



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Advanced Food Chemistry							
Course Code		VBH601		Couse Level		Third Cycle (Doctorate Degree)			
ECTS Credit	6	Workload	147 (<i>Hours</i>)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		To teach food components (protein, fat, carbohydrate, mineral, vitamin, enzymes and water) and chemical properties, classification, metabolism, function, deficiency, daily requirements of this. Chemical analyses of foods.							
Course Content		Food composition (protein, fat, carbohydrate, mineral, vitamin, enzymes and water). Reactions of matter in food composition and chemical analyses of foods.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Demonstration, Discussion, Individual Study, Problem Solving					
Name of Lecturer(s)		Lec. Cemil ŞAHİNER, Prof. Filiz KÖK							

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Fennema, O.R. Food Chemistry, Third Edition, Revised and Expanded, Marcel Dekker, Inc., New York, 1996
2	James, C.S. Analytical chemistry of foods. An Aspen Publication, Gaithersburg, Maryland, 1999.
3	Belitz, H.D., Grosch, W. Food Chemistry. Berlin, 1999.
4	Tayar, M., Çıbık, R. Gıda Kimyası, Bursa, 2011.
5	Demirci, M. Gıda Kimyası, 2010.
6	Bilişi A. Gıda Kimyası, 2009.
7	Saldamlı, İ. Gıda Kimyası. Hacettepe Üniversitesi Yayınları – Ankara, 1998.
8	Altuğ, T. Gıda Katkı Maddeleri, İzmir, 2001.

Week	Weekly Detailed Course Contents	
1	Theoretical	Chemical and physical properties of water, water in foods
	Practice	Sampling for water analysis and physical analysis of water
2	Theoretical	Classification and properties of carbohydrates
	Practice	Chemical analyses of water
3	Theoretical	Functions of carbohydrates in foods
	Practice	Water activity, moisture and ash analyses of foods
4	Theoretical	Classification and properties of proteins
	Practice	Determination of protein in meat and meat products
5	Theoretical	Functions of proteins in foods
	Practice	Determination of protein in milk and dairy products
6	Theoretical	Classification and properties of enzymes, functions of enzymes in foods
	Practice	Enzyme analyses of milk
7	Theoretical	Classification and properties of lipids
	Practice	Determination of lipid in meat and meat products
8	Intermediate Exam	MIDTERM
9	Theoretical	Functions of lipids in foods
	Practice	Determination of lipid in milk and dairy products
10	Theoretical	Vitamins
	Practice	Calculation of energy in meat and meat products
11	Theoretical	Minerals
	Practice	Calculation of energy in milk and dairy products
12	Theoretical	Natural toxins and contaminants



12	Practice	Determination of pH and acidity in foods
13	Theoretical	Phenolic compounds
	Practice	Determination of salt in foods
14	Theoretical	Natural taste compounds in foods
	Practice	Determination of preservatives and platform tests in milk
15	Theoretical	Food additives
	Practice	Overview and review of practical works carried out by

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Assignment	2	0	6	12
Reading	9	0	3	27
Midterm Examination	1	20	1	21
Final Examination	1	30	1	31
Total Workload (Hours)				147
[Total Workload (Hours) / 25*] = ECTS				6

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Learns metabolism, presence in foods, functions in nutrition and chemical structure of carbohydrates.
2	Learns metabolism, presence in foods, functions in nutrition and chemical structure of lipids.
3	Learns metabolism, presence in foods, functions in nutrition and chemical structure proteins.
4	Learns chemical structure, presence, deficiency, daily requirement of vitamins in foods
5	Learns chemical structure, presence, deficiency, daily requirement of minerals in foods
6	Learns chemical structure of enzymes, enzymes used in food processes.
7	Learns water in food and its chemical properties
8	Learns chemical analyses of foods

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	L6	L7	L8
P1	5	5	5	5	5	5	5	5
P2	3	3	3	3	3	3	3	
P3	2	2	2	2	2	2	2	2
P4	2	2	2	2	2	2	2	1
P5	1	1	1	1	1	1	1	1
P6	2	2	2	2	2	2	2	
P7	2	2	2	2	2	2	2	1



P8	3	3	3	3	3	3	3	2
P9	4	4	4	4	4	4	4	2
P10	5	5	5	5	5	5	5	5
P11								5
P12								5

