AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Food Chemistry							
Course Code		LBT203		Couse Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	75 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		The aim of the course is to explain the composition and properties of fat, protein, mineral substances and water, which are the main components of nutrients, physical and chemical changes during processing and storage.							
Course Content		Water (physical properties of water and ice, structure of water molecule, water types, water activity and degradation of foods), proteins (properties and reactions of amino acids, classification of amino acids, quantitative and qualitative determination of amino acids, structure of proteins, biological value of proteins, physicochemical properties, classification of proteins, quantitative and qualitative determination of proteins), lipids (definition and classification of lipids and edible oils, structure and properties of fatty acids, chemical properties of lipids, fatty alcohols with straight chain and aromatic structure, antioxidants used to prevent spoilage of oils), mineral classification of minerals, how minerals are found in nature, factors affecting absorption of minerals), toxic minerals.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)		Ins. Hilal DEMİRPENÇE							

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

Recommended or Required Reading	
1	Textbook: Ötleş, S., Özdestan. Ö., Nakilcioğlu, E., Kartal, C., Özyurt, H. 2016. Food Chemistry. EU Publications, Izmir.
2	AUXILIARY BOOKS: deMan, J.M., 1990, Principles of Food Chemistry Second edition, The Avi Publishing Company, 469 pp. Heimann, W., 1980,
3	Fundamentals of Food Chemistry, The Avi Publishing Company, 344 pp. Lee, F.A., 1983,

Week	Weekly Detailed Course Contents	
1	Theoretical	Structure of water molecule and water types
2	Theoretical	Physical properties of water and ice
3	Theoretical	Properties and structure of lipids and fatty acids
4	Theoretical	Properties of amino acids, reactions, classification, proteins and biological value
5	Theoretical	Classification of mineral substances, factors affecting the absorption of minerals
6	Theoretical	Classification and structure of sugars
7	Theoretical	Classification and structure of sugars
8	Theoretical	Reduction and oxidation structures of sugars (Midterm Exam)
9	Theoretical	Maillard reaction mechanism and prevention
10	Theoretical	Maillard reaction mechanism and prevention
11	Theoretical	Structure, gelatinization, retrogradation, modification of starch
12	Theoretical	Definition, functions and classification of vitamins
13	Theoretical	Importance, structure and classification of enzymes
14	Theoretical	Commercial enzyme production, application areas

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	14	0	2	28
Individual Work	14	1	0	14
Midterm Examination	1	1	1	2

Final Examination	1	2	1	3
			Total Workload (Hours)	75
			[Total Workload (Hours) / 25*] = **ECTS**	3
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Learning physical properties of water and ice, structure of water molecule, water types
2	Properties, classification and reactions of amino acids
3	Structure of proteins, biological value, classification
4	Chemical properties of lipids
5	Classification of mineral substances, forms of occurrence in nature
6	Structure and classification of enzymes

Programme Outcomes *(Laboratory Technology)*	
1	To be able to comprehend social, cultural and social responsibilities, to be able to follow national and international contemporary problems and developments
2	Atatürk is bound to Atatürk nationalism in the direction of principles and reforms; Adopting the national, moral, spiritual and cultural values of the Turkish people, open to universal and contemporary developments, the Turkish language is a rich, rooted and productive language; Have a love of language and a consciousness; To have the ability to use as much of a foreign language as he would need to read, taste and habit and professionally.
3	To be able to recognize the basic hardware units and operating systems of a computer, having information about internet usage and preparing documents, spreadsheets and presentations on computer by using office programs.
4	Acquires theoretical and practical knowledge at the basic level in mathematics, science and vocational field.
5	With the knowledge of laboratory technology in the field, he knows and analyzes problems, brings interpretation of data and suggests solutions.
6	In laboratories, according to the prepared business plan and program, necessary work can be done to obtain the desired quality products.
7	To have professional and ethical responsibility in business life.
8	Development and change are open, follow scientific social and cultural innovations, and develop themselves constantly.

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	2	2	2	2	2	2
P2	1	1	1	1	1	1
P3	1	1	1	1	1	1
P4	5	5	5	5	5	5
P5	4	4	4	4	4	4
P6	4	4	4	4	4	4
P7	3	3	3	3	3	3
P8	4	4	4	4	4	4