CLINICAL BIOMECHANICS

1	Course Title:	CLINICAL BIOMECHANICS	
2	Course Code:	FTR1010	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. Özden ÖZKAL	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Dr. Öğr. Üyesi Özden ÖZKAL e-posta:ozdenozkal@uludag.edu.tr tel:0224-2942450/55372 Adres: Bursa Uludağ Üniversitesi Sağlık Bilimleri Fakültesi Fizyoterapi ve Rehabilitasyon Bölümü Görükle Kampüsü-Bursa	
17	Website:		
18	Objective of the Course:	To define basic terms and principles related to clinical biomechanics, to approach and analyze the situations encountered in clinical problem solving biomechanically.	
19	Contribution of the Course to Professional Development:	The professional contribution of this course is to provide a basis for physiotherapists to choose the most biomechanically appropriate exercise for the patient during case evaluation and rehabilitation practices.	
20	Learning Outcomes:		
		1	Define the basic definitions and principles of biomechanics.
		2	Explain the basic principles of force and motion.
		3	Explain the biomechanical properties of tissues.
		4	Explains the biomechanical properties of joints.
		5	Explain the biomechanical properties of gait.
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21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Introduction to the course, informing about the course	
2	Introduction to biomechanics basic concepts	

3	Biomechanical properties of tissues: tendon ligament	
4	Biomechanical properties of tissues: bone	
5	Biomechanical properties of tissues: muscle	
6	Biomechanical properties of tissues: nerve	
7	Upper extremity biomechanics: Shoulder biomechanics	
8	Upper limb biomechanics: Elbow and hand biomechanics	
9	Spine biomechanics	
10	Lower extremity biomechanics: Pelvis and hip biomechanics	
11	Lower extremity biomechanics: Knee biomechanics	
12	Lower extremity biomechanics: foot biomechanics	
13	Gait and balance biomechanics	
14	Biomechanical research areas	

22	Textbooks, References and/or Other Materials:	1. Lecture Notes. 2. Akalan NE, Temelli Y. Lecture with basic kinesio-mechanical clinical examples. İstanbul tıp kitabevleri,2016. 2. Peterson Dr, Bronzino JD. Biomechanics: Principles and Practices. CRC Press, Taylor and Francis Group, 2015. 3. Winkelstein, Beth A. Orthopaedic biomechanics. CRC 5. Brinckmann P, Frobin W, Leivseth G. Musculoskeletal biomechanics. Stuttgart Thieme, 2002.

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	7	4.00	28.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	14.00	14.00
Others	0	0.00	0.00
Final Exams	1	20.00	20.00
Total Work Load			104.00
Total work load/ 30 hr			3.00
ECTS Credit of the Course			3.00

TERM LEARNING ACTIVITIES	**NUMBE**	**WEIGHT**
Midterm Exam	1	40.00
Home work-project	0	0.00
Final	2	100.00
Total		100.00
Success Grade		
Contribution of Final Exam to Course Grade		
Measurement and Evaluation Techniques Used in the Course		Relative evaluation

24 ECTS / WORK LOAD TABLE

25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS

	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	5	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0

ÖK3	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**