

## Course Description Form

<b>1. Course Name:</b>	
Cheese Processing	
<b>2. Course Code:</b>	
CHPR466	
<b>3. Semester / Year:</b>	
First semester (autumn)/2023-2024	
<b>4. Description Preparation Date:</b>	
1/2/2024	
<b>5. Available Attendance Forms:</b>	
Attendance lesson	
<b>6. Number of Credit Hours (Total) / Number of Units (Total): units</b>	
30 hours/30 units+ 45 hours/	
<b>7. Course administrator's name (mention all, if more than one name):</b>	
Name: dr. Azhar Ibrahim shukur Email: <a href="mailto:azhar.Ibrahim@uomosul.edu.iq">azhar.Ibrahim@uomosul.edu.iq</a> Name : dr. Saif Ali Mohammed Email: <a href="mailto:saif_ali@uomosul.edu.iq">saif_ali@uomosul.edu.iq</a>	
<b>8. Course Objectives</b>	
<b>Theoretical:</b> - Enabling the student to understand what is related to cheese making and its types * Enabling the student to know the most important types of cheese that are widespread in the world and in Iraq in particular * Enabling the student to become familiar with the most important defects of cheese * The student can judge the types of cheese	<b>practical:</b> Enabling the student to become familiar with the most important laboratory methods in studying and making cheese
<b>9. Teaching and Learning Strategies</b>	
<b>Theoretical:</b> Interactive lecture with the use of	<b>practical:</b> Assigning group work and revealing

presentations – dialogue Discussion - brainstorming - assigning tasks and reporting.

students’ skills - assignment Assignments to write a report for each experiment.

**10. Course Structure**

Week	Hours	Required Learning Outcomes	Name of Unit or subject	Learning method	Evaluation method
First	2Theoretical 3Practical	<b>Theoretical:a 1/ Recognizes cheese And its types Practical:b 6/ Tests different samples of rennet to determine its strength</b>	<b>Theoretical: Definition of cheese and factors that Determines the spread of one type rather than another practical: Estimation of rennet strength</b>	<b>Theoretical: Auditory methods Writing style on the blackboard Direct dialogue style practical : Assigning tasks and reporting</b>	Short exams, assignments, or discussions
Second	2Theoretical 3Practical	<b>Theoretical:a 2/ Differentiate between cheese Dry and soft cheese  practical :b 7/  Discover the types of bacterial cultures</b>	<b>Theoretical: Geographic distribution and types of work  Service: preparation The basics and their activation</b>	<b>Theoretical: Auditory methods Writing style on the blackboard Direct dialogue style practical : Assigning tasks and reporting</b>	Short exams, assignments, or discussions
Third	2Theoretical 3Practical	<b>Theoretical:b 1/ Explains the effect of type of Milk on cheese The resulting  practical :b 8/ Measures which type of cheese is best</b>	<b>Theoretical: Factors affecting characteristics Milk used in Cheese making And the relationship of this to the resulting cheese practical : Types of cowardice</b>	<b>Theoretical: Auditory methods Writing style on the blackboard Direct dialogue style practical : Assigning tasks and reporting</b>	Short exams, assignments, or discussions
Fourth	2Theoretical 3Practical	<b>Theoretical:c1/ Write a brief overview of Heat effect On casein and salts  practical :b9/ Discover the types of sensory tests conducted on milk before making soft white cheese .</b>	<b>Theoretical:  Factors affecting characteristics Milk used In cheese making And the relationship of this to the resulting cheese practical : White cheese industry</b>	<b>Theoretical: Auditory methods Writing style on the blackboard Direct dialogue style practical : Assigning tasks and reporting</b>	Short exams, assignments, or discussions

