



ULUDAĞ UNIVERSITY
INSTITUTE of SCIENCE
2017-2018 ACADEMIC YEAR COURSE PLAN

DEPARTMENT OF

FOOD ENGINEERING

DEPARTMENT / PROGRAM

Master's Program

COURSE STAGE	I. TERM / FALL								II. TERM / SPRING							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
	GMB5191	M.Sc. THESIS I	C	0	1	0	0	1	GMB5192	M.Sc. THESIS II	C	0	1	0	0	1
	GMB5001	SAFE FOOD PROCESSING TECHNIQUES	C	3	0	0	3	6	GMB5171	SEMINAR	C	0	2	0	0	4
	GMB5003	INSTRUMENTAL FOOD ANALYSIS TECHNIQUES	C	3	0	0	3	6	GMB5002	ADVANCED FOOD MICROBIOLOGY	C	2	0	2	3	6
									GMB5000	RESEARCH TECHNIQUES and PUBLICATION ETHICS in FOOD ENGINEERING	C	2	0	0	2	2
	GMB5181	ADVANCED TOPICS IN M.Sc. THESIS I	E	4	0	0	0	5	GMB5182	ADVANCED TOPICS IN M.Sc. THESIS II	E	4	0	0	0	5
	GMB5011	INDUSTRIAL FOOD PROCESS ENGINEERING	E	3	0	0	3	6	GMB5010	DRYING TECHNIQUES OF FOODS	E	3	0	0	3	6
	GMB5013	INDUSTRIAL FRUIT JUICE PRODUCTION TECHNOLOGY	E	2	0	2	3	6	GMB5012	INDUSTRIAL CANNING TECHNOLOGY	E	2	0	2	3	6
	GMB5015	CHEMISTRY AND TECHNOLOGY OF EDIBLE FATS AND OILS	E	3	0	0	3	6	GMB5014	CHEMICAL MICROBIOLOGY	E	3	0	0	3	6
	GMB5017	CEREAL CHEMISTRY	E	2	0	2	3	6	GMB5016	FERMENTED CEREAL PRODUCTSTECHNOLOGIES	E	2	0	2	3	6
	GMB5019	TECHNOLOGY OF BISCUIT, CRACKER AND CAKE	E	2	0	2	3	6	GMB5018	PASTA AND NOODLE TECHNOLOGY	E	2	0	2	3	6
	GMB5021	STARTER PRODUCTION AND USE IN FOOD INDUSTRY	E	2	0	2	3	6	GMB5020	SAFETY, MICROBIOLOGY AND CHEMISTRY OF FOODS	E	3	0	0	3	6
	GMB5023	IDENTIFICATION OF MICROORGANISMS CAUSING SPOILAGE IN FOODS	E	2	0	2	3	6	GMB5022	TECHNIQUES APPLIED IN FOOD PACKAGING	E	3	0	0	3	6
	GMB5025	MICROBIAL PROCESS TECHNOLOGY	E	3	0	0	3	6	GMB5024	COMMUNITY NUTRITION	E	3	0	0	3	6
	GMB5027	FOOD SANITATION	E	3	0	0	3	6	GMB5026	FUNCTIONAL FOODS AND NUTRACEUTICALS	E	3	0	0	3	6
	GMB5029	INDUSTRIAL FRUIT WINES TECHNOLOGY	E	2	0	2	3	6	GMB5028	WHISKY AND COGNAC PRODUCTION	E	2	0	2	3	6
	GMB5031	ENZYMES IN FOOD INDUSTRY	E	2	0	2	3	6	GMB5030	FOOD AROMA AND AROMA CHEMISTRY	E	2	0	2	3	6

