Course Syllabus

Code - Course Title	**BYK603 - Oxygen Radicals in Biological Systems**
Course Type	II. SEMESTER
Laboratory + Practice	3+0
ECTS	**7.5**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	PROF. DR. FİLİZ ÖZDEMİR

Mode of Delivery	Face to face
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	Biochemistry, molecular biology

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Names of oxygen radicals.	
Week - 2		Structure of Free Radicals, sources and Reactions.	
Week - 3		Formation mechanisms of biological oxygen radicals.	
Week - 4		Reactions of oxygen radicals with other oxidants.	
Week - 5		Chemical properties of biological oxygen radicals.	
Week - 6		The Role of Mitochondria in the Production of Reactive Oxygen Species.	
Week - 7		Detoxification mechanisms of oxygen radicals in the cell.	
Week - 8		Signaling pathways regulated by ROS in cancer.	
Week - 9		Effects of ROS on neurodegenerative diseases.	
Week - 10		Effects of ROS on cardiovascular diseases.	
Week - 11		Literature discussions.	
Week - 12		Literature discussions	
Week - 13		Literature discussions.	
Week - 14		Literature discussions.	

Learning Outcomes

#	Learning Outcome
1	Lists the names of oxygen radicals.
2	Will be able to illustrate the structure, sources and reactions of oxygen radicals.
3	Explains the formation mechanisms of biological oxygen radicals.
4	Shows the reactions of oxygen radicals with other oxidants.
5	List the chemical properties of biological oxygen radicals.
6	Explain the Role of Mitochondria in the Production of Reactive Oxygen Species.
7	Explains the detoxification mechanisms of oxygen radicals in the cell.
8	Discusses the signaling pathways regulated by ROS in cancer.
9	Knows the effects of ROS on neurodegenerative diseases.
10	Knows the effects of ROS on cardiovascular diseases.
11	Can discuss the literature.

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.