AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Novel Techniques in Meat Processing								
Course Code	GMP624		Couse Level		Third Cycle (Doctorate Degree)				
ECTS Credit	8	Workload	200 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	Improve the engineering outlook by learning basic princibles of novel food processing techniques and the effects of these techniques to meat quality								
Course Content	Meat quality, the usage of novel technologies; ultrasound, irradiation, microwave, high pressure processing, vacuum cooling, pulsed electric fiedls, pulsed light, vacuum cooling, ohmic system, infrared heating in meat technology								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Project Based Study, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	70

Recommended or Required Reading	
1	Baysal, T., İçier, F. “Gıda Mühendisliğinde Isıl Olmayan Teknolojiler” Nobel Yayıncılık, 2012.
2	Sun, D.W. (Ed), Emerging Technologies for Food Processing, Second Edition, Elsevier Academic Press, Oxford, 2014

Week	**Weekly Detailed Course Contents & Teaching Methods**	
1	Theoretical	Traditional Techniques in Meat Processing
2	Theoretical	The Effect of Traditional Techniques in Meat Processing on Meat Quality
3	Theoretical	High Hydrostatic Pressure and Usage in Meat Processing
4	Theoretical	Ultrasound and Usage in Meat Processing
5	Theoretical	Irradiation and Usage in Meat Processing
6	Theoretical	Pulsed Electric Fields (PEF) and Usage in Meat Processing
7	Theoretical	Pulsed Light and Usage in Meat Processing
8	Theoretical	Microwave Heating in Meat Processing
9	Intermediate Exam	Midterm
10	Theoretical	Vacuum Cooling and Usage in Meat Processing
11	Theoretical	Ohmic Process and Usage in Meat Processing
12	Theoretical	Infrared and Usage in Meat Processing
13	Theoretical	Radio Frequency and Usage in Meat Processing
14	Theoretical	Novel Combined Systems in Meat Processing
15	Theoretical	Novel Combined Systems in Meat Processing
16	Final Exam	Final exam

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	
1	To learn about the principles of novel techniques in meat technology
2	To learn the effects of novel techniques on meat quality

3	To learn about the disadvantages of novel techniques and parts to be improved
4	Gain the ability of doing literature search, review, and reporting by using computer about a given subject
5	Yaşamda öğrenme ve uygulama bilinci ve bunu gerçekleştirebilme becerisi kazanma

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
P1	3	4	4	4	4
P2		5			
P3				4	4
P4			4	4	
P5					5