GMB5033	MALT AND BEER TECHNOLOGY	E	2	0	2	3	6	GMB5032	DAIRY PROCESSING TECHNOLOGY	E	2	0	2	3	6				
GMB5035	PROCESSES DESIGN AND EVALUATION	E	3	0	0	3	6	GMB5034	FORTIFICATION OF FOODS WITH MINERALS AND BIOAVAILABILITY	E	3	0	0	3	6				
GMB5037	PHYSICS AND CHEMISTRY OF MILK AND DAIRY PRODUCTS	E	2	0	2	3	6	GMB5036	SHELF LIFE OF FOODS	E	3	0	0	3	6				
GMB5039	TRACE ELEMENTS IN FOODS	E	3	0	0	3	6	GMB5038	PROBIOTIC BACTERIA AND PROBIOTICS IN DAIRY SCIENCE	E	2	0	2	3	8				
GMB5041	ALTERNATIVE PRESERVATION TECHNIQUES IN DAIRY SCIENCE	E	3	0	0	3	6	GMB5040	MODIFIED ATMOSPHERE PACKAGING OF FOOD	E	3	0	0	3	6				
GMB5043	MOLECULAR APPLICATIONS IN FOOD ENGINEERING	E	2	0	2	3	6	GMB5042	GASTRONOMY AND FOOD HISTORY	E	3	0	0	3	6				
GMB5045	ASEPTIC PACKAGING TECHNOLOGY	E	3	0	0	3	6	GMB5044	YEASTS and BIOTECHNOLOGICAL APPLICATIONS OF YEASTS	E	3	0	0	3	6				
GMB5047	CORN PRODUCTS AND SWEETENERS	E	3	0	0	3	6	GMB5046	BASIC PRACTICAL MICROBIOLOGY	E	2	2	0	3	6				
GMB5049	INVESTMENT PROJECT PREPARATION, EVALUATION AND MONITORING METHODS IN FOOD INDUSTRY	E	3	0	0	3	6	GMB5048	RECENT ADVANCES IN MEAT TECHNOLOGY	E	3	0	0	3	6				
GMB5051	RHEOLOGY AND TEXTURE OF DAIRY PRODUCTS	E	3	0	0	3	6	GMB5050	FOOD CONTAMINANTS AND RESIDUES	E	3	0	0	3	6				
GMB5053	TEA PROCESSING TECHNOLOGY	E	3	0	0	3	6												
GMB5055	ADVANCED MEAT SCIENCE AND TECHNOLOGY	E	3	0	0	3	6												
GMB5057	QUALITY MANAGEMENT SYSTEMS FOR FOOD TESTING LABORATORIES	E	3	0	0	3	6												
TOTAL Credits								12	30	TOTAL Credits								11	30
THESIS	III. TERM / FALL								IV. TERM / SPRING										
	GMB5183	ADVANCED TOPICS IN M.Sc. THESIS III	C	4	0	0	0	5	GMB51824	ADVANCED TOPICS IN M.Sc. THESIS IV	C	4	0	0	0	5			
	GMB5193	M.Sc. THESIS III	C	0	1	0	0	25	GMB5194	M.Sc.. THESIS IV	C	0	1	0	0	25			
	TOTAL Credits								0	30	TOTAL Credits								0
TOTAL CREDITS: 23 - TOTAL ECTS: 120																			



