Course Description Form

1. Course Name:
Principles of Dairy
2. Course Code:
PRPD227
3. Semester / Year:
First semester (fall) / 2023-2024
4. Description Preparation Date:
1\9\2024
5. Available Attendance Forms:
Presence
6. Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours + 3 practical hours 3.5 units
7. Course administrator's name (mention all, if more than one name)
Name: M.D. Zaman Nadhim Taher

8. Course Objectives

theoretical: Enabling the student to understand and absorb what is related to dairy principles And its relationship to the dairy industry and its preservati - Enabling the student to know the most important method preserving milk - Enabling the student to become familiar with the most important sources of contamination in milk - Empowering the student with the ability to detect types o spoilage in milk - The student can judge the types of milk and how quickly it spoils	practical: Enabling the student to become familiar with the n important laboratory methods for detection and to bec familiar with the most important analytical methods analyzing milk products

9. Teaching and Learning Strategies

theoretical: -Interactive lecture - Brainstorming - Dialogue and discussion - Assigning tasks and reporting - Presentations of models of milk spoilage due to microbial contamination - He is assigned to prepare a diligence report and discuss it with the students	practical: - Assigning group work to reveal leadership skills - Assigning tasks and reporting for each experiment

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2Theoretical 3Practical	**THEORETICAL** a1) The student learns about the chemical composition of milk, the positive and negative relationship between the	**THEORETICAL** Milk Definitions - Factors - Affecting milk composition	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks	Shortexams, assignments, discussions

		composition of milk components, and the causes of milk contamination. **PRACTICAL:** c1) The student examines the received milk samples.	practical : Sampling methods	and reports	
2	2Theoretical 3Practical	**THEORETICAL** a1) The student learns about the chemical composition of milk, the positive and negative relationship between the composition of milk components, and the causes of milk contamination. **PRACTICAL :** b1) The student distinguishes between the methods of sensory examination of milk.	**THEORETICAL** Physical properties of milk practical : Sensory tests and milk judging	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
3	2Theoretical 3Practical	**THEORETICAL** a1) The student learns about the chemical composition of milk, the positive and negative relationship between the composition of milk components, and the causes of milk contamination. **PRACTICAL :** c1) The student examines the received milk samples.	**THEORETICAL** Water-fat-lactose practical : Estimating the percentage of fat in milk	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
4	2Theoretical 3Practical	**THEORETICAL** a2) The student is familiar with the types of milk proteins, the positive and negative relationship between its components, and the estimation of milk constants. **PRACTICAL :** b1) The student distinguishes between the methods of sensory examination of milk.	**THEORETICAL** Protein estimation practical : Milk adulteration and methods for detecting it	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
5	2Theoretical 3Practical	THEORETICAL a1) The student learns about the chemical composition of milk,	**theoretical** Enzymes - salts Mineral – vitamins	**THEORETICAL** audio methods, Writing on the board Direct dialogue	Shortexams, assignments, discussions

		the positive and negative relationship between the composition of milk components, and the causes of milk contamination. practical : b1) The student distinguishes between the methods of sensory examination of milk.	practical : Bacteriological examinations of milk	style **PRACTICAL** Assigning tasks and reports	
6	2Theoretical 3Practical	THEORETICAL a2) The student is familiar with the types of milk proteins, the positive and negative relationship between its components, and the estimation of milk constants. C1: The student examines the received milk samples.	**THEORETICAL** Microbiology in the milk practical : Estimation of milk acidity	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
7	2Theoretical 3Practical	THEORETICAL a1) The student will learn about the chemical composition of milk, the positive and negative relationship between the components of milk, and the causes of milk contamination. practical : c1) The student examines the received milk samples.	**THEORETICAL** Transmitted diseases Milk road practical : Detection of milk taken from cattle infected with mastitis	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
8	2Theoretical 3Practical	THEORETICAL a2) The student is famili with the types of milk proteins, the positive an negative relationship between its component and the estimation of mi constants. **PRACTICAL** : b1) The student distinguishes between the methods of sensory examination of milk.	**THEORETICAL** Adjusting the fat percentage in Milk (Pearson box) practical : Milk stability tests	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
9	2Theoretical 3Practical	THEORETICAL a2) The student is famili with the types of milk proteins, the positive an negative relationship between its component and the estimation of mi constants.	**THEORETICAL** Prepare milk in Farm and milk receiving practical : Milk fermentation industry	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions

