



Jordan University of Science and Technology
Faculty of Agriculture
Nutrition & Food Technology Department

NF374 Principles Of Dairy Science

First Semester 2020-2021

Course Catalog

2 Credit Hours. Due to the remarkable increase in dairy sector manufacturing and the abundant dairy product in the markets, makes the complete comprehensive text in dairy principles as a prerequisite to dairy technology course extremely necessary to cover the following aspects: ? 1. The physiological aspects of milk production, including classification of mammals, ? structure and development of mammary tissue and ultrastructure of the secretory cell. ? 2. The milk composition of varies lactating species. 3. The physical and physico-chemical properties including, color, taste, fat globules, protein micelles, specific density, freezing point, and pH. 4. the important milk components including, lipids, proteins, lactose, milk Oligosaccharides, milk salts, milk vitamins and milk enzymes. 5. Microbiology of raw milk including, the initial microflora of raw milk, total raw milk, bacterial content via the SPC method, type of microorganisms present in raw milk, biosecurity, Udder disease, nnd bacterial control of raw milk, pathogens for man in raw milk, and environmental sources. 5. Types of milk and dairy products. 6. The nutrient components of milk and milk products.

Text Book

Title	Dairy Microbiology Handbook (2002)
Author(s)	Richard K. Robinson
Edition	3rd Edition
Short Name	1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
2	Handbook of Dairy Foods and Nutrition (2000)	Edited by Gregory D. Miller, Ph.D., F.A.C.N. Judith K. Jarvis, M.S., R.D., L.D. Lois D. McBean, M.S., R.D.	2nd Edition	
3	Advanced Dairy Chemistry, Volume 3: Lactose, Water, Salts and Minor Constituents (2009)	Edited by P. L. H. McSweeney and P. F. Fox	3rd Edition	

Instructor	
Name	Dr. Sana Gammoh
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Office Hours	
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Class Schedule & Room
Section 1: Lecture Time: Sun, Tue : 10:00 - 11:00 Room: منصة الكترونية

Tentative List of Topics Covered		
Weeks	Topic	References
Weeks 1, 2	CHAPTER ONE: Production and utilization of milk	From 1
Weeks 3, 4	MILK COMPONENTS	From 1
Weeks 5, 6, 7	CHAPTER THREE: MILK MICROBIOLOGY	From 1
Weeks 8, 9, 10, 11	CHAPTER FOUR: MILK AND DAIRY PRODUCTS	From 1
Weeks 12, 13, 14	CHAPTER FIVE: Dairy Foods and Nutrition	From 1

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Become aware of the physiological secretion of raw milk of different lactating species	15%	
Able to identify the different milk components	15%	
Able to identify the Physical and Physico-Chemical Properties of milk	15%	
Become aware of the different dairy products and its processing steps	15%	
Become aware of the highly nutritional value of milk and milk products	20%	
Being able to interpret the gained knowledge about milk and milk product and use them in the normal life and as a nutritional consultant	20%	

Relationship to Program Student Outcomes (Out of 100%)				
SLO1	SLO2	SLO3	SLO4	SLO5

Evaluation	
Assessment Tool	Weight
First hour exam	30%

second hour exam	30%
Final exam	40%

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