



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Apoptosis and It's Role On Development							
Course Code		BiO626		Couse Level		Third Cycle (Doctorate Degree)			
ECTS Credit	7	Workload	196 ( <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	30
Final Examination	1	70

### 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 necrosis.
4	Theoretical	Cell types that we can see apoptosis,
5	Theoretical	Biochemical properties of apoptosis, physiological significance.
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 (Midterm)
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	Methods for determining apoptotic cells; TUNEL and other methods.
13	Theoretical	Connection between apoptotic mechanisms and cancer, otoimmun, neurodegenerative diseases.
14	Theoretical	Connection between apoptotic mechanisms and cancer, otoimmun, neurodegenerative diseases.

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	3	70
Assignment	2	6	6	24
Reading	14	4	3	98
Midterm Examination	1	1	1	2
Final Examination	1	1	1	2
Total Workload (Hours)				196
[Total Workload (Hours) / 25*] = ECTS				8

\*25 hour workload is accepted as 1 ECTS

### Learning Outcomes

1	Learn about the functioning and importance of apoptosis.
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2	To understand the importance of apoptosis in embryogenesis.
3	To be prepared for other lessons based on the cell.
4	
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#### Programme Outcomes (*Biology Doctorate*)

1	Develops expertise-level knowledge in the field of biology.
2	Applies the acquired theoretical and practical knowledge related to the field.
3	Gains the ability to identify problems related to the field and formulate hypotheses for their solutions.
4	Utilizes various methods for solving problems when planning research in accordance with predetermined hypotheses related to the field.
5	Gains diverse experiences through laboratory or fieldwork related to the field.
6	Presents the data obtained in relation to solving field-specific problems by adhering to scientific and ethical values.
7	Utilizes the knowledge acquired in the field in interdisciplinary studies.
8	Follows current and scientific developments related to the field.
9	Conveys current developments related to the field to individuals in the same or different fields.
10	Values ethical principles.
11	Develops a sensitive perspective towards the conservation of biodiversity and issues related to the environment and climate.
12	Acquires sufficient English proficiency to understand fundamental topics in the field of biology.
13	Demonstrates the ability to prepare a national or international article to contribute to the literature in the field of biology.
14	Develops projects aimed at solving problems in the field.

