AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Molecular Plant Pathology								
Course Code	ZBK607		Couse Level		Third Cycle (Doctorate Degree)				
ECTS Credit	7	Workload	175 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	This course will explore the modern molecular techniques being used to investigate plant/microbe interactions and will examine the way in which pathogens cause disease.								
Course Content	The contents encompass the modern molecular techniques in plant pathology. Genom organization, genetic of the host-pathogen interaction, pathogenic determinants are defined. Identification of by RNA extraction-isolation, northern blot analysis DNA extraction-isolation, southern blot analysis DNA/RNA hybridization, dot-blot hybridization. Labelling and storage of nucleic asid probes. Nucleic acid amplification tecniques: polymerase chain reaction. Genome analysis by RFLP and RAPD, cloning and gene expression. Characterized defence response genes. Genetic modification of plants for pathogens resistance are discussed.								
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	40
Final Examination	1	60

Recommended or Required Reading	
1	Goosen, T. And Debets, 1996. Molecular genetic analysis. In: Fungal Genetic: Principles and practce, Bos, C.J. (ed.) Marcel Dekker, New York, pp.97-117.
2	Berger S.L. Guide to Molecular Cloning Techniques Academic Pres
3	Tower K.J. and A. Cockayne 1993. Molecular Methods for Microbial Identification and Typing. Chapman and Hall
4	Gurr S.J. and D.J. Bowles 1992 Molecular Plant Pathology Volume I, II,A Practical Approarh, At Oxfort Univ.Press

Week	Weekly Detailed Course Contents	
1	Theoretical	a
2	Theoretical	a
3	Theoretical	a
4	Theoretical	a
5	Theoretical	a
6	Theoretical	a
7	Intermediate Exam	Midterm
8	Theoretical	a
9	Theoretical	a
10	Theoretical	a
11	Theoretical	a
12	Theoretical	a
13	Theoretical	a
14	Theoretical	a
15	Final Exam	Final Exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	2	25	2	54
Quiz	1	10	1	11
Midterm Examination	1	35	1	36

Final Examination	1	45	1	46
			Total Workload (Hours)	175
			[Total Workload (Hours) / 25*] = **ECTS**	7
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	
2	
3	
4	
5	

Programme Outcomes *(Plant Protection Doctorate)*	
1	Students improve their knowledge and skill previously gained during first cycle and second cycle programs and become a specialist their own discipline
2	Students gain knowledge and experience for using new techniques and equipments in their own discipline.
3	Students gain ability to plan and conduct scientific projects in their own discipline by using current knowledge and techniques, and to collect and analyze data and make inference on the results .
4	Students gain ability to write scientific articles and prepare them for publications and to make oral or poster presentations in scientific meetings.
5	Students gain ability to review scientific articles and projects relevant to their own discipline.
6	Students gain experiences how to get effective position in national and international projects.
7	Students gain experience for participating in and organizing scientific meetings.

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	3	3	3	3	3
P2	4	4	4	4	4
P3	5	5	5	5	5
P4	4	4	4	4	4
P5	5	5	5	5	5
P6	4	4	4	4	4
P7	4	4	4	4	4