



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Nutrition and Milk Quality							
Course Code		VHB636		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	5	Workload	123 (<i>Hours</i>)	Theory	1	Practice	0	Laboratory	0
Objectives of the Course		Raising experts knowing the relationship between nutrition and milk quality. Raising experts knowing the factors effecting milk quality.							
Course Content		Nutritional factors effecting chemical composition of milk. Fat ratio, smell, flavour, protein level and microbiological composition.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	60
Assignment	4	10

Recommended or Required Reading

1	Ergün, A., Tuncer, Ş.D., Çolpan, İ., Yalçın, S., Yıldız, G., Küçükersan, M.K., Küçükersan, S., Şehu, A. (2004) Hayvan Besleme ve Beslenme Hastalıkları, Pozitif Matbaacılık, Ankara.
2	Yavuz, H.M. (2001) Çiftlik Hayvanlarının Beslenmesinde Temel Prensipler, Hilal Yayınevi, İstanbul.
3	McDonald, P., Edwards, R.A., Greenhalgh, J.F.D., Morgan, C.A. (2002) Animal Nutrition, Longman Scientific & Technical, England.
4	Kellerns, R.O., Church, D.C. (2002) Livestock Feeds and Feeding, Prentice Hall, New Jersey.
5	Pond, W.G., Church, D.C., Pond, K.R., Schoknecht, P.A. (2004) Basic Animal Nutrition and Feeding, John Wiley & Sons, New York.

Week	Weekly Detailed Course Contents	
1	Theoretical	Relationship between Nutrition and Milk Quality
2	Theoretical	Effects of nutrition on milk protein level.
3	Theoretical	Effects of nutrition on milk protein level.
4	Theoretical	Effects of nutrition on milk fat composition. Mechanisms of milk fat synthesis.
5	Theoretical	Effects of different feed sources on milk fat synthesis. Effects of forage particle size, forage quality and ration protein level on milk fat level.
6	Theoretical	Effects of nutrition on milk fat composition.
7	Intermediate Exam	Midterm exam
8	Theoretical	Effects of nutrition on milk fat composition.
9	Theoretical	Feedstuffs effecting milk smell. Effects of silage, cabbage, beet, radish and celery on smell of milk.
10	Theoretical	Precautions to prevent bad smells in milk.
11	Theoretical	Effects of pigment substances of feedstuffs on milk colour. Precautions for arranging colour of products. Effects of green plants and carrot on milk colour.
12	Theoretical	Effects of nutrition on microbiological quality of milk.
13	Theoretical	Practical tests for determining microbiological quality of milk.
14	Theoretical	Practical tests for determining microbiological quality of milk.
15	Theoretical	Homework presentation
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	1	14
Assignment	5	0	3	15
Reading	14	0	5	70



Midterm Examination	1	8	2	10
Final Examination	1	12	2	14
Total Workload (Hours)				123
[Total Workload (Hours) / 25*] = ECTS				5

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Knowing information about nutritional factors effecting milk quality.
2	Knowing information about milk fat ratio, taste, protein level, and microbiological composition of milk.
3	Knowing information about detrimental effects of pathogenic microorganisms on product quality in milk.
4	Effects of nutrition on milk fat composition.
5	Effects of nutrition on microbiological quality of milk.

Programme Outcomes (Animal Nutrition and Nutritional Diseases (Veterinary Medicine) Doctorate)

1	Knows information about importance of forage and concentrates in basic animal nutrition for protecting animal health in scientific and technological animal production.
2	Have ability to formulate economical and full-satisfactory rations with considering product quality and health. May inform animal producers about practical/appropriate feeding methods.
3	Can adapt to recent scientific and technological developments in animal nutrition easier and produce proper strategies against to problems on this field.
4	Knows the properties of feeds used in proper and economical rations formulated due to needs of animal species.
5	Can give information to animal producers about properties of common feedstuffs used in Turkey
6	Knows organoleptic, physical diagnostic and chemical analysis methods used in determining feed quality.
7	Have information about processing and the effects of processing on animal yield.
8	Can identify the term "feed hygiene" and have information about the usage availability of contaminated feedstuffs.
9	Can apply the informations related to feed additives in a proper way.
10	Understands the results and factors decreasing production.
11	Knows the nutrition related diseases and their solution recommendations which may be applied in feeding or formulating feeds for preventing nutritonal diseases.
12	Knows about the availability level of feedstuffs after consumed and can perform digestibility trials.
13	Knows the definition of stress, stress sources and effects on health and production level of animals.
14	Have sufficient information on classification, activation and fermentation of rumen microorganisms plus carbohydrate, lipid and protein digestibility.
15	Knows the factors effecting feed intake and negative factors in feedstuffs and prevention of them.
16	Comments on feeding behaviours and related yield parameters.
17	Have information on basic terms related to feed legislation, feeds used in animal nutrition and their legal regulations.
18	Have information about biotechnological research conducted on feeds and animal nutrition.
19	Knows the effects of nutrition on food quality, fertility, immunity and parasite enfestations.

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

	L1	L2
P19	5	5

