Course Description Form

1. Course Name:

Principles of Dairy

2. Course Code:

PRPD227

3. Semester / Year:

First semester (fall) / 2024-2025

4. Description Preparation Date:

1\2\2025

5. Available Attendance Forms:

Presence

6. Number of Credit Hours (Total) / Number of Units (Total)

2 theoretical hours + 3 practical hours (75 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:	practical:
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	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:	practical:
-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	- 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** B1: The student evaluates dairy and the positive and negative relationship with the composition of dairy products **PRACTICAL:** C5: Checks the method of receiving the milk	**THEORETICAL** Milk Definitions - Factors Affecting milk composition practical : Sampling methods	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
2	2Theoretical	**THEORETICAL**	**THEORETICAL**	**THEORETICAL**	Shortexams,

	3Practical	C1: The student learns to study and identify all the properties of milk **PRACTICAL :** B6: Detects sensory tests of milk	Physical properties of milk practical : Sensory tests and milk judging	audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	assignments, discussions
3	2Theoretical 3Practical	**THEORETICAL** B2: The student learns about examining the chemical composition of fat, lactose, and water **PRACTICAL :** B7: Measures the percentage of fat in milk	**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** A1: The student examines the laboratory analysis and estimation of types of milk proteins **PRACTICAL :** C6: Discovers methods of milk adulteration	**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 C2: The student analyzes, estimates and studies the chemical composition of milk practical : C7: Tests the level of contamination in milk and methods for detecting contamination	**theoretical** Enzymes - salts Mineral - vitamins practical : Bacteriological examinations of milk	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions
6	2Theoretical 3Practical	THEORETICAL C3: The student judges the detection of contaminants in milk and milk products practical : B8: Try different types of acidity measurements in milk	**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 C4: The student studies and reviews infectious diseases and determines their causes practical : B9: Explains the causes of mastitis	**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 seeks to use mathematical and mathematical equations	**THEORETICAL** Adjusting the fat percentage in Milk (Pearson box)	**THEORETICAL** audio methods, Writing on the board Direct dialogue	Shortexams, assignments, discussions

		adjust milk fat **PRACTICAL :** B10: It continues to find out which substances increase the stability of milk	practical : Milk stability tests	style **PRACTICAL** Assigning tasks and reports	
9	2Theoretical 3Practical	THEORETICAL B3: The student judges t work on determining th routes for receiving and distributing milk **PRACTICAL :** C8: Discovers how to make yogurt	**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
10	2Theoretical 3Practical	THEORETICAL A3: The student experiences the use of n separator devices and modern methods for separating milk fat **PRACTICAL:** B11: Examines the types of curdiness 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 B4: The student experiments with using methods of pasteurizing and sterilizing milk and preserving it for the longest period **PRACTICAL:** B12: Explains methods of making cream	**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 E1: The student produce cheese, yogurt, and enriched and dried milk **PRACTICAL:** C10: Discovers how to make butter	**THEORETICAL** Cheese making 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 A4: The student leads discussion groups relate to milk safety and ways prevent it **PRACTICAL:** B13: Identify the best way to calculate ice cream mixture	**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 B5: The student identifi health risks, their impac on human health, and th impact of negligence on public health **PRACTICAL :** C11: Testing the	**THEORETICAL** A field visit to a dairy factory and submitting a report on the microorganisms common in milk contamination practical :	**THEORETICAL** audio methods, Writing on the board Direct dialogue style **PRACTICAL** Assigning tasks and reports	Shortexams, assignments, discussions

		manufacture of milk ice	Manufacture of milk ice cream		
15	2Theoretical 3Practical	THEORETICAL e1 The student A5: The student experiences the types of work steps in dairy factories **PRACTICAL:** B14: Experiment with making water ice	**THEORETICAL** A field visit to a food factory and submitting a report on microorganisms common in food contamination practical : Water ice industry	**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

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كلية الزراعة والغابات
قسم الإرشاد الزراعي وتنمية المجتمعات

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