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 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course									
Course Content									
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation)								
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)	151
			[Total Workload (Hours) / 25*] = **ECTS**	6

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes	
1	
2	

3	
4	
5	

Programme Outcomes *(Biochemistry (Medical) Doctorate)*	
1	To have basic theoretical knowledge about biochemistry and to help understanding biochemistry
2	To have the basic laboratory knowledge, apparatus and methods used in biochemistry
3	Analysis: To be able to analyze information critically
4	Synthesis: To be able to synthesize and adapt the knowledge in the field from different directions
5	Evaluation: To critically evaluate research in the field