



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Honey Bee Improvement							
Course Code		AR229		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	4	Workload	96 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		The purpose of breeding bees is to know the importance of sex determination in bees, bee species and breeds, heritability, selection, and effects, methods of selection, crossbreeding and hybridization methods, emphasis on the honey bee breeding facilities morphological, physiological, behavioral characteristics, bee breeding, artificial insemination.							
Course Content		Bee species and breeds and breeding in explaining the methods used, and describes the features discussed							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study, Problem Solving					
Name of Lecturer(s)		Ins. Ali Kemali ÖZUGÜR							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	1. Arı Genetiği ve Islahı(Prof. Dr. Metin Şengonca, ISBN:975-483-615-9
2	2. Ana arı Yetiştiriciliği(Enver Öder ,ISBN:975-605-62580-0-8
3	3. Modern Arıcılık Teknikleri (Prof. Dr. Musin Doğaroğlu, ISBN:975-94210-0-3
4	4. Arıcılığın Temel Esasları (Prof. Dr. Ferhat Genç, Doç. Dr. Ahmet Dodoloğlu Atatürk Ü. Ziraat Fak.Yayınları No:160)

Week	Weekly Detailed Course Contents	
1	Theoretical	Geographic variation and its causes, the main geographical honey bee races
2	Theoretical	Geographic variation and its causes, the main geographical honey bee races
3	Theoretical	bee genetics
4	Theoretical	bee genetics
5	Theoretical	Basic Concepts of breeding
6	Theoretical	Purpose and importance of breeding
7	Theoretical	Racial characteristics of the main morphological features of honey bee races
8	Intermediate Exam	Mid-Term
9	Theoretical	Physiological characteristics of race
10	Theoretical	The importance of honeybees and methods of controlled mating
11	Theoretical	Selection and methods
12	Theoretical	Pure breeding and pure breeding methods
13	Theoretical	Crossbreeding and hybridization methods
14	Theoretical	Crossbreeding and hybridization methods
15	Theoretical	The importance of the protection of genetic resources and indigenous
16	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	2	0	14	28
Assignment	3	0	12	36
Reading	3	0	10	30
Midterm Examination	1	0	1	1



Final Examination	1	0	1	1
Total Workload (Hours)				96
[Total Workload (Hours) / 25*] = ECTS				4
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	To be able to comprehend geographical variation and natural bee races
2	To be able to identify bee genetics
3	To be able to identify basic concepts of breeding, breeding objectives and the importance of bees
4	To be able to distinguish the main characteristics of honey bee race

Programme Outcomes (Apiculture)

1	Understand to bee family (ecology, behavior), needs and diseases of bees. To make needs for healthy colony.
2	Produce of bee and bee products with modern techniques
3	Understand and use of tools and equipments used in Apiculture
4	Understand to nectar and pollen vegetables
5	To know nomadic apiculture conditions
6	Packing of bee products
7	Application to hygienic rules in apiculture enterprise
8	To have information of professional ethics and responsibility
9	Ability to work in team and individual
10	To communicate orally and in writing

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4
P1	5	5	4	5
P2		5	4	4
P3		4		
P4	3			
P5	4			

