



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Packaging in Dairy Industry							
Course Code		ST410		Course Level		First Cycle (Bachelor's Degree)			
ECTS Credit	4	Workload	102 (<i>Hours</i>)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		Aim of the course is to convey information about the importance of packaging technology, packaging materials and packaging methods which are important steps in the production of dairy products.							
Course Content		Effects of moisture, oxygen and light on foods and food spoilage. The need for packaging. Glass, paper, aluminum, tin and plastic materials and multi-layer packaging materials. Aseptic packaging, migration and the latest developments in packaging technology							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	1. Üçüncü, M., 2000, Gıdaların Ambalajlanması , Ege Üniversitesi Basımevi, Bornova, 689 s.
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Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction of the packaging, the packaging functions, spoilage in dairy products
2	Theoretical	Glass packaging
3	Theoretical	Paper packaging
4	Theoretical	Wood and aluminum packaging
5	Theoretical	Tin packaging
6	Theoretical	Plastics and plastic-based packaging
7	Theoretical	Plastics and plastic-based packaging
8	Intermediate Exam	Mid-term exam
9	Theoretical	Aseptic packaging technology in dairy industry
10	Theoretical	Widely used packaging materials and packaging techniques for dairy products
11	Theoretical	The importance of labels and labeling
12	Theoretical	Modified atmosphere packaging technology
13	Theoretical	Developments in packaging technology- active packaging technology
14	Theoretical	Developments in packaging technology-intelligent packaging technology
15	Theoretical	Definition and importance of migration
16	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	2	56
Laboratory	14	0	2	28
Individual Work	14	0	1	14
Midterm Examination	1	0	2	2
Final Examination	1	0	2	2
Total Workload (Hours)				102
[Total Workload (Hours) / 25*] = ECTS				4

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	Ability to know the functions of packaging
2	Ability to establish a relationship between packaging and spoilage of dairy products
3	Ability to determine the most appropriate packaging technology to protect the quality and to extend the shelf life of dairy products.
4	Ability to become aware of the relationships between packaging and the environment, packaging and health, packaging and cost.
5	The knowledge of smart packaging techniques.

Programme Outcomes (Dairy Technology)

1	Having sufficient infrastructure in basic sciences and engineering subjects and ability to use the theoretical and applied info instantly in this field.
2	Determining the modern techniques, tools and information technologies required for applications related with his field and ability to use them efficiently
3	Ability for planning, projecting, and designing, following up, analyzing and finding target-driven solutions related with his field
4	Ability to have professional ethic and awareness.
5	Ability to work, decide, express opinions orally and in written individually
6	Ability to participate team studies, taking responsibility, making leadership.
7	Ability to conceive Atatürk's principles and reforms, to communicate in Turkish and foreign language.
8	Ability to comprehend the necessity to learn for a life time, to monitor developments in science and technology and continuously renew himself.
9	Having sufficient level of information about production and quality control of milk and dairy products and also product development, increasing product quality and food security fields.
10	Ability to detect, define, solve problems related with his field and to select and apply suitable methods and modeling techniques for this purpose.
11	To be conscious about workplace applications, worker health, work security and environment subjects, to have knowledge about legal results of the engineering applications related with his subject.

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	5	5	5	5	4
P2			5		
P3					4
P8			5		
P9	5	5	5	5	
P10					3

