

AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Molecular Cell Biology and Applications								
Course Code		TIB601		Couse Level			Third Cycle (Doctorate Degree)			
ECTS Credit 6		Workload	151 <i>(Hours)</i>	Theory		2	Practice	2	Laboratory	0
Objectives of the Course										
Course Content										
Work Placement		N/A								
Planned Learning Activities and Tea		and Teaching	Methods	Explar	nation	(Presenta	ition)			
Name of Lecturer(s)										

Assessment Methods and Criteria

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

Recommended or Required Reading

1	The Cell: A molecular Approach , Geoffrey M. Copper	
2	2. Molecular Cell Biology, Lodish, WH Freeman and Company	
3	3. Molecular Biology of the Cell, Alberts, Garland Science	

Week	Weekly Detailed Course Contents					
1	Theoretical	Cell proliferation, cell division, mechanimsm of celular senescence.				
2	Theoretical	Cell cycle related topics and cell cycle regulation				
3	Theoretical	Mechanimsm of intracelular interactions				
4	Theoretical	Cell cycle arrest				
5	Theoretical	Cell death (apoptosis)				
6	Theoretical	Mechanisms of non apoptotic cell death				
7	Theoretical	Mechanisms of Autophagy				
8	Intermediate Exam	Midterm Exam				
9	Theoretical	Interrelations between cell proliferation, cell cycle arrest, apoptosis, senescence and autophagy				
10	Theoretical	Methods for measuring cell proliferation, , apoptosis, autophagy and (XTT, MTT, WST-1,).				
11	Theoretical	Methods for measuring cell cycle arrest BrDU,				
12	Theoretical	TUNEL test				
13	Theoretical	LC3 antibody based immunostaining				
14	Theoretical	S-AB-Galactosidase Staining				
15	Final Exam	Final Exam				

Workload Calculation

Activity	Quantity	Preparation		Duration		Total Workload	
Lecture - Theory	13 5		2		91		
Lecture - Practice	13		2	2		52	
Midterm Examination	1		2	2		4	
Final Examination	1		2	2		4	
Total Workload (Hours)							
[Total Workload (Hours) / 25*] = ECTS						6	

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1 2



3	
4	
5	

Programme Outcomes (Medical Biology Doctorate)

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1	To acquire fundamental knowledge on medical biology field	
2	To gain expertise on molecular biology techniques	
3	To utilize molecular biology techniques	
4	To be able to construct and conduct a research project	
5	To be able to follow and interpret scientific advancements	

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

	L1	L2	L3	L4	L5
P1	5	5	5	2	3
P2	1	1	1	4	3
P3	1	1	1	4	3
P4	2	2	2	4	3
P5	4	4	4	3	4

