AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Advanced Food Chemistry								
Course Code	GMP513		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	7	Workload	176 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	In this course chemical structures of macro and mico food components will be studied in details.								
Course Content	Structural and functional properties of food proteins, the changed in proteins, lipids, carbohaydrates and vitamins during processing and storage, the enzymatic changes during matıration and post-harvest period of foods.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Individual Study								
Name of Lecturer(s)	Prof. Aslı YORULMAZ								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	20
Final Examination	1	60
Assignment	2	20

Recommended or Required Reading	
1	Saldamlı İ., Gıda Kimyası, 1998, Ankara
2	Fennema, O., Food Chemistry, 1996

Week	Weekly Detailed Course Contents	
1	Theoretical	Free energy and chemical reactions, activation energy
2	Theoretical	Primer and seconder structures of aminoacids and proteins
3	Theoretical	Tertiary structures of proteins
4	Theoretical	Deanturation, functional properties of proteins
5	Theoretical	Polyphenoloxidases, enzymatic reactions
6	Theoretical	Structures and reactions of carbonhydrates
7	Intermediate Exam	Exam
8	Theoretical	Non-enzymatic browning reactions, Strecker degradations
9	Theoretical	Sweeteners, polysaccharides, starch, pectins and gums
10	Theoretical	Structures and denomination of lipids
11	Theoretical	Lipid oxidation; mechanism, starter mechanisms of free radicals
12	Theoretical	Lipid oxidation-frying oils and antioxidants
13	Theoretical	Hidrogenation, interesterification and polymorfism
14	Final Exam	Final Exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	3	70
Assignment	2	16	2	36
Midterm Examination	1	29	1	30
Final Examination	1	39	1	40
			Total Workload (Hours)	176
			[Total Workload (Hours) / 25*] = **ECTS**	7
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	
2	

3	
4	
5	

Programme Outcomes *(Food Engineering Master)*	
1	To provide further training and research opportunities to food engineers to meet the needs of the food industry
2	To develop and deepen the current and advanced knowledge in the field of food engineering with original thought and / or research at the level of expertise, based on the qualifications of the master
3	To identify, define, formulate and solve problems in applications related to Food Engineering and gain the ability to select and apply appropriate analytical methods and modeling techniques
4	To gain the ability to evaluate the accuracy of the data obtained from food analysis
5	To educate students having research, entrepreneur qualifications

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	3	3	3	3	1
P2	3	3	3	3	
P3	3	2	2	4	
P4	3	3	3	3	
P5	3	4	3	3	