



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Condensed Milk and Milk Powder Technology							
Course Code		ST407		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		Learning the prenciples of concentration and drying and condensed milk and milk powder technologies							
Course Content		<ul style="list-style-type: none">• The importance of condensed milk and milk powder• Evaporation and evaporaters• Condensed milk production<ul style="list-style-type: none">• Vals and Sprey Drying• Milk powder production• Modified milk powders							
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. 1996. Süt Teknolojisi E.Ü. Mühendislik Fakültesi Yayınları No; 32
---	---

Week	Weekly Detailed Course Contents	
1	Theoretical	The amount of condensed milk and milk powder production, the properties of milk, the histories of condensed milk and milk powder production, the importance of condensed milk and milk powder production,
2	Theoretical	The principle of evaporation and evaporators
3	Theoretical	Condensed milk production
4	Theoretical	Condensed milk with sugar production
5	Theoretical	Recombined evaporated milk and others concentrated milk products
6	Theoretical	Drying, the principle of drying, the methods of drying
7	Theoretical	Vals drying
8	Intermediate Exam	Mid-term Exam
9	Theoretical	Sprey drying
10	Theoretical	Instant milk powder production
11	Theoretical	Packaging and storage
12	Theoretical	The properties and quality of milk powder
13	Theoretical	Whey powder, casein, laktose productions
14	Theoretical	Modified milk powders,
15	Theoretical	Modified milk powders,
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	1. evaporation principle, be able to have information about evaporators
2	2. Understand the process of sugar-free and sweetened condensed milk product technology
3	3. Have knowledge of Drying and the principle of drying, drying techniques and applying
4	4. To understand the processes related to the drying cylinder and spraying
5	The Knowledge of recombined evaporated milk and others concentrated milk products

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	5
P9	5	5	5	5	5

