AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Routine Techniques Used in Food Microbiology								
Course Code	VBH621		Couse Level	Third Cycle (Doctorate Degree)					
ECTS Credit	6	Workload	150 *(Hours)*	Theory	1	Practice	2	Laboratory	0
Objectives of the Course	To be able to recognize the media used in food microbiology, to prepare food samples for microbiological analysis, take samples for microbiological analysis, to make general microbiological planting, staining, biochemical tests, to gain the ability to evaluate the results of microbiological analysis								
Course Content	Media and media preparation methods, sampling, homogenization and dilution, microbiological planting methods, resuscitation, presence / absence test, biological stability test, surface and air control, interpretation of results, total bacterial count (total mesophile aerob, total psychophile, total thermophil, total anaerobic, etc.); coliform, fecal coliform and E. coli counts; simple biochemical tests, microscopic identification.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Discussion, Individual Study								
Name of Lecturer(s)									

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

Recommended or Required Reading	
1	Gıda Mikrobiyolojisi Uygulamaları

Week	Weekly Detailed Course Contents	
1	Theoretical	Media and media preparation methods
	Practice	Media preparation and sterilization
2	Theoretical	Ingredients in medium composition
	Practice	Sampling and preparation (homogenization and dilution) for microbiological analysis
3	Theoretical	Media types, preparation and storage of media
	Practice	Determination of total mesophile aerob bacteria
4	Theoretical	Sterilization
	Practice	Most probable number method
5	Theoretical	Sampling, homogenization and dilution
	Practice	Direct microscobic count
6	Theoretical	Methods used in solid media
	Practice	Memrane filter method
7	Theoretical	Most probable number method
	Practice	Application of serological methods
8	Theoretical	Midterms examination
	Practice	Midterm exam
9	Theoretical	Membrane filtration method
	Practice	Preservation methods of culture
10	Theoretical	Rapid analysis based on metabolism and microscopic counts
	Practice	Isolation and enumeration of coliforms, fecal coliforms and E. coli
11	Theoretical	Resuscitation of microbes, presence/absence test, biological stability test, surface and air control, interpretations of test results
	Practice	Isolation and enumeration of enterococcus
12	Theoretical	Total bacteria count (total mesophile aerob, total psychophile, total thermophile, total anaerobic, etc.)
	Practice	Isolation and enumeration of Salmonella

13	Theoretical	Coliform, fecal coliform and E. coli counts
	Practice	Isolation and enumeration of Listeria monocytogenes
14	Theoretical	Simple biochemical tests
	Practice	Isolation and enumeration of Staphylococcus aureus
15	Theoretical	Microscopic identification (Simple staining, gram staining and motion test)
	Practice	Isolation and enumeration of yeast and mold

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	1	28
Lecture - Practice	14	2	1	42
Assignment	12	2	1	36
Reading	12	0	1	12
Midterm Examination	1	10	1	11
Final Examination	1	20	1	21
			Total Workload (Hours)	150
			[Total Workload (Hours) / 25*] = **ECTS**	6

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	To be learned in detail information about media types and to be able to prepare methods
2	To learn information about microbiological methods and practical activities
3	To be able to carry out a microbiological examination of a food
4	To learn the isolation of specific pathogens
5	To learn simple biochemical tests and microscopic identification

Programme Outcomes *(Food Hygiene and Technology (Veterinary Medicine) Doctorate)*

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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
P1	5	5	5	5	5
P2			4	4	
P3	4	4	5	5	5
P4	5	5	5	5	5
P5	5	5	5	5	5
P7	5	5	5	5	5
P9	5	5	5	5	5
P10	4	4	4	4	4
P11	5	5	5	5	5
P12	4	4	4	4	4