Subject	**Biomechanics**		
Type	Type	Semester	ECTS
	MANDATORY (M)	III	4
Lecturer	Dr.Sc. Milaim Berisha		
Aims and Objectives	The aim of the course is to provide a general knowledge about the concept of biomechanics and its applicative benefits in sports and movement science. Thus, the course aims to enable students to understand the human mechanics and relationships with the body compositional and motor skills features		
Learning Outcomes	Upon completion of this module, students shall be able to: ✓ Understand the concepts of Biomechanics ✓ Explain the general concepts of human mechanics ✓ Explain the benefits of biomechanic in sports and movement science ✓ Explain the human mechanics and body compositional features relationships ✓ Explain the human mechanics and motor skills features relationships		
Content	**Week**	**Topics**	
	Syllabus presentation		
	1	Definition and classification of Biomechanics	
	2	Content and terminology of Biomechanics	
	3	Linear movements kinematics	
	4	Angular movements kinematics	
	5	Projectiles	
	6	Newton Laws and force concept	
	Mid-term exam – 1		
	7	Energy, power and force	
	8	Momentum concept	
	9	Momentum and impulse	
	10	The center of gravity	
	11	Inertia	
	12	Biomechanics laws in sports and movement science	
	Mid-term exam – 2		
Teaching/Learning Methods	**Activity**		**Weight (%)**
	Lectures		40%
	Lab		40%
	Research		10%
	Independent learning		10%
Assessment Methods	**Methods of assessment:**		**%**
	Participation		10%
	a) Mid-term exam -1		20%
	b) Mid-term exam - 2		20%
	Lab		10%
	Task		40%
Resources	**Resources**		**Number**
	Lectures		1
	Presantations		1
	Web of science		1
	PubMed		1
	Scopus		1
ECTS Workload	**Activity**	**Weekly hours**	**Workload**
	Lectures	2	24
	Lab	1	12
	Independent learning	n/a	44
	Examination preparation	n/a	20

Literature	• Chapman, A. E. (2008). Biomechanical analysis of fundamental human movements. Human Kinetics. • Robertson, G. E., Caldwell, G. E., Hamill, J., Kamen, G., & Whittlesey, S. (2013). Research methods in biomechanics. Human kinetics. • Serbest, K., Berisha, M., & Cilli, M. (2018). Dynamic analysis of three different high bar dismounts in the simmechanics environment. *Journal of Mechanics in Medicine and Biology*, *18*(03), 1850030. • Berisha, M. (2021). A biomechanical examination of the inclusion of active flexibility in artistic gymnastic movements requiring mobility. *Pedagogy of Physical Culture and Sports*, *25*(5), 267-274. • Berisha, M. (2021). A biomechanical examination of the inclusion of active flexibility in artistic gymnastic movements requiring mobility. *Pedagogy of Physical Culture and Sports*, *25*(5), 267-274.
Ethical standards	This course follows UBT College's Code of Ethics, requiring all students to behave accordingly. Any case of academic misconduct, including but not limited to cheating, plagiarism, or other forms of dishonesty, will lead to significant punishment such as failure of the specific assessment or the entire course, as well as further disciplinary measures in accordance with UBT College's academic integrity policies.
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