AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Jam and Concentrated Products Technology								
Course Code	MSİ210		Couse Level	Short Cycle (Associate's Degree)					
ECTS Credit	4	Workload	100 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	It is aimed to comprehend the importance of the composition of fruits and vegetables in concentrated production processes.								
Course Content	Concentrated products are introduced. Tomato paste, jam, marmalade, molasses, citrus and pulp juice concentrate production processes are taught.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading	
1	Cemeroğlu, B., Karadeniz, F., 2001. oloj Fruit Juice Technology., Food Technology Association, Ankara.
2	Cemeroğlu, B., Karadeniz, F., Özkan, M., 2001. “Fruit and Vegetable Processing Technology kan, Food Technology Association, Ankara
3	Cemeroglu, Acar, J. and Cemeroğlu, B., 1998. II Fruit and Vegetable Technology ve, Volume II, Hacettepe University, Faculty of Engineering Publications, Ankara.B., Karadeniz, F., Ozkan, M., 2001., Fruit and Vegetable Processing Technology, Food Technology Association, Ankara

Week	Weekly Detailed Course Contents	
1	Theoretical	Concentrated products - general introduction and concepts
	Practice	Program introduction and rules
2	Theoretical	Tomato paste production technology-Pretreatments
	Practice	Tomato paste analysis-1
3	Theoretical	Tomato paste technology - Pulp production and technological applications
	Practice	Tomato paste analysis-2
4	Theoretical	Evaporators and their properties
	Practice	Color determination in paste
5	Theoretical	Tomato paste production technology-Concentration and filling
	Practice	Application of sugar syrup preparation (measuring with refractometer and cough)
6	Theoretical	Tomato paste production technology-Quality properties and process steps affecting them
	Practice	Evaporator presentation and concentration of sugar syrup
7	Theoretical	Jam and marmalade production technology-Definitions and raw material properties
	Practice	Jam Recipe arrangement
8	Intermediate Exam	Midterm
9	Theoretical	Jam and marmalade production technology-Auxiliary materials and properties
	Practice	Jam Recipe arrangement
10	Theoretical	Jam and marmalade production technology-Production equipment and methods
	Practice	Production of fresh fruit jam
11	Theoretical	Jam and marmalade production technology-production errors and filling
	Practice	Production of jam from dry fruits
12	Theoretical	Production of clear fruit juice concentrate
	Practice	Aroma holder, vacuum pump, evaporators

13	Theoretical	Production of citrus and pulp fruit juice concentrates
	Practice	Concentration problems
14	Theoretical	Production of molasses-Pretreatment and extraction
	Practice	Determination of TGK susceptibility of concentrated products
15	Theoretical	Production of molasses - concentration and filling
	Practice	Production of molasses - concentration and filling
16	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Individual Work	14	0	2	28
Midterm Examination	1	7	1	8
Final Examination	1	7	1	8
			Total Workload (Hours)	100
			[Total Workload (Hours) / 25*] = **ECTS**	4

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	To comprehend the importance of the composition of fruits and vegetables in concentrated production processes
2	Learning the fundamentals of technological production of concentrated fruit products
3	To understand the effects of production parameters and techniques on the final product quality in concentrated products
4	Identify the problems that may occur in the production and offer solutions
5	To be able to comprehend the production lines of different fruit concentrates and the working principle of equipments
6	To be able to analyze the production quality
7	To be able to evaluate the results of the analysis according to the relevant legal regulations
8	To be able to design the current system for a process given in the production of concentrated products

Programme Outcomes *(Fruit and Vegetables Processing Technology)*

1	To be able to understand social, cultural and social responsibilities and to have the ability to follow national and international contemporary
2	In line with the principles and reforms of Atatürk; Adopting the national, moral, spiritual and cultural values ??of the Turkish Nation, open to universal and contemporary developments, the Turkish language is a rich, rooted and productive language; love and awareness of language; to have the ability to use the foreign language sufficiently and with the habit of reading and professionally.
3	To know the basic hardware units and operating systems of computer, internet to be able to prepare documents, spreadsheets and presentations on the computer by using office programs
4	Gains the theoretical and practical knowledge at the basic level in mathematics, science and professional fields
5	Recognize and analyze the problems with the knowledge of fruit and vegetable technology in the field, interpret the data and propose solutions.
6	According to the prepared work plan and program in laboratories, it can carry out the necessary works to obtain the desired quality product.
7	To have professional and ethical responsibility in business life.
8	It is open to development and change, follows scientific social and cultural innovations and constantly improves itself.

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	L8
P1	3	3	4	3	3	3	2	2
P2	3	3	3	3	3	3	2	2
P3	2	2	4	2	2	3	2	4
P4	4	4	5	4	4	5	3	3
P5	5	5	5	5	5	5	4	5
P6	4	4	3	4	4	5	4	5
P7	4	4	3	4	4	4	4	3

P8	4	3	4	4	4	4	3	3