Subject	**Technology and Innovation in Sports and Exercise**		
Type	Type	Semester	ECTS
	ELECTIVE (E)	2	3
Lecturer	Dr. Milaim Berisha		
Aims and Objectives	Besides the awareness of the students about the latest technology involved in sport sciences, and the effect of these technologies in sports performance, this course aims to enable student to be indipendent in th using gtechnology in training programs preparation, performance testing, rehabiliation programs, health and exercise programs applications, etc.		
Learning Outcomes	Upon completion of this module, students should be knowledgeable about: • The latest technology used in sports science • The effect of technology on athletes' performance • The effect of technology on performance measurements • The use of technology in designing training programs • The use of technology in performance measurements • The use of technology in statistics and data analysis		
Content	**Week**	**Topics**	
	Syllabus presentation		
	1	Wearable technology (trackers, GPS, heart ate monitors, etc)	
	2	Motion analyzers (Vicon, Qualysis, Kinovea, Tracker, etc)	
	3	Data-driven programs (statistics for strategy development)	
	4	Virtual reality (E-sports)	
	5	Technology of sports equipment	
	6	Sports technology and health (nutrition, hydration programs, etc.)	
	Mid-term exam – 1		
	7	AI in sports science	
	8	The future of technology in sports and health science	
	9	Technology used in education and sports learning (3D Gym)	
	10	Traditional methods of performance measurements versus technological methods	
	11	Traditional methods of training versus technological methods	
	12	Challenges of the sports caused by technology	
	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		50%
ECTS Workload	**Activity**	**Weekly hours**	**Workload**
	Lectures	2	24
	Lab	n/a	12
	Independent learning	n/a	29
	Examination preparation	n/a	10
Literature	Noraxon: https://www.noraxon.com/ GPS catapult system: https://www.catapult.com/ Gym aware system: https://gymaware.com/ Fit light system: https://www.fitlighttraining.com/?srsltid=AfmBOopFBgXDrDJO_WBcyZ54lux5ymgb92vYkkxy-5Zci2ynB7dlnJWu Sigma balance platform: https://www.markmed.pl/en/sigma_balance_diagnostics		

	My jump: https://play.google.com/store/apps/details?id=com.my.jump.lab&hl=en_US VALD Performance: https://valdperformance.com/ Computer Science in Sport: Modeling, Simulation, Data Analysis and Visualization of Sports-Related Data: https://link.springer.com/book/10.1007/978-3-662-68313-2 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). Determination of flexibility and mobility levels for female physical education students and motor asymmetry analysis. *Physical education of students*, *25*(5), 272-279. Berisha, M., Ceyhan, G., Büyükergün, A., & Gjaka, M. (2023). A New Approach to Active Flexibility Measurement in Students of Sports Sciences Faculties. *Kinesiologia Slovenica*, *29*(2), 195-207.
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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