ULUDAĞ UNIVERSITY
INSTITUTE of SCIENCE
2017-2018 ACADEMIC YEAR COURSE PLAN

DEPARTMENT OF		FOOD ENGINEERING														
DEPARTMENT / PROGRAM		Doctorate Program														
COURSE STAGE	I. TERM / FALL								II. TERM / SPRING							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
	GMB6191	PHD THESIS CONSULTING I	C	0	1	0	0	1	GMB6192	PHD THESIS CONSULTING II	C	0	1	0	0	1
	GMB6001	ADVANCED STERILISATION TECHNIQUES	C	3	0	0	3	6	GMB6172	SEMINAR	C	0	2	0	0	4
									FEN6000	RESEARCH TECHNIQUES and PUBLICATION ETHICS	C	2	0	0	2	2
									GMB6182	ADVANCED TOPICS IN PHD THESIS II	E	4	0	0	0	5
	GMB6181	ADVANCED TOPICS IN PHD THESIS I	E	4	0	0	0	5	GMB6008	FOOD PRESERVATION TECHNOLOGY	E	3	0	0	3	6
	GMB6009	CLARIFICATION AND FILTRATION TECHNIQUES	E	3	0	0	3	6	GMB6010	LIPIDS	E	3	0	0	3	6
	GMB6011	HYDROGENATION OF FATS AND MARGARINE TECHNOLOGY	E	3	0	0	3	6	GMB6012	STATISTICAL QUALITY CONTROL IN FOOD INDUSTRY	E	3	0	0	3	6
	GMB6013	CHEMISTRY AND TECHNOLOGY OF STARCH	E	2	0	2	3	6	GMB6014	ADVANCED FOOD CHEMISTRY	E	3	0	0	3	6
	GMB6015	FOOD MYCOLOGY	E	2	0	2	3	6	GMB6016	MILLING TECHNOLOGY	E	2	0	2	3	6
	GMB6017	AROMA-ACTIVE FOOD COMPONENTS	E	2	0	2	3	6	GMB6018	SPECIAL CEREAL PRODUCTS	E	2	0	2	3	6
	GMB6019	FOOD-ORIGINATED SULPHUR COMPOUNDS	E	2	0	2	3	6	GMB6020	FOOD TOXICOLOGY	E	3	0	0	3	6
	GMB6021	ADVANCED DAIRY TECHNOLOGY	E	3	0	0	3	6	GMB6022	CHEMICAL CHANGES OCCURED DURING FOOD PROCESSING	E	3	0	0	3	6
	GMB6023	ADVANCED FOOD BIOCHEMISTRY	E	3	0	0	3	6	GMB6024	FOOD FERMENTATIONS	E	3	0	0	3	6
	GMB6025	RESEARCH METHODS IN FOOD SCIENCE	E	3	0	0	3	6	GMB6026	TECHNOLOGY OF FLAVOR AND PHENOLIC COMPOUNDS	E	2	0	2	3	6
	GMB6027	LACTIC ACID BACTERIA and BIOTECHNOLOGICAL APPLICATIONS OF LACTIC ACID BACTERIA	E	3	0	0	3	6	GMB6028	CHEMISTRY AND TECHNOLOGY OF FERMENTED DAIRY PRODUCTS	E	3	0	0	3	6
	GMB6029	FUNCTIONAL ADDITIVES IN DAIRY	E	3	0	0	3	6	GMB6030	PHYSICAL PROPERTIES OF FOOD	E	3	0	0	3	6

		PRODUCTS														
								GMB6032	FOOD INGREDIENTS AND ADDITIVES IN PRODUCT DEVELOPMENT	E	3	0	0	3	6	
								GMB6034	THE PROTEOM AND METABOLOM ANALYSIS USED IN DETERMINATION OF MICROBIOLOGICAL FOOD QUALITY	E	3	0	0	3	6	
								GMB6036	THE SPICES USED IN FOOD INDUSTRY AND THEIR PROPERTIES	E	3	0	0	3	6	
								GMB6038	MICROBIAL SHELF LIFE ASSESSMENT OF FOOD	E	3	0	0	3	6	
								GMB6040	ADVANCED CHEESE TECHONOLOGY	E	3	0	0	3	6	
		TOTAL					14	30	TOTAL						11	30
THESIS STAGE	III. TERM / FALL							IV. TERM / SPRING								
	GMB6183	ADVANCED TOPICS IN PHD THESIS III	C	4	0	0	0	5	GMB6184	ADVANCED TOPICS IN PHD THESIS IV	C	4	0	0	0	5
	GMB6193	PHD THESIS III	C	0	1	0	0	20	GMB6194	PHD THESIS IV	C	0	1	0	0	25
	YET6177	PHD PROFICIENCY EXAMINATION	C	0	0	0	0	5								
		TOTAL					0	30	TOTAL						0	30
	V. TERM / FALL							VI. TERM / SPRING								
	GMB6185	ADVANCED TOPICS IN PHD THESIS V	C	4	0	0	0	5	GMB6186	ADVANCED TOPICS IN PHD THESIS VI	C	4	0	0	0	5
	GMB6195	PHD THESIS V	C	0	1	0	0	25	GMB6196	PHD THESIS VI	C	0	1	0	0	25
			TOTAL					0	30	TOTAL						0
	VII. TERM / FALL							VIII. TERM / SPRING								
	GMB6187	ADVANCED TOPICS IN PHD THESIS VII	C	4	0	0	0	5	GMB6188	ADVANCED TOPICS IN PHD THESIS VIII	C	4	0	0	0	5
	GMB6197	PHD THESIS VII	C	0	1	0	0	25	GMB618	PHD THESIS VIII	C	0	1	0	0	25
			TOTAL					0	30	TOTAL						0
TOTAL CREDITS: 23 - TOTAL ECTS: 240																