		PRACTICAL : b1) The student distinguishes between the methods of sensory examination of milk.			
10	2Theoretical 3Practical	THEORETICAL a2) The student is famili with the types of milk proteins, the positive an negative relationship between its component and the estimation of mi constants. **PRACTICAL**: b1) The student distinguishes between the methods of sensory examination of milk.	**THEORETICAL** Milk separator and industry Cream practical : Cheese making	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
11	2Theoretical 3Practical	THEORETICAL a2) The student is famili with the types of milk proteins, the positive an negative relationship between its component and the estimation of mi constants. **PRACTICAL**: c1) The student examines the received milk samples.	**THEORETICAL** Thermal transactions For milk practical : Cream industry	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
12	2Theoretical 3Practical	THEORETICAL a2) The student is famili with the types of milk proteins, the positive an negative relationship between its component and the estimation of mi constants. **PRACTICAL**: c1) The student examines the received milk samples.	**THEORETICAL** Cheese And fermented milk practical : Butter industry	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
13	2Theoretical 3Practical	THEORETICAL a1) The student learns about the chemical composition of milk, the positive and negative relationship between th composition of milk components, and the causes of milk contamination. **PRACTICAL**: b1) The student distinguishes between the methods of sensory examination of milk.	**THEORETICAL** Report and discuss practical : Calculations for making milk ice cream mixes	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
14	2Theoretical 3Practical	THEORETICAL d1) The student	**THEORETICAL** A field visit to a dairy	**THEORETICAL** audio methods,	Shortexams, assignments,

		communicates with a da factory to evaluate the production situation. **PRACTICAL** : b1) The student distinguishes between the methods of sensory examination of milk.	factory and submitting a report on the microorganisms common in milk contamination practical : Manufacture of milk ice cream	Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	discussions
15	2Theoretical 3Practical	THEORETICAL d1) The student communicates with a da factory to evaluate the production situation. **PRACTICAL**: d1) The student communicates with a dairy factory to evaluate the production situation.	**THEORETICAL** Problem solving practical : Problem solving	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions

11. Course Evaluation

t	Calendar methods	Calendar date (week)	Class	Relative weight %
1	Report 1	fourth week	2.5	2.5
2	Report 2	The fifth week	2.5	2.5
3	Short test (1) Quiz	the sixth week	2	2
4	Short test (2) Quiz	The fourteenth week	2	2
5	Short test (3) Quiz	The fifteenth week	1	1
6	Semester test (1)	the sixth week	7.5	7.5
7	Semester test (2)	The eleventh week is difficult	7.5	7.5
8	Final theoretical test	Final semester exams	40	40
9	Practical Laboratory project	The fifteenth week	5	5
10	Laboratory evaluation	The third and fifth week	2	2
11	Practical short test (1) Quiz	The first week	1	1
12	Short practical test (2) Quiz	fourth week	0.5	0.5
13	Short practical test (3) Quiz	The fourteenth week	1	1
14	Practical test	Weeks 6, 8, 9, 10, 11, 12 and 13	5.5	5.5
15	Final practical test	Final semester exams	20	20
	the total	100	100%	100%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	General dairy principles, Al-Shabibi
Main references (sources)	Scientific journals and articles
Recommended books and references (scientific journals, reports...)	Specialized books in the field of dairy science and its produ General dairy principles, Jamal al-Din Abdel Tawab
Electronic References, Websites	Scientific electronic websites specialized in studying milk its processing

Course administrator's name : Dr. Zaman Nadhim Taher

Chairman of the Scientific Committee: A.Prof.Dr. Taha Mohammed Taqi

Head of the Food Science Department: A.Prof. Dr. Taha Mohammed Taqi