AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	The Relations of Plant- Phytophagous Insects								
Course Code	ZBK646		Couse Level	Third Cycle (Doctorate Degree)					
ECTS Credit	7	Workload	175 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	Relations between insects and plants are examined and emphasis is placed on the importance of agricultural products and plant protection.								
Course Content	Aim of this course is to teach the host range and feeding types of phytophagous insects, the process of host-plant selection, the effects on insects of food and the features of plants as food, the effected factors to feeding behaviors of insects, the adaptations of insects to vegetable defences, specialization of insects on plants and plant parts, chemicals in plants.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Discussion, Case Study, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	Bernays, E.A. and R.F.Chapman,1994.Host- plantselectionbyphytophagousinsects. ChapmanandHall, 115 FifthAvenue, Newyork,312 s.2.Clausen, C.P., 1962.
2	Mitchell E.R. andTingle F.C.,1996.Plant allelochemicals: a relativcelyunexploredterritory in management of cropinsectpests (IN:Pest Management in thesubtropics, IntegratedPest Management-a Florida Perspective) (Ed.:D.Rosen, F.D.Bennett, J.L.Capinera)Intercept Limited, United Kingdom, 578 s.
3	Chapman,R.F.1972.The Insects. The English UniversitiesPress Ltd.,819 s.
4	Painter,R.H.,1968.Insects resistance in cropplants. The Mac MillanCompany, Newyork,520 s.

Week	Weekly Detailed Course Contents	
1	Theoretical	Host range and feeding types of phytophagous insects
2	Theoretical	Taste, olfaction, vision and touching senses of insects
3	Theoretical	The process of host-plant selection
4	Theoretical	The effects on insects of food and the features of plants as food
5	Theoretical	The effected factors to feeding behaviors of insects
6	Theoretical	Benefiting from food of insects, The adaptations of insects toward vegetable defences
7	Theoretical	The adaptation of insects through vegetable defences
8	Intermediate Exam	Exam
9	Theoretical	Insects resistance in plants
10	Theoretical	Specialization of insects on plants and plant parts
11	Theoretical	Chemicals in plants; Volatiles, surface waxes and other surface compounds
12	Theoretical	Nutrients; Protein and aminoacids
13	Theoretical	Carbohydrates and lipids
14	Theoretical	Secondary metabolites, PhenolicsTerpenoids ,Organic acids and Sulfur –containing compounds
15	Theoretical	Secondary metabolites, PhenolicsTerpenoids ,Organic acids and Sulfur –containing compounds

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Term Project	1	35	2	37
Studio Work	1	2	2	4

Land Work	2	0	4	8
Midterm Examination	1	30	1	31
Final Examination	1	38	1	39
			Total Workload (Hours)	175
			[Total Workload (Hours) / 25*] = **ECTS**	7
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	The nutritional forms of phytophagous insect species, the characteristics of the plant as an insect nutrient and consequently grasping the damage that occurs in plants
2	Host plant selection for feeding and laying eggs is an important aspect of plant protection
3	Improving the idea of benefiting from insect-plant relationships
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	4	4
P2	5	4	4	4	4
P3	4	5	5	5	5
P4	4	5	5	5	5
P5	5	5	5	5	5
P6	4	4	4	4	4
P7	5	5	4	4	4