

COURSE INFORMATION SHEET

University: Catholic University in Ružomberok	
Faculty: Faculty of Health	
Course code: KFYZIO/54F2001W/17	Course title: Human Biomechanics
Type and range of planned learning activities and teaching methods: Form of instruction: Lecture Recommended study range: hours weekly: 3 hours per semester: 36 Teaching method: on-site (distance method according to the document Príkaz rektora P-8/2020 since 15. 10. 2020)	
Credits: 3	
Recommended semester/trimester: 1.	
Level of study: II.	
Prerequisites:	
Requirements for passing the course: The control of self-study takes place by assigning and elaborating the semester work and its presentation, it forms 10% of the evaluation in the final evaluation of the subject. During the semester: there will be two written examinations in class and two oral examinations in practice. To participate in the exam, it is necessary to obtain 60% of the examinations. Final evaluation: will be based on the total number of points obtained from the examinations and the oral exam. Course evaluation: A – 100%-93% B – 92%-85% C – 84%-77% D – 76%-69% E – 68%-60% FX – 59%- 0%	
Learning outcomes of the course: Objective of the course: Acquire the knowledge base in terms of biomechanical conditions in various load processes as well as load methods. Theoretical knowledge: The student manages and knows the properties of tissues (soft and hard), their behavior under biomechanical load in relation to biomechanical action. The student manages the issue of human biomechanics in the theoretical area. Practical skills: The student presents the knowledge that is used in physiotherapeutic procedures and in subsequent treatment. The student manages the issue of human biomechanics in the practical area.	
Course contents: Lectures: 1. Introduction to biomechanics 2. Human Locomotor system	

3. Parameterization of the human musculoskeletal system
4. Biomechanical properties of soft tissues
5. Biomechanical properties of hard tissues
6. Biomechanics of joints
7. Biomechanics of the spine
8. Biomechanics of upper limbs
9. Biomechanics of the lower limbs
10. Osteosynthesis material
11. Repositioning systems
12. OKC- open chains and CKC- closed chains

Recommended or required literature:

1. ŽIVČÁK, J., HUDÁK, R. Biomechanizmy. Prešov, 2001. ISBN 80-89-040-06-3
2. ŽIVČÁK, J., HUDÁK, R. Biomechanizmy. Sluchové stimulatory. Prešov, 2002.
3. ŽIVČÁK, J. a kol. Základy bioniky a biomechaniky. Prešov, 2005.

Language of instruction:

Slovak language

Notes:

The subject is taught only in the winter semester and is evaluated only in the relevant examination period of the winter semester of the academic year.

Course evaluation:

Assessed students in total: 74

A	B	C	D	E	FX
40.54	25.68	25.68	5.41	1.35	1.35

Name of lecturer(s): Mgr. Ivana Aštaryová, PhD.

Last modification: 25.11.2020

Supervisor(s): prof. MUDr. Anna Lesňáková, PhD.