			<b>Tender .</b>		
Fifth	2Theoretical 3Practical	<b>Theoretical:a3/ Explains the functions of protein in cheese practical :b10/ Tests the purpose of wax</b>	<b>Theoretical: The importance of milk components in cheese making practical : Monterrey cheese industry</b>	<b>Theoretical: Auditory methods Writing style on the blackboard Direct dialogue style practical : Assigning tasks a reporting</b>	Short exams, assignments, or discussions
Sixth	2Theoretical 3Practical	<b>Theoretical:b2/ Determines the desired types of bacteria used in cheese making practical :c4/ Trying out how to make wall cheese</b>	<b>Theoretical: Microbe relationship By making cheese practical : Cheeder cheese</b>	<b>Theoretical: Auditory methods Writing style on the blackboard Direct dialogue style practical : Assigning tasks a reporting</b>	Short exams, assignments, or discussion
Seventh	2Theoretical 3Practical	<b>Theoretical:a4/ Explains the factors affecting rennet action and strength The resulting clot practical :c5/ Explains adding salt to pasteurized milk</b>	<b>Theoretical: Ways to cheese milk  practical : Damiati cheese</b>	<b>Theoretical: Auditory methods Writing style on the blackboard Direct dialogue style practical : Assigning tasks a reporting</b>	Short exams, assignments, or discussion
eighth	2Theoretical 3Practical	<b>Theoretical:c2/ He lists the qualities of good annatto practical :c6/ Continue to the chemical analysis of Ushari chees And baisa cheese.</b>	<b>Theoretical: Materials and raw materials used in cheese making practical : Ushari cheese</b>	<b>Theoretical: Auditory methods Writing style on the blackboard Direct dialogue style practical : Assigning tasks a reporting</b>	Short exams, assignments, or discussion
Ninth	2Theoretical 3Practical	<b>Theoretical:a5/ Familiar with milk processing methods practical :c7/ Find out the types stabilizers in proces cheese</b>	<b>Theoretical: General steps for making cheese practical : Types of stabilizers in processed cheese</b>	<b>Theoretical: Auditory methods Writing style on the blackboard Direct dialogue style practical : Assigning tasks a reporting</b>	Short exams, assignments, or discussions
Tenth	2Theoretical 3Practical	<b>Theoretical:c3/ Explains the purpose of scalding practical :c8/ It checks the degree of</b>	<b>General steps for making cheese practical : The degree of aging cheese over a differ</b>	<b>Theoretical: Auditory methods Writing style on the blackboard Direct dialogue st</b>	Short exams, assignments, or discussions

		<b>aging of cheese over a different period of time</b>	<b>period of time</b>	<b>practical :</b> Assigning tasks and reporting	
Eleventh	2Theoretical 3Practical	<b>Theoretical:b3/ Documents the purpose of the grinding or milling practical :c9/ Explains the types of dry cheeses</b>	<b>Theoretical: General steps for making cheese practical : Dry types of cheese</b>	<b>Theoretical:</b> Auditory methods Writing style on the blackboard Direct dialogue style <b>practical :</b> Assigning tasks and reporting	Short exams, assignments, or discussions
Twelveth	2Theoretical 3Practical	<b>Theoretical:b4/ Multiple packaging methods Cheese and raw materials Used in packaging practical :d1/ Discover the types of cheese aging methods</b>	<b>Theoretical: General steps for making cheese practical : Types of cheese aging methods</b>	<b>Theoretical:</b> Auditory methods Writing style on the blackboard Direct dialogue style <b>practical :</b> Assigning tasks and reporting	Short exams, assignments, or discussions
Thirteenth	2Theoretical 3Practical	<b>Theoretical:c4/ Explains the required conditions Availability in settlement rooms practical :d2/ Distinguish between types of enzymatic cheeses.</b>	<b>Theoretical: General steps for making cheese practical : Any type of enzymatic cheese</b>	<b>Theoretical:</b> Auditory methods Writing style on the blackboard Direct dialogue style <b>practical :</b> Assigning tasks and reporting	Short exams, assignments, or discussions
Fourteenth	2Theoretical 3Practical	<b>Theoretical:b5/ Regulated by humidity levels And the best temperature To settle the cheese practical :d3/ Testing which type of packaging is best for packaging dry cheese</b>	<b>Theoretical: Conditions for Ripening cheese practical : What type of packaging is best for wrapping dry cheese</b>	<b>Theoretical:</b> Auditory methods Writing style on the blackboard Direct dialogue style <b>practical :</b> Assigning tasks and reporting	Short exams, assignments, or discussions
Fifteenth	2Theoretical 3Practical	<b>Theoretical:e1/ A scientific and field visit to a dairy factory and submitting a report on manufacturing methods for dairy products practical :d4/ He tests which types cheese taste best</b>	<b>Theoretical: Solve the problem practical : Which types of cheese taste better?</b>	<b>Theoretical:</b> Auditory methods Writing style on the blackboard Direct dialogue style <b>practical :</b> Assigning tasks and reporting	Short exams, assignments, or discussions

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc . The average is calculated from 25 for theory, as well as for practical, with an average of 15.

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Book on making cheese and fermented milk (Abdul Muttalib, Salim)
Main references (sources)	Many books and magazines related to food processing
Recommended books and references (scientific journals, reports...)	Many books and magazines, including Technology of Cheese Making Journal of Dairy Science
Electronic References, Websites	Internet sites such as Google

Instructor of theoretical part

dr. Azhar ibrahim shukur

Instructor of practical part

dr. Saif ali mohammed

Chairman of the scientific committee

Prof. Dr. Moafak mahmood ahmed

Head of the department of Food science

Prof. Dr. Sumaya khalaf badawi