



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Apoptosis and It's Role On Development							
Course Code		BİO626		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	7	Workload	181 ( <i>Hours</i> )	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		It aims to give information about mechanism, the role on improvement and importance of apoptosis.							
Course Content		Cell death, cell death types, apoptosis, necrosis, the differences between apoptosis and necrosis,the mechanism of apoptosis, the role of apoptosis in development.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion					
Name of Lecturer(s)									

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

### Recommended or Required Reading

1	-Jacobson, Mike., McCarthy, Nicola: Apoptosis methods in pharmacology and toxicology : approaches to measurement and quantification: / edited by Myrtle A. Davis.ISSN 01996385000 , 2002
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Week	Weekly Detailed Course Contents	
1	Theoretical	What is apoptosis? Why is it important ? How is it controlled? What is it's importance in embryology?
2	Theoretical	Cell types that we can see apoptosis, modulators of apoptosis, induct, on of apoptosis, the role of mitokondri in apoptosis
3	Theoretical	The steps, mechanism of apoptosis , definition of necros
4	Theoretical	Cell types that we can see apoptosis,
5	Theoretical	Biochemical characteristics of apoptosis, physiological importance of it, receptor characteristics of apud cells
6	Theoretical	Biochemical characteristics of apoptosis, physiological importance of it, receptor characteristics of apud cells-Contuniation
7	Theoretical	Connection between apoptosis and improvement of nerve system
8	Theoretical	Connection between apoptosis and improvement of nerve system-Contuniation
9	Theoretical	Methods for determining apoptotic cells
10	Theoretical	Methods for determining apoptotic cells -Contuniation
11	Theoretical	Methods for determining apoptotic cells; TUNEL and other methods
12	Theoretical	Connection between apoptotic mechanisms and cancer, otoimmun, neurodegenerative diseases
13	Theoretical	Connection between apoptotic mechanisms and cancer, otoimmun, neurodegenerative diseases
14	Final Exam	Final exam

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	2	3	65
Assignment	13	2	1	39
Seminar	2	2	2	8
Laboratory	13	2	3	65
Midterm Examination	1	1	1	2
Final Examination	1	1	1	2
Total Workload (Hours)				181
[Total Workload (Hours) / 25*] = ECTS				7

\*25 hour workload is accepted as 1 ECTS



**Learning Outcomes**

1	Learn about the functioning and importance of apoptosis.
2	To understand the importance of apoptosis in embryogenesis.
3	To be prepared for other lessons based on the cell.
4	
5	

**Programme Outcomes (Biology Doctorate)**

1	To have enough scientific background knowledge towards a specific study and research area
2	To have an ability to identify, evaluate and develop a solution for a problem on biological aspects
3	To be able to evaluate scientific observations and results of experiments using statistical analysis methods
4	To have basic skills in areas related to field of biological studies
5	To have the ability to develop cooperation with different disciplines with the high level of social communication required for studies
6	To have knowledge of technology and use of methods and means used in biological researches
7	To have an ethical understanding which will be a guide for their investigations and publications
8	For PhD; to have European Language Portfolio C1 general level language skill
9	To be able to present and discuss own research results in accordance with scientific discipline using technological tools in scientific research environments
10	To be able to detect and evaluate economic and social impacts of an own original research results
11	To be equipped with ability of carrying out independent study in biological field
12	To be able to publish at least one an international/national peer reviewed scientific paper and/or produce or interpret an original work related to biology in order to expand the frontiers of knowledge
13	To be able to develop new approaches or adaptations to be used in solving scientific and biological problems
14	To be able to develop new understanding and approaches in order to explain a new phenomenon or a biological event under investigation
15	To have abilities and experience to create new search area through inspiration gained from subject searched

**Contribution of Learning Outcomes to Programme Outcomes** 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P3	5	5	5		
P5	5	5	5		
P6				2	2
P8	5	5	5		
P10	5	5	5		

