



**AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
VETERINARY FOOD HYGIENE AND TECHNOLOGY
FOOD HYGIENE AND TECHNOLOGY (VETERINARY)
FOOD HYGIENE AND TECHNOLOGY (VETERINARY) MASTER
COURSE INFORMATION FORM**

Course Title	Meat Science								
Course Code	VBH522		Course Level		Second Cycle (Master's Degree)				
ECTS Credit	5	Workload	125 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	To provide information to students about the nutritional value of meat , discrimination of meat species , rigor mortis and biochemical mechanisms occurring in muscle, meat preservation methods of meat and classification of meat according to the quality.								
Course Content	The definition and composition of meat , the changes in the muscle after slaughtering , the meat quality attributes and preservation methods of meat								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Discussion, Individual Study, Problem Solving								
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	YILDIRIM, Y. Et Endüstrisi. Kozan Ofset Mat. San. Ve Tic. Ltd. Şti., Ankara, 1996
2	GÖKALP, H.Y., KAYA, M. Ve ZORBA, Ö. Et Ürünleri İşletme Mühendisliği, Erzurum: Atatürk Üniversitesi Yayın No:786
3	Arslan, A. Et Muayenesi ve Et Ürünleri Teknolojisi
4	Türker, S. Hayvansal Gıdalarda Kalite Kontrolü

Week	Weekly Detailed Course Contents	
1	Theoretical	Definition of meat and importance of meat about nutrition, general information about meat production and consumption in the world and Turkey
	Practice	The physical examination of meat and meat products
2	Theoretical	Composition of meat (Water, fat, proteins, vitamins and mineral substances), classification of livestock meat
	Practice	Measurement of bleeding degree
3	Theoretical	Histological structure of muscle tissue, structure and chemical composition of meat
	Practice	Differentiation of meat species by ELISA
4	Theoretical	Separation of the meat species
	Practice	Measurement of water activity value in meat and meat products
5	Theoretical	Changes in the muscle after slaughtering (mechanism of muscle conversion to meat and postmortem changes)
	Practice	pH and acidity analysis on meat and meat products
6	Theoretical	Rigor mortis and varieties of rigor mortis, aging of meats
	Practice	Ash and moisture measurement in meat and meat products
7	Theoretical	Factors affecting of postmortem changes
	Practice	Analysis of protein in meat and meat products
8	Intermediate Exam	Midterm exam
9	Theoretical & Practice	Effects of postmortem changes on meat quality & Determination of fat in meat and meat products
10	Theoretical	Artificially maturing of meat
	Practice	Analysis of salt in meat and meat products
11	Theoretical	Quality properties of meat and classification to carcass quality
	Practice	Definition of precious meat parts
12	Theoretical	Factors affecting carcass quality (cultivation, postmortem changes, genetics etc.)
	Practice	Putrefaction tests in meat and meat products
13	Theoretical	Meat hygiene, meat microbiology and causes of spoilage and pathogenic microorganisms



13	Practice	Measurement of sensory changes in meat
14	Theoretical	Meats protection and protection methods
15	Theoretical	Chilling, freezing, and thaw of meat
	Practice	Determining some pathogens in meat and meat products (Salmonella spp, Listeria monocytogenes)
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Reading	14	0	2	28
Midterm Examination	1	15	2	17
Final Examination	1	22	2	24
Total Workload (Hours)				125
[Total Workload (Hours) / 25*] = ECTS				5

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Learn about information meat composition and importance of meat in term of nutritional physiology
2	To learn histological structure of the meat and transformation mechanism of muscle to meat
3	To learn differentiation of meat types
4	To learn classification according to meat quality
5	To learn knowledge about cooling and freezing preservation method sof meat
6	Find out the effect of postmortem changes on meat quality

Programme Outcomes (Food Hygiene and Technology (Veterinary) Master)

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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	L6
P4	5	5	5	5	5	
P6	5	5	5			
P7	5	5	5	5	5	
P9	5	5	5		5	
P11			5			
P12		5		5		
P13	5	5		5	5	5

