AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Mechanısms of Signal Transduction								
Course Code	TIB605		Couse Level	Third Cycle (Doctorate Degree)					
ECTS Credit	5	Workload	120 *(Hours)*	Theory	3	Practice	0	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	The signal transmission system,
2	Theoretical	The signal transmission system,
3	Theoretical	Protein-protein interactions,
4	Theoretical	Phosphorylation, G protein and functions
5	Theoretical	Second messengers and ion channels,
6	Theoretical	Membrane receptors
7	Intermediate Exam	Mid term exam
8	Theoretical	Signal transduction required for the signals coming from outside to transform biological response.
9	Theoretical	Signal transduction required for the signals coming from outside to transform biological response.
10	Theoretical	Conceptual examination of the cascade mechanism of several prototype signal transduction and analyzes various experimental approaches refering to important research in the literature.
11	Theoretical	Conceptual examination of the cascade mechanism of several prototype signal transduction and analyzes various experimental approaches refering to important research in the literature.
12	Theoretical	Conceptual examination of the cascade mechanism of several prototype signal transduction and analyzes various experimental approaches refering to important research in the literature.
13	Theoretical	Conceptual examination of the cascade mechanism of several prototype signal transduction and analyzes various experimental approaches refering to important research in the literature.
14	Theoretical	Changes caused by receptor activation
15	Final Exam	Final Exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	5	3	104
Midterm Examination	1	2	2	4
Final Examination	1	10	2	12
			Total Workload (Hours)	120
			[Total Workload (Hours) / 25*] = **ECTS**	5
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	

2	
3	
4	
5	

Programme Outcomes *(Medical Biology Doctorate)*	
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	5	5
P2	2	2	1	1	1
P3	2	2	1	1	1
P4	3	3	3	3	1
P5	3	3	3	3	5