Course Syllabus

Code - Course Title	**FKL625 - Gene Transfere Methods**
Course Type	II. SEMESTER
Laboratory + Practice	3+0
ECTS	**7.5**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	DR. ÖĞR. ÜYESİ ELİF KAYA TİLKİ

Mode of Delivery	The mode of delivery of this course is Face to face
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	There is no recommended optional programme component for this course.
Recommended Resources	Mauro Giacca. Gene Therapy. Springer-Verlag Italia, 2010.Joseph M. Le Doux (ed.). Gene Therapy Protocols Volume 2: Design and Characterization of Gene Transfer Vectors (Third Edition). Humana Press, USA, 2008.W. C. Heiser (Ed.). Gene Delivery to Mammalian Cells: Vol. 1: Nonviral Gene Transfer Techniques, Humana Press Inc., Totowa, NJ, 2008Mouldy Sioud, siRNA and miRNA Gene Silencing, Humana Press Inc., New York, 2009

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Structure of Genes, Therapeutic Nucleic Acids	
Week - 2		Basic Principles of Gene Transfer: Transfection, Transformation	
Week - 3		Restriction Indonucleases and Their Use in Recombinant Technology	
Week - 4		Use of Genomic and cDNA Libraries; DNA Cloning and Product Identification	
Week - 5		Properties of Plasmid and Bacteriophages	
Week - 6		Cloning of Eukaryotic Genes in Bacterial Plasmids	
Week - 7		Cloning Eukaryotic Genes Within the Phage Genome	
Week - 8		Gene Transfer Methods: Biological and Chemical Methods	
Week - 9		Gene Transfer Methods: Physical and Mechanical Methods	
Week - 10		Gene Transfer Into Eukaryotic Cell; Transgenic Animals and Uses	
Week - 11		Recombinant Protein Production, Vaccine and Hormone Production	
Week - 12		siRNA and miRNA Gene Silencing	

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 13		Gene Therapy and Clinical Applications	
Week - 14		Gene Therapy and Clinical Applications	

Learning Outcomes

#	Learning Outcome
1	can be explain the basic principles of gene transfer
2	can be list the gene transfer methods
3	can be discuss the usage areas of gene transfer methods

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.