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INSTITUTE of SCIENCE
2017-2018 ACADEMIC YEAR COURSE PLAN

DEPARTMENT OF		FOOD ENGINEERING														
DEPARTMENT / PROGRAM		Integrated Doctorate Program														
COURSE STAGE	I. TERM / FALL								II. TERM / SPRING							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
	GMB6191	PHD THESIS CONSULTING I	C	0	1	0	0	1	GMB6192	PHD THESIS CONSULTING II	C	0	1	0	0	1
	GMB6181	ADVANCED TOPICS IN PHD THESIS I	E	4	0	0	0	5	GMB6182	ADVANCED TOPICS IN PHD THESIS II	E	4	0	0	0	5
	GMB5001	SAFE FOOD PROCESSING TECHNIQUES	C	3	0	0	3	6	GMB5002	ADVANCED FOOD MICROBIOLOGY	C	2	0	2	3	6
	GMB5003	INSTRUMENTAL FOOD ANALYSIS TECHNIQUES	C	3	0	0	3	6	GMB5010	DRYING TECHNIQUES OF FOODS	E	3	0	0	3	6
	GMB5011	INDUSTRIAL FOOD PROCESS ENGINEERING	E	3	0	0	3	6	GMB5012	INDUSTRIAL CANNING TECHNOLOGY	E	2	0	2	3	6
	GMB5013	INDUSTRIAL FRUIT JUICE PRODUCTION TECHNOLOGY	E	2	0	2	3	6	GMB5014	CHEMICAL MICROBIOLOGY	E	3	0	0	3	6
	GMB5015	CHEMISTRY AND TECHNOLOGY OF EDIBLE FATS AND OILS	E	3	0	0	3	6	GMB5016	FERMENTED CEREAL PRODUCTS TECHNOLOGIES	E	2	0	2	3	6
	GMB5017	CEREAL CHEMISTRY	E	2	0	2	3	6	GMB5018	PASTA AND NOODLE TECHNOLOGY	E	2	0	2	3	6
	GMB5019	TECHNOLOGY OF BISCUIT, CRACKER AND CAKE	E	2	0	2	3	6	GMB5020	SAFETY, MICROBOLOGY AND CHEMISTRY OF FOODS	E	3	0	0	3	6
	GMB5021	STARTER PRODUCTION AND USE IN FOOD INDUSTRY	E	2	0	2	3	6	GMB5022	TECHNIQUES APPLIED IN FOOD PACKAGING	E	3	0	0	3	6
	GMB5023	IDENTIFICATION OF MICROORGANISMS CAUSING SPOILAGE IN FOODS	E	2	0	2	3	6	GMB5024	COMMUNITY NUTRITION	E	3	0	0	3	6
	GMB5025	MICROBIAL PROCESS TECHNOLOGY	E	3	0	0	3	6	GMB5026	FUNCTIONAL FOODS AND NUTRACEUTICALS	E	3	0	0	3	6
	GMB5027	FOOD SANITATION	E	3	0	0	3	6	GMB5028	WHISKY AND COGNAC PRODUCTION	E	2	0	2	3	6
	GMB5029	INDUSTRIAL FRUIT WINES TECHNOLOGY	E	2	0	2	3	6	GMB5030	FOOD AROMA AND AROMA CHEMISTRY	E	2	0	2	3	6
	GMB5031	ENZYMES IN FOOD INDUSTRY	E	2	0	2	3	6	GMB5032	DAIRY PROCESSING TECHNOLOGY	E	2	0	2	3	6
	GMB5033	MALT AND BEER TECHNOLOGY	E	2	0	2	3	6	GMB5034	FORTIFICATION OF FOODS WITH MINERALS AND BIOAVAILABILITY	E	3	0	0	3	6
	GMB5035	PROCEES DESIGN AND EVALUATION	E	3	0	0	3	6	GMB5036	SHELFLIFE OF FOODS	E	3	0	0	3	6
	GMB5037	PHYSICS AND CHEMISTRY OF MILK AND DAIRY PRODUCTS	E	2	0	2	3	6	GMB5038	PROBIOTIC BACTERIA AND PROBIOTICS IN DAIRY SCIENCE	E	2	0	2	3	8
GMB5039	TRACE ELEMENTS IN FOODS	E	3	0	0	3	6	GMB5040	MODIFIED ATMOSPHERE PACKAGING OF FOOD	E	3	0	0	3	6	

