AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Ration Formulation Principles and Techniques							
Course Code	VHB502			Couse Level	Second Cycle (Master's Degree)			
ECTS Credit	7	Workload	176 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	The main concept is educate masters who got knowledge about the basic principles and techniques of ration preparation for farms and feed factory, amount of feeds for different rations, prepare proper rations formulations for different animal species including poultry and ruminant.							
Course Content	Determination of ration and basic principles. Standards of animal nutrition. Factors which affecting ration preparation. Techniques of ration preparation. Ration formulations for proper to different animal species and breeding methods.							
Work Placement	N/A							
Planned Learning Activities and Teaching Methods					Explanation (Presentation), Demonstration, Discussion, Individual Study, Problem Solving			
Name of Lecturer(s)								

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	28
Final Examination	1	60
Assignment	10	12

Recommended or Required Reading

1	Ergün, A., Tuncer, Ş.D., Çolpan, İ., Yalçın, S., Yıldız, G., Küçükersan, M.K., Küçükersan, S., Şehu, A. (2008) Hayvan Besleme ve Beslenme Hastalıkları, Pozitif Matbaacılık, Ankara.
2	Kılıç, A. (1988) Yemler ve Hayvan Besleme, Bilgehan Basımevi, İzmir.
3	Aksoy, A., Macit M., Karaoğlu, M. (2000) Hayvan Besleme, Atatürk Üniversitesi Ziraat Fakültesi Yayınları, Erzurum.
4	Sarı, M., Çakmak, M.N. (1996) Balık Besleme, Fırat Üniversitesi Matbaası, Elazığ.

Week	Weekly Detailed Course Contents	
1	Theoretical	Selection of feed
2	Theoretical	Determine of nutrient requirements
3	Theoretical	Determine of nutrient requirements
4	Theoretical	Technique of ration preparation (method of Pearson Square)
5	Theoretical	Technique of ration preparation (method of two unknown equation)
6	Theoretical	Technique of ration preparation (method of trial and error)
7	Theoretical	Technique of ration preparation (method of trial and error)
8	Intermediate Exam	Midterm exam
9	Theoretical	Ration formulation for dairy cattle
10	Theoretical	Ration formulation for dairy cattle
11	Theoretical	Ration formulation for beef cattle
12	Theoretical	Ration formulation for sheep and goats
13	Theoretical	Ration formulation for laying hens
14	Theoretical	Ration formulation for broilers
15	Theoretical	Ration formulation for horses

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	15	0	2	30
Assignment	10	0	3	30
Reading	14	4	0	56
Midterm Examination	1	12	2	14

Final Examination	1	16	2	18
		Total Workload (Hours)		176
		[Total Workload (Hours) / 25*] = **ECTS**		7

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Determination of ration, balance ration and nutrition standards.
2	Express of energy and nutrient requirements in different forms.
3	Knows that factors which affecting ration formulation and about animal, feed and economy.
4	Calculate of energy and nutrient requirements of animals.
5	Knows that usage amount of feeds and feed additives.
6	Knows that technique of ration formulations.

Programme Outcomes *(Animal Nutrition and Nutritional Diseases (Veterinary Medicine) Master)*

1	to be able to comprehend information about basic animal nutrition and feeds for protecting animal health, scientific and technological animal production.
2	to be able to formulate economical and full-satisfactory rations with considering product quality and health and inform animal producers about practical/appropriate feeding methods.
3	to be able to apply recent scientific and technological developments in animal nutrition easier and produce proper strategies against to problems on this field.
4	to be able to analyse the properties of feeds used in proper and economical rations formulated due to needs of animal species.
5	to be able to inform animal producers about the common feedstuffs used in animal nutrition
6	to be able to interpret physical, diagnostic and chemical analysis methods used in determinin feed quality.
7	to be able to comprehend processing and the effects of processing on animal yield.
8	to be able to identify the term "feed hygiene" and have information about the usage availability of contaminated feedstuffs.
9	to be able to apply the informations related to feed additives in a proper way.
10	to be able to formulate the results and factors decreasing production.
11	to be able to apprehend the nutrition related diseases and their solution recommendations which may be applied in feeding or formulating feeds for preventing nutiritonal diseases.

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

	L1	L2	L3	L4	L5	L6
P1	5	5	5	5	5	
P2			5	5		5
P3	5	5	5	5	5	5
P4			5	5	5	
P5			5		5	
P9					5	