AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Shelfish-Fish Hygiene and Technologies								
Course Code	VBH625		Couse Level		Third Cycle (Doctorate Degree)				
ECTS Credit	5	Workload	125 *(Hours)*	Theory	1	Practice	2	Laboratory	0
Objectives of the Course	To inspect of the shellfish products and fish , give an information about fresh or deteriorated products and intoxication caused by the products.								
Course Content	Shellfish and fish inspection methods, aquaculture processing technologies, aquaculture-induced food infections and intoxications								
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	Erol I., Gıda Hijyeni ve mikrobiyolojisi, 2007.
2	Türker., Hayvansal gıdalarda kalite kontrolü, 1997.

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction
	Practice	Introduction
2	Theoretical	Chemical and microbiological quality of shellfish and fish
	Practice	Introducing the instruments and devices used in the laboratory where the analysis of shellfish and fish
3	Theoretical	Changes in shellfish and fish after death
	Practice	Identification and preparation of chemicals needed in the analysis
4	Theoretical	Cold and frozen preservation of shellfish and fish
	Practice	Determination of fat in shellfish and fish
5	Theoretical	Quality changes in chilled shellfish and fish
	Practice	Determination of fat in shellfish and fish
6	Theoretical	Fresh shellfish and fish - separation of stale shellfish and fish
	Practice	Moisture, ash and pH determination in shellfish and fish
7	Theoretical	Intoxications from shellfish and fish 1: Paralytic and diaretic poisoning
	Practice	Bacterial diseases caused by shellfish and fish 1: Determination of Vibrio
8	Intermediate Exam	Midterm
9	Theoretical	Intoxications from shellfish and fish 2: Neurotoxic and amnesic type poisoning
	Practice	Bacterial diseases caused by shellfish and fish 2: Determination of Clostridium perfringens
10	Theoretical	Poisoning of shellfish and fish
	Practice	Bacterial diseases caused by shellfish and fish 3: Determination of Aeromonas hydrophila
11	Theoretical	Prevention and control
	Practice	A visit to the aquaculture farm
12	Theoretical	Cleaning and sanitation in shellfish and fish farms
	Practice	Analyzes of swabbing samples taken from plant
13	Theoretical	Personnel hygiene with cold storage in shellfish and fish farms
	Practice	Microbiological examination of samples taken from cold storage and personel
14	Theoretical	Necessary properties for transport of feed of shellfish

14	Practice	Analysis of feeds of shellfish and fish
15	Theoretical	Discussion
	Practice	Discussion- Evaluated of the analysis results

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	1	42
Lecture - Practice	14	1	2	42
Assignment	7	1	1	14
Midterm Examination	1	10	1	11
Final Examination	1	15	1	16
			Total Workload (Hours)	125
			[Total Workload (Hours) / 25*] = **ECTS**	5
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Determination of the quality of shellfish and seafood products
2	Importance of preservation of shellfish and seafood and changes in products
3	Determination of risks and protection measures from shellfish and fish
4	Laboratory analysis of shellfish and fish
5	To determine the chemical and microbiological quality of shellfish and fish

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	4	4	5	4	5
P3	5	5		5	
P4			5		
P7	4	4	4	4	4
P9			5	5	5
P10	5	5	5	5	5
P11	5			5	5
P12	5			5	5
P13	5	5	5	5	5