GMB5041	ALTERNATIVE PRESERVATION TECHNIQUES IN DAIRY SCIENCE	E	3	0	0	3	6	GMB5042	GASTRONOMY AND FOOD HISTORY	E	3	0	0	3	6		
GMB5043	MOLECULAR APPLICATIONS IN FOOD ENGINEERING	E	2	0	2	3	6	GMB5044	YEASTS and BIOTECHNOLOGICAL APPLICATIONS OF YEASTS	E	3	0	0	3	6		
GMB5045	ASEPTIC PACKAGING TECHNOLOGY	E	3	0	0	3	6	GMB5046	BASIC PRACTICAL MICROBIOLOGY	E	2	2	0	3	6		
GMB5047	CORN PRODUCTS AND SWEETENERS	E	3	0	0	3	6	GMB5048	RECENT ADVANCES IN MEAT TECHNOLOGY	E	3	0	0	3	6		
GMB5049	INVESTMENT PROJECT PREPARATION, EVALUATION AND MONITORING METHODS IN FOOD INDUSTRY	E	3	0	0	3	6	GMB5050	FOOD CONTAMINANTS AND RESIDUES	E	3	0	0	3	6		
GMB5051	RHEOLOGY AND TEXTURE OF DAIRY PRODUCTS	E	3	0	0	3	6										
GMB5053	TEA PROCESSING TECHNOLOGY	E	3	0	0	3	6										
GMB5055	ADVANCED MEAT SCIENCE AND TECHNOLOGY	E	3	0	0	3	6										
GMB5057	QUALITY MANAGEMENT SYSTEMS FOR FOOD TESTING LABORATORIES	E	3	0	0	3	6										
Toplam Kredi							12	30	Toplam Kredi							12	30
III. TERM / FALL								IV. TERM / SPRING									
GMB6193	PHD THESIS CONSULTING III	C	0	1	0	0	1	GMB6194	PHD THESIS CONSULTING IV	C	0	1	0	0	1		
GMB6183	ADVANCED TOPICS IN PHD THESIS III	E	4	0	0	0	5	GMB6184	ADVANCED TOPICS IN PHD THESIS IV	E	4	0	0	0	5		
ENS6001	RESEARCH METHODS	C	2	0	0	2	4	GMB6172	SEMINAR	C	0	2	0	0	4		
GMB6001	ADVANCED STERILISATION TECHNIQUES	C	3	0	0	3	6	FEN6000	RESEARCH TECHNIQUES and PUBLICATION ETHICS	C	2	0	0	2	2		
								GMB6008	FOOD PRESERVATION TECHNOLOGY	E	3	0	0	3	6		
GMB6009	CLARIFICATION AND FILTRATION TECHNIQUES	E	3	0	0	3	6	GMB6010	LIPIDS	E	3	0	0	3	6		
GMB6011	HYDROGENATION OF FATS AND MARGARINE TECHNOLOGY	E	3	0	0	3	6	GMB6014	ADVANCED FOOD CHEMISTRY	E	3	0	0	3	6		
GMB6013	CHEMISTRY AND TECHNOLOGY OF STARCH	E	2	0	2	3	6	GMB6016	MILLING TECHNOLOGY	E	2	0	2	3	6		
GMB6015	FOOD MYCOLOGY	E	2	0	2	3	6	GMB6018	SPECIAL CEREAL PRODUCTS	E	2	0	2	3	6		
GMB6017	AROMA-ACTIVE FOOD COMPONENTS	E	2	0	2	3	6	GMB6020	FOOD TOXICOLOGY	E	3	0	0	3	6		
GMB6019	FOOD-ORIGINATED SULPHUR COMPOUNDS	E	2	0	2	3	6	GMB6022	CHEMICAL CHANGES OCCURED DURING FOOD PROCESSING	E	3	0	0	3	6		
GMB6021	ADVANCED DAIRY TECHNOLOGY	E	3	0	0	3	6	GMB6024	FOOD FERMENTATIONS	E	3	0	0	3	6		
GMB6023	ADVANCED FOOD BIOCHEMISTRY	E	3	0	0	3	6	GMB6026	TECHNOLOGY OF FLAVOR AND PHENOLIC COMPOUNDS	E	2	0	2	3	6		
GMB6025	RESEARCH METHODS IN FOOD SCIENCE	E	3	0	0	3	6	GMB6028	CHEMISTRY AND TECHNOLOGY OF FERMENTED DAIRY PRODUCTS	E	3	0	0	3	6		

