



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title	PCR Detection of Microbial Pathogens								
Course Code	MIK644		Course Level		Third Cycle (Doctorate Degree)				
ECTS Credit	5	Workload	128 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	The objective of this course is to give information about PCR detection of microbial pathogens.								
Course Content	Specify and performance of diagnostic PCR assays. PCR processing of samples, Critical aspects of standardization of PCR, PCR technology and applications.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Discussion, Case Study								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Assignment	4	20
Quiz	2	20
Midterm Examination	1	20
Final Examination	1	40

Recommended or Required Reading	
1	Clinical Veterinary Microbiology
2	Early, rapid and sensitive veterinary molecular diagnostics
3	Real time PCR applications
4	Biyoteknoloji

Week	Weekly Detailed Course Contents & Teaching Methods	
1	Theoretical & Practice	Properties of diagnostic PCR assays
2	Theoretical & Practice	Properties of diagnostic PCR assays
3	Theoretical & Practice	Properties of diagnostic PCR assays
4	Theoretical & Practice	Properties of diagnostic PCR assays
5	Theoretical & Practice	PCR processing of samples
6	Theoretical & Practice	PCR processing of samples
7	Theoretical & Practice	PCR processing of samples
8	Theoretical & Practice	Discussion
9	Theoretical & Practice	Critical levels of PCR standardization
10	Theoretical & Practice	Critical levels of PCR standardization
11	Theoretical & Practice	Critical levels of PCR standardization
12	Theoretical & Practice	PCR technology and applications
13	Theoretical & Practice	PCR technology and applications
14	Theoretical & Practice	PCR technology and applications

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Assignment	4	0	1	4
Reading	2	0	25	50
Quiz	2	1	1	4
Midterm Examination	1	5	1	6



Final Examination	1	6	2	8
Total Workload (Hours)				128
[Total Workload (Hours) / 25*] = ECTS				5
*25 hour workload is accepted as 1 ECTS				

### Learning Outcomes

1	1. Having information about PCR detection of microbial pathogens.
2	2. Having information about PCR technology and applications
3	3. To have knowledge about sample preparation for PCR applications
4	4. To have knowledge about data analyses for PCR applications
5	5. Providing ability to use these informations

### Programme Outcomes (Microbiology (Veterinary Medicine) Doctorate)

1	Department has the ability to identify and apply information about bacteriology, virology, mycology and has the ability to recognize diseases about veterinary medicine.
2	Department has the ability to take the advantage of technology and has the ability to diagnose, treat and prevent the diseases by using appropriate equipments.
3	Department has the ability to analyze the epidemiological compounds of an animal population and has the ability to get precautions.
4	Department has the ability to test or analyze the diseases and has the ability to evaluate the results.
5	Department has the ability to perform, produce and conclude projects for scientific researches.
6	Department has the ability to donate theoretical and practical knowledge about postgraduate students in the are of microbiology.
7	Graduate students has the ability to perform scientific researches.

### 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	4	5	4	4
P2	5	4	5	5	5
P3	5	4	5	4	5
P4	4	4	4	4	5
P5	5	4	5	4	4
P6	4	4	4	5	4
P7	5	5	5	4	4

