



LITHUANIAN SPORTS UNIVERSITY

STUDY MODULE PROGRAMME (SMP)

Module Code	B	115	B	019	Accredited until				Renewal date
	Branch of Science		Progr.	Registr. №.					

Entitlement

Biomechanics

Prerequisites

Anatomy

Main aim

To provide students with the knowledge to understand basic mechanical principles and laws and apply them to the analysis of human motion.

Provided knowledge and abilities

1. Describe basic concepts related to the biomechanical analysis of movement.
2. Apply biomechanical principles to describe the internal and external forces associated with human movement.
3. Identify and describe the biomechanical factors that contribute to efficient human movement.

Summary

Informacija ruošiamą

Level of module

Level of programme		Subject group (under the regulation of the area)
Cycle	Type	
First	Bachelor	Bendrojo universitetinio lavinimo

Group under financial classification

Syllabus

№.	Sections and themes	Responsible lecturer
1.	Mechanics of musculoskeletal system. Biomechanics of bone, tendon, ligaments, cartilage.	
2.	Biomechanics of muscle. Neurologic considerations for movement.	
3.	Introduction to biomechanics: core areas of study, anatomical movement descriptions, reference systems	
4.	Linear kinematics and kinetics.	
5.	Angular kinematics and kinetics.	
6.	Work, Power and Energy	
7.	Qualitative Biomechanical Analysis to Understand Injury Development.	
8.	Qualitative Biomechanical Analysis to Improve Technique	

Teaching/learning methods:

Informacija ruošiamą

Evaluation procedure of knowledge and abilities:

References

№.	Title	Edition in Lithuanian Sports University library		In Lithuanian Sports University bookstore	Number of ex. in the methodical cabinet of the depart.
		Pressmark	Number of exemplars		
1.	Muckus, K. Biomechanikos pagrindai: vadovėlis: LKKA, 2006. - 304 p.			Yes	

Additional literature

№.	Title
1.	Biomechanical basis of human movement/Joseph Hamill, Kathleen M. Knutzen, Timothy R.Derrick.—Fourth edition.

