positive grade from the partial question the student must demonstrate a minimum of 50% know what was presented to him at classes.

Lectures: the exam for the assessment includes lecture and exercise material, the condition for passing the exam is to get a positive grade from the exercises. The condition for passing the exam is to receive by the student a minimum of 50% of points possible to receive from the test.

Literatura podstawowa

1. Physiology of Sport and Exercise 6th Edition With Web Study Guide. W. Larry Kenney, Jack Wilmore, David Costill. Cloth Pass/Kycd, 2015.
2. Górski J. Fizjologia wysiłku i treningu fizycznego. PZWL Warszawa 2011.
3. Jaskólski A - Podstawy fizjologii wysiłku fizycznego z zarysem fizjologii człowieka. AWF Wrocław, 2002.
4. Kozłowski S, Nazar K - Wprowadzenie do fizjologii klinicznej. PZWL, Warszawa, 1995.
5. Fizjologia wysiłku i treningu fizycznego, 2019. / red. nauk. Jan Górski, Warszawa : Wydawnictwo Lekarskie PZWL, s. 81--120, ISBN: 978-83-200-5676-1
6. Magazines and e-books available at the University Library, digital databases - medical sciences and health sciences http://www.bu.uz.zgora.pl/

Literatura uzupełniająca

Uwagi

Zmodyfikowane przez dr Ewa Skorupka (ostatnia modyfikacja: 23-06-2020 14:12)