



Beni-Suef University
Faculty of Veterinary Medicine

Course specification

1-Basic information

Course Code:	MKST- 4255
Course title :	Milk Products Safety and Technology
Academic year:	4th Academic year
Program title:	B. Sc. Veterinary Medical sciences
Contact hours/ week	3 hours/week, (1 Lect./week, 2 Practical/week)
Approval Date	

2-Professional information

Overall aims of course:

By the end of this course, the student should gain the knowledge about:

- 1- Hygienic production of Milk products.
- 2- Microbiology of milk products.
- 3- Assessing the quality and safety milk products both consumer and plant level.
- 4- Contaminants in milk products.
- 5- HACCP system and quality assurance.

3- Intended learning outcomes of course (ILOs)

A-Knowledge and understanding:

By the end of this course the student should be able to:

- a1. Identify the quality and safety of milk products.
- a2. Recognize the chemical residues in milk products.
- a3. Explain the application of HACCP system in production of milk products.
- a4. Recognize the processing of milk products.
- a5. Describe the different forms of milk products spoilage.
- a6. Recognize microbial ecology and preservation.
- a7. Describe the base for construction of dairy plant.

b- Intellectual skills

By the end of this course the student should be able to:

- b1. Identify the quality of good dairy products.
- b2. Differentiate between normal & abnormal dairy products.
- b3. Examine the milk products with the judgment on different defects which present.
- b4. Identify milk products borne disease, food poisoning and suitable control measures.
- b5. Discuss the chemical pollutants & suitable control measures.
- b6. Discuss the impact of processing on quality of milk products



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c- Professional and practical skills

By the end of this course the student should be able to:

- c1. Collect milk products samples for physical and chemical examination.
- c2. Assess the quality of milk products.
- c3. Demonstrate the critical points during milk products processing.
- c4. Detect and isolate contaminating and food poisoning microorganisms in milk products.
- c5. Practice the technology and processing of some dairy products.
- c6. Perform full microbiological examination of milk products.
- c7. Detect residues in milk products.
- c8. Get experience in detection of the adulteration of milk products.

d- General and transferable skills

By the end of studying the course, the student should be able to:

- d1. Decision making.
- d2. Manage time.
- d3. Work in group teams.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
Title (Lec. h./week, Pract. h./week) 4th year second term	Cream and cream based products & examination	6	2	4
	Butter and related products & examination	6	2	4
	Cheese & examination	5	3	2
	Fermented milk products & examination	4	2	2
	Concentrated milk products & examination	6	2	4
	Milk powder & examination	6	2	4
	Ice cream and related products & examination	4	2	2
	Food preservation	4	2	2
	Residues	4	2	2
Total		45	19	26

5-Teaching and learning methods

- 5.1- Lectures depending on the sharing efforts of the students and supported with macromedia and multimedia aids.
- 5.2- Training visits to milk processing plants.
- 5.3- Practical sections: Laboratory examination of milk products by chemical and microbiological methods.
- 5.4- Self learning (Electronic learning, Seminars, scientific search on related websites, international, national and local journals, related books in faculty library).
- 5.5- Summer training course
- 5.6- Assays and reviews
- 5.7- Discussion groups



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6-Teaching and learning methods for the students with disabilities

Office hours and special meeting

7-Student assessment

7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	I.S	P&P.S	G.S
Final Exam	a1 to a7	b1 to b6		
Practical Exam			c1 to c8	
Oral Exam	a1 to a7	b1 to b6	c1 to c8	d1 to d3

7.2. Assessment schedules/semester:

Method	Week(s)
Practical exams	14 th week
Final exams	managed by administrations
Oral Exam	managed by the department
Student activities	-

7.3. Weight of assessments:

Assessment	Weight of assessment
Practical exams	30%
Final exams	50%
Oral Exam	%20
	100%

8- List of references

8.1. Essential books:

- Milk and milk products, 1997 (Sutherland & Varnam)
- Dairy microbiology Vol. I, 2nd , 1990edition, (Robinson, R.K)
- Dairy microbiology Vol. II, 2nd , 1990edition, (Robinson, R.K)

8.2. Recommended texts

- Principles of dairy science (G.H. Schmidt. 1988)
- Microbial food poisoning (A.R. Eley, 1992)
- Fundamental food microbiology (B. Ray, 1996)
- Milk composition, production and biotechnology (1997)
- Manuals of food quality (FAO, 1997)
- Technology of dairy products (J.V. Patikh)
- Food microbiology (W.C. Frazier, 1978)

8.4. Journals, Websitesetc

Journals:



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- Journal of food protection
- International journal