GMB6027	LACTIC ACID BACTERIA and BIOTECHNOLOGICAL APPLICATIONS OF LACTIC ACID BACTERIA	E	3	0	0	3	6	GMB6030	PHYSICAL PROPERTIES OF FOOD	E	3	0	0	3	6		
GMB6029	FUNCTIONAL ADDITIVES IN DAIRY PRODUCTS	E	3	0	0	3	6	GMB6032	FOOD INGREDIENTS AND ADDITIVES IN PRODUCT DEVELOPMENT	E	3	0	0	3	6		
								GMB6034	THE PROTEOM AND METABOLOM ANALYSIS USED IN DETERMINATION OF MICROBIOLOGICAL FOOD QUALITY	E	3	0	0	3	6		
								GMB6036	THE SPICES USED IN FOOD INDUSTRY AND THEIR PROPERTIES	E	3	0	0	3	6		
								GMB6038	MICROBIAL SHELF LIFE ASSESSMENT OF FOOD	E	3	0	0	3	6		
								GMB6040	ADVANCED CHEESE TECHONOLOGY	E	3	0	0	3	6		
Toplam Kredi							12	30	Toplam Kredi							11	30
V. TERM / FALL								VI. TERM / SPRING									
GMB6185	ADVANCED TOPICS IN PHD THESIS V	C	4	0	0	0	5	GMB6186	ADVANCED TOPICS IN PHD THESIS VI	C	4	0	0	0	5		
GMB6195	PHD THESIS V	C	0	1	0	0	20	GMB6196	PHD THESIS VI	C	0	1	0	0	25		
YET6177	PHD PROFICIENCY EXAMINATION	C	0	0	0	0	5										
TOTAL							0	30	TOTAL							0	30
VII. TERM / FALL								VIII. TERM / SPRING									
GMB6187	ADVANCED TOPICS IN PHD THESIS VII	C	4	0	0	0	5	GMB6188	ADVANCED TOPICS IN PHD THESIS VIII	C	4	0	0	0	5		
GMB6197	PHD THESIS VII	C	0	1	0	0	25	GMB6198	PHD THESIS VIII	C	0	1	0	0	25		
TOTAL							0	30	TOTAL							0	30
IX. TERM / FALL								X. TERM / SPRING									
	ADVANCED TOPICS IN PHD THESIS IX	C	4	0	0	0	5		ADVANCED TOPICS IN PHD THESIS X	C	4	0	0	0	5		
	PHD THESIS IX	C	0	1	0	0	25		PHD THESIS X	C	0	1	0	0	25		
TOTAL							0	30	TOTAL							0	30
TOTAL CREDITS: 47 - TOTAL ECTS: 300																	

Not: The student is expected to take a total of credited selective courses every academic term.

The student have the option of choosing one selective course from another department with the endorsement of the supervisor. *Success in Ph.D. qualifying exam is a prerequisite.