AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Advanced Food Microbiology								
Course Code	GMP518		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	8	Workload	200 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	Aim of course is discussion and evaluation of recent developments on the basis of basic subjects in Food Microbiology.								
Course Content	Course summary includes Food and microorganisms relations, undesirable effects of microorganisms, the effects of microorganisms in different food groups, antimicrobial substances produced by microorganism, bacteriocins, probiotics, Starter cultures of bacteria and their functions, Starter cultures of yeast and their functions, Starter cultures of molds and their functions, new development for prevention of microbial growth, predictive microbiology and significance in food safety.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Case Study, Individual Study								
Name of Lecturer(s)									

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

Recommended or Required Reading	
1	Food Microbiology, Adams, Martin Ray, Royal Society of Chemistry-Rsc ISBN:978085404284
2	Food Microbiology, an introduction. Thomas J. Montville and Karl R. Matthews
3	Erkmen and Bozoğlu. Food Microbiology I-II. 2008, 1 st ed. G.Ü.V. İlke Publishing, ISBN-978-605-5983-13-0

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to course
2	Theoretical	Food and microorganism relations
3	Theoretical	Growth of microorganisms in protein rich foods
4	Theoretical	Growth of microorganisms in fat and lipid rich foods
5	Theoretical	Growth of microorganisms carbohydrate rich foods
6	Theoretical	Growth of microorganisms in specific foods
7	Theoretical	Microorganism used as starter cultures.
8	Theoretical	The properties and functions of starter cultures
9	Theoretical	Probiotics
10	Theoretical	Antimicrobials produced by microorganisms
11	Theoretical	Bacteriocins
12	Theoretical	The effect of new Technologies against microbial growth
13	Theoretical	Predictive microbiology
14	Theoretical	Recent studies

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 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	L6	L7
P1	5	5	5	5	5	5	5
P2	4	4	4	5	4	5	5
P3	2	2	2	2	2	2	4
P4	4	4	4	4	4	4	4
P5	4	4	4	4	4	4	4