Course Syllabus

Code - Course Title	**FKL538 - Pharmaceutical Biophysics**
Course Type	I. SEMESTER
Laboratory + Practice	2+1
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	DR. ÖĞR. ÜYESİ FEYZA ALYU ALTINOK

Mode of Delivery	Face-to-face
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	-
Recommended Resources	-
Work Placement	-

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Explanation of concepts in biophysics and cell electrophysiology	
Week - 2		Investigation of cell membrane biophysics through Nernst's equation and Fick's law of diffusion	
Week - 3		Examination of Hodgkin-Huxley modeling in biophysics applications	
Week - 4		Investigation of Boltzmann distribution and equation in biophysics applications	
Week - 5		Discussing the functionality of the electrophysiological properties of ion channels	
Week - 6		Explanation of the Patch Clamp (Current or Voltage Clamp) method	
Week - 7		Discussing the application areas of the Patch Clamp (Current or Voltage Clamping) method	
Week - 8		Introduction to experimental application with patch clamp method	
Week - 9		Taking control records in experimental application with patch clamp method	
Week - 10		Application of patch clamp technique with pharmaceutical agents	
Week - 11		Application of patch clamp technique with pharmaceutical agents	
Week - 12		Application of patch clamp technique with pharmaceutical agents	
Week - 13		Application of patch clamp technique with pharmaceutical agents	
Week - 14		Discussion of the mechanisms of action for pharmaceutical agents on biophysical parameters	

Learning Outcomes

#	Learning Outcome
1	Will be able to explain the concepts of biophysics.
2	Will be able to explicate cell electrophysiology.
3	Will discuss the electrophysiological properties of ion channels over their functionality.
4	Will interpret the principles of patch clamp method.
5	Will be able to discuss the application of patch clamp method.
6	Will be able to discuss the mechanism of action for pharmaceutical agents on biophysics parameters.

Sustainable Development Goals

No content has been provided.

Course Theme

No content has been provided.

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	0	0	0
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	0	0	0
Ödevler	0	0	0
Proje - Rapor - Sunum Hazırlama	0	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	0	0	0
Final Sınavı Hazırlığı (sınav süresi dahil)	0	0	0
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	0	0	0
Staj Uygulaması	0	0	0
		Calculated ECTS	**0**

Assessment Method and Passing Requirements

No content has been provided.