



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	Starter Cultures in Food Industry								
Course Code	VBH552	Course Level			Second Cycle (Master's Degree)				
ECTS Credit	3	Workload	75 (Hours)	Theory	1	Practice	0	Laboratory	0
Objectives of the Course	Definition of starter cultures and areas of application, the mechanism of action								
Course Content	The effects of microorganisms attributed as starter cultures, general properties and characteristics of starter cultures used in meat and dairy industry								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion								
Name of Lecturer(s)	Prof. Ergün Ömer GÖKSOY								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	Kılıç S., Süt Mikrobiyolojisi, 2010.
2	Üçüncü M., Süt ve mamülleri teknolojisi, 2010
3	Anar Ş., Et ve et ürünleri teknolojisi, 2010.

Week	Weekly Detailed Course Contents	
1	Theoretical	Starter cultures and their characteristics
2	Theoretical	Probiotics and lantibiotics
3	Theoretical	Starter cultures used in meat technology 1: Staphylococcus spp
4	Theoretical	Starter cultures used in meat technology 2: Lactobacilli
5	Theoretical	Starter cultures used in meat technology 3: Micrococcus spp
6	Theoretical	Starter cultures used in meat technology 4: Kocuria spp
7	Theoretical	Starter cultures used in meat technology 5: Pediococcus spp
8	Intermediate Exam	Midterm exam
9	Theoretical	Starter cultures used in milk technology 1: Lactococci
10	Theoretical	Starter cultures used in milk technology 2: Lactobacilli
11	Theoretical	Starter cultures used in milk technology 3: Streptococci
12	Theoretical	Starter cultures used in milk technology 4: Leuconostoc spp
13	Theoretical	Starter cultures used in milk technology 5: Bifidobacterium
14	Theoretical	Yeast and mould used as a Starter cultures
15	Theoretical	Discussion
16	Final Exam	Final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	1	14
Seminar	2	0	2	4
Reading	14	0	2	28
Midterm Examination	1	10	2	12
Final Examination	1	14	3	17
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	To determine the features of strains which must carry to be called a starter culture
2	Determination of mechanisms of starter cultures
3	Specifying starter cultures used in meat industry
4	Specifying starter cultures used in dairy industry
5	The terms of probiotics
6	Lantibiotics and their working principles against to pathogenic microorganisms

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

1	
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13	

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		4	3		
P2	4		3	2	5	1
P3	1	4				5
P4	3	4	5			2
P5	3	4	5			2
P6	3	4	5			2
P7	3	4	5			2
P8	3	4	5			2
P9	2			5	4	3
P10	2			5	4	3
P11	2			5	4	3
P12	2			5	4	3
P13	2			5	4	3

