Course Syllabus

Code - Course Title	**ECZ909 - Pharmaceutical Biotechnology I**
Course Type	VII. SEMESTER
Laboratory + Practice	2+0
ECTS	**2.0**
Language of Instruction	Türkçe
Course Type	Required Courses
Course Instructor(s)	PROF. DR. GÜLAY BÜYÜKKÖROĞLU, DOÇ. DR. BEHİYE ŞENEL

Mode of Delivery	The mode of delivery of this course is Face to face
Prerequisites	ECZ309 Pharmaceutical Technology I course has to be taken
Courses Recomended	BİY346 of Molecular Biology course is recommended for this course
Work Placement	Not Applicable

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		History and Scope of Pharmaceutical Biotechnology	
Week - 2		Production of Antibiotics and Vitamins by Fermentation	
Week - 3		Recombinant DNA Technology and Its History	
Week - 4		Methods Used in Recombinant DNA Technology	
Week - 5		Laboratory Techniques Used in Recombinant DNA Technology	
Week - 6		Gene Cloning	
Week - 7		Ex-vivo and In-vivo gene therapy	
Week - 8		Viral and Non-Viral Vectors	
Week - 9		Antisense Technology and Aptamers	
Week - 10		Therapeutic Protein Structures and Stability	
Week - 11		Modifications to Therapeutic Proteins	
Week - 12		Electrophoresis Analyses of Therapeutic Proteins	
Week - 13		Chromatography Methods in Therapeutic Proteins	
Week - 14		Discussion	

Learning Outcomes

#	Learning Outcome
1	Will Be Able to List the History of Pharmaceutical Biotechnology and Explain Its Scope.
2	Will Be Able to Explain the Production of Antibiotics and Vitamins by Fermentation.
3	Will Be Able to Recognize Recombinant DNA and Explain the Methods Used in Its Production.
4	Will Be Able to Explain the Laboratory Techniques Used in Recombinant DNA Technology.
5	Will Be Able to Explain Gene Cloning.
6	Will Be Able to Explain Gene Therapy and its Construction Methods
7	Will Be Able to Explain Antisense Technology.
8	Will Be Able to Explain Aptamers.
9	Will Be Able to Explain the Structures of Therapeutic Proteins
10	Will Be Able to Discuss the Analysis Performed on Therapeutic Proteins.

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.