



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Ectoparasites And Protozoer Infections Of Bees							
Course Code		VPR608		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	5	Workload	122 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Understands the biology and morphology of ectoparazites and protozoans of bees, symptoms of bee diseases they cause, diagnosis, treatment and control measures.							
Course Content		Morphology and biology of important ectoparasites such as Varroa, Braula, infection routes, symptoms of diseases they cause in bees, diagnosis, treatment and control methods, diseases caused by Malpighornoeba ve Nosema, diagnosis, treatment and control measures for these diseases.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Case Study, Individual Study, Problem Solving					
Name of Lecturer(s)		Prof. Nuran AYSUL							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	15
Final Examination	1	60
Quiz	2	10
Assignment	6	15

Recommended or Required Reading

1	Scott-Dupree C. (1996). Honey bee diseases and pests. Ontario, The Canadian Association of Professional Apiculturists, 538 p.
2	Morse, R.A., Flottum K. (1997). Honey bee pests, predators, and diseases. Medina, OH, A.I. Root Co. 718 p.

Week	Weekly Detailed Course Contents	
1	Theoretical	Biology of bees
2	Theoretical	Collection, storage and transportation of samples from bees
3	Theoretical	Nosema- I
4	Theoretical	Nosema- II
5	Theoretical	Malpighamoeba
6	Theoretical	Gregarine'ler
7	Theoretical	Falgellalılar
8	Intermediate Exam	Midterm exam
9	Theoretical	Varroa
10	Theoretical	Acarapis Woodi-Trake Akar
11	Theoretical	Tropilaelaps clarea
12	Theoretical	Braula coeca
13	Theoretical	Meloe varigatus
14	Theoretical	Philanthus triangulum
15	Theoretical	Galleria mellonella
16	Final Exam	Final exam
17	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	3	0	4	12
Reading	14	2	0	28
Quiz	2	5	0.5	11
Midterm Examination	1	20	1	21



Final Examination	1	20	2	22
Total Workload (Hours)				122
[Total Workload (Hours) / 25*] = ECTS				5
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Knows the morphology of parasites infecting bees.
2	Gains information on important diseases caused by insects
3	Gains information on how insects infect animals, symptoms and economical aspects of diseases they cause
4	Knows diagnostic methods for these diseases.
5	Understands the prevention and control measures

Programme Outcomes (Parasitology (Veterinary Medicine) Doctorate)

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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	5	5	5	5	5
P3	5	5	5	4	5
P4	5	4	4	3	4
P5	5	5	5	4	5
P6	5	4	4	4	4
P7	3	3	4	5	4
P8	4	4	4	3	4
P9	4	4	4	3	4
P10	5	5	5	5	5
P11	4	4	4	2	4
P12	4	3	4	3	3

