Course Syllabus

Code - Course Title	**FBİ501 - Molecular Biotechnology Techniques**
Course Type	I. SEMESTER
Laboratory + Practice	3+0
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Required Courses
Course Instructor(s)	DOÇ. DR. BEHİYE ŞENEL

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	Advanced Methods in Molecular Biology and Biotechnology: A Practical Lab Manual, Authors:Khalid Z. Masoodi, Sameena Maqbool Lone and Rovidha Saba RasoolMolecular Biology Techniques A Classroom Laboratory Manual, Authors: Susan Carson, Heather B. Miller, ... Melissa C. Srougi
Work Placement	Practical training is not required for this programme

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Structure and Properties of Nucleic Acids	
Week - 2		Genetic Code and Protein Synthesis	
Week - 3		Gene Structure and Gene Expression	
Week - 4		Databases and Biological Networks for Gene Analysis	
Week - 5		Recombinant DNA Technology	
Week - 6		Basic Principles of Gene Cloning	
Week - 7		Polymerase Chain Reaction Definition and Types	
Week - 8		Polymerase Chain Reaction Applications	
Week - 9		Manipulation of Gene Expression in Prokaryotes and Eukaryotes	
Week - 10		DNA Diagnostic Methods	
Week - 11		Protein Engineering	
Week - 12		Editable Promoters	

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 13		Hybridization Methods	
Week - 14		Current Advances in Molecular Biotechnology	

Learning Outcomes

#	Learning Outcome
1	Knows the nucleic acids
2	Explains the gene structure
3	Explains recombinant DNA technology
4	Explains the Polymerase Chain Reaction
5	Knows current developments in molecular biotechnology

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.

Assessment Method and Passing Requirements	Quamtity	Percentage (%)
Final Exam	1	60
Homework	1	40
	Sum (%)	**100**