FTR302 - Biomechanics And Kinesiology II

Course Name	Code	Term	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)		ECTS
Biomechanics and Kinesiology II	FTR 302	4. semester/2.term Spring	3	-	-		2

Prequisites	
Course language	Turkish
Course type	Compulsory
Learning and teaching strategies	Lecture
Instructor (s)	
Course objective(Aim of course)	Basic knowledge on mechanics/pathomechanics of columna vertebralis, pelvis, hip, knee, ankle joint/foot and shoulder-arm komplex, elbow and wrist are given. A student who successfully completes the course is expected to have acquired the competency to carry the theoretical knowledge to the pathological conditions of lower and upper limbs and spine.
Learning outcomes	1. Describes the normal motion/function and make comparisons with pathological conditions. 2. Describes the anatomic and mechanical characteristics of columna vertebralis and compares with pathological conditions; learns preventative factors, ergonomic principles and importance of exercise. 3. Learns mechanic and pathomechanic features of pelvis, hip, knees, ankle and foot, questions the knowledge to analyse, Learns the kinematic and kinetic data for the dynamic activities of lower limbs. 4. Defines mechanical and pathological conditions of shoulder-arm complex, elbow, wrist, hand and uses this knowledge in practice.
References	--Gül Şener ; Fatih Erbahçeci. Kinezyoloji ve biyomekanik. Ankara : Hipokrat Kitabevi, 2016 -N.Ekin Akalan, Yener Temelli. Temel kinezyo-mekanik : klinik örnekli anlatım. İstanbul : İstanbul Tıp Kitabevleri, 2017

Course outline weekly:

Weeks	Topics
1. Week	Mechanics features of columna vertebralis
2. Week	Pathomechanics features of columna vertebralis
3. Week	Mechanics of pelvis
4. Week	Pathomechanics of pelvis
5. Week	Mechanics and pathomechanics of hip joint
6. Week	Mechanics and pathomechanics of knee joint
7. Week	Mechanics of foot- ankle mechanics
8. Week	Midterm Exam
9. Week	Foot deformities
10. Week	Mechanics of shoulder-arm komplex
11. Week	Pathomechanics of shoulder-arm komplex
12. Week	Mechanics and pathomechanics of elbow joint
13. Week	Mechanics and pathomechanics of wrist joints and hand
14. Week	An overview
15. Week	An overview

ECTS (Student Work Load Table)

Activities	Number	Duration	Total Work Load
Course Duration (X14)	14	3	42
Laboratory			
Practice			
Field Study			
Study Time Out of Class (Free study / Group Work/ Pre-Study)	1	2	2
Presentations (Video shoot/Poster preparation/Oral presentation, Etc.)			
Seminars			
Project			
Case study			
Role playing, Dramatization			
Writing articles, Critique			
Time To Prepare For Midterm Exam	1	2	2
Final Exam Preparation Time	1	5	5
Total Work Load (hour) / 25(s)	51 / 25 = 2.04		
ECTS	2		

Evaluation System

Mid-Term Studies	**Number**	**Contribution**
Midterm exams	1	%90
Quiz		
Laboratory		
Practice		
Field Study		
Course Internship (If There Is)		
Homework's	1	%10
Presentation and Seminar		
Project		
Other evaluation methods		
Total Time To Activities For Midterm		100
Final works		
Final	1	%100
Homework		
Practice		
Laboratory		
Total Time To Activities For Midterm		100
Contribution Of Midterm Studies On Grades		%40
Contribution Of Final Exam On Grades		%60
Total		100

The relationship between learning outcomes and the program qualifications of the courses

Program Qualifications	**Learning outcomes**			
	L.O.1	**L.O. 2**	**L.O.3**	**L.O.4**
1-Acquire proficient infrastructure related to the field of Physiotherapy and Rehabilitation, gain the ability to use theoretical and practical knowledge and skills in this field.	**5**	**5**	**5**	**5**
2-Identify, define the factors affecting health and gain problem-solving skill by using the information they have; plan and implement a treatment and exercise program with appropriate evidence-based methods and new techniques.	**5**	**5**	**5**	**5**
3-Gain the ability to use information technologies effectively, as well as the ability to select and use modern tools, techniques and agents necessary for physiotherapy and rehabilitation applications.				
4-Design individual and multidisciplinary research, keep records, prepare reports, analyze and interpret results for quality service and research in health sciences.				
5-They conduct a literature search to access the information by using evidence-based databases and information sources.				
6-Gain autonomy in interdisciplinary and individual studies, ability to work effectively and take responsibility and awareness of the universal and social effects of their professional practice.				
7-Adopt life-long learning; contribute to quality improvement, field-related training and introductory programs and exhibit their professional behavior at national and international level.				
8-Have deontological and ethical awareness in professional researches and applications.				

Contribution to the level of proficiency: 1. Lowest, 2. Low / Medium, 3. Average, 4. High, 5. Excellent