Course Syllabus

Code - Course Title	**ECZ910 - Pharmaceutical Biotechnology II**
Course Type	VIII. 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 Biotechnology 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		Recombinant Therapeutic Protein Production	
Week - 2		Recombinant Therapeutic Protein Purification Steps	
Week - 3		Formulation of Recombinant Therapeutic Proteins	
Week - 4		Recombinant Therapeutic Product Filling, Labeling and Packaging Methods	
Week - 5		Cytokines: Interferon Family, Interleukins, Hormones and Their Formulations	
Week - 6		Recombinant Blood Products and Therapeutic Enzymes	
Week - 7		The Immune System and Antibodies	
Week - 8		Antibodies and Immunotherapy Used in Therapy	
Week - 9		Vaccines and Adjuvants	
Week - 10		Stem Cell Use in Therapy	
Week - 11		Advanced Therapy Medicinal Products and Individualized Treatment Options	
Week - 12		Biosimilars and Formulation Development	
Week - 13		Characterization of Biosimilars	
Week - 14		Discussion	

Learning Outcomes

#	Learning Outcome
1	Will be able to explain Recombinant Protein Production and Purification Stages.
2	Will Be Able to Explain the Final Product Formulation of Recombinant Therapeutic Protein.
3	Will Be Able to Explain Cytokines and Give Examples of Their Formulations.
4	Will Be Able to List Recombinant Hormones and Give Examples of Their Formulations.
5	Will Be Able to Count Recombinant Blood Products and Enzymes.
6	Will Be Able to Explain Antibodies, Vaccines and Adjuvants.
7	Will be Able to Explain the Use of Stem Cells in Treatment.
8	Will Be Able to Give Examples of Advanced Therapy Medical Products.
9	Will Be Able to Discuss Biosimilars and Their Formulations.
10	Will be able to list the characterization studies performed on biosimilars.

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.