



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Food Flavor Compounds							
Course Code		GMP603		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	8	Workload	200 (Hours)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		This course introduces the fundamental science and latest research advances in food flavour, through relevant scientific case examples and industrially relevant applications.							
Course Content		This course covers the isolation, fractionation, and identification of the flavor constituents in food; biochemical pathways for the formation of plant derived aromas; chemical reactions and their mechanisms for the formation of flavor components in food; methods for measuring flavor and flavor stability of food.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Project Based Study, Individual Study, Problem Solving					
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	15
Final Examination	1	60
Assignment	1	10
Term Assignment	1	15

Recommended or Required Reading	
1	Flavor Chemistry and Technology( 2006), Gary Reinecius, Taylor&Francis
2	Flavor, fragrances and odor analysis. Editor: R. Marsili (2002), Marcel Dekker, Inc. 270 Madison Avenue, New York

Week	Weekly Detailed Course Contents & Teaching Methods	
1	Theoretical	An Overview of Flavor Perception
2	Theoretical	Flavor and the Information Age
3	Theoretical	Flavor Analysis (Principles of aroma isolation, Methods of aroma isolation)
4	Theoretical	Flavor Analysis (Analysis of aroma isolates, GC, GC/O, GC/MS/O, Electronic noses)
5	Theoretical	Flavor Analysis (Key components in foods, Aroma release during eating)
6	Theoretical	Taste compounds, Analysis of taste compounds
7	Theoretical	Flavor Formation in Fruits and Vegetables
8	Theoretical	Changes in Food Flavor Due to Processing
9	Theoretical	Flavor Formation via the Maillard Reaction
10	Theoretical	Flavors from Lipids
11	Theoretical	Flavors Formed via Fermentation
12	Theoretical	Food components and flavor interactions
13	Theoretical	Flavor Release from Foods
14	Theoretical	Off-Flavors and Taints in Foods

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	9	3	168
Midterm Examination	1	15	1	16
Final Examination	1	15	1	16
Total Workload (Hours)				200
[Total Workload (Hours) / 25*] = ECTS				8
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes	
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**Programme Outcomes (Food Engineering Doctorate)**

1	Developing and investigating the details of current and advanced knowledge in the field of Food Engineering by original thought and/or research on the level of expertise based on the graduate qualification and reaching to the original definitions that bring innovation to science.
2	Gain of ability of develop strategies, policies and implementation plans in the field of food engineering and evaluate the results within the framework of quality processes.
3	Gain of ability to perceive, design, evaluate and finish an original process by using and following the knowledge of the recent developments in the engineering fields.
4	Gain of ability of making critical analysis, synthesis and evaluation of ideas and development in food engineering field
5	Having advanced knowledge of food science and its applications based on doctoral level 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	L6	L7	L8
P1	3		2		3		2	3
P2	3	2	2		3		2	2
P3	3	3	2		2		2	3
P4	3	3		2			2	3
P5	2	4	4	5	3	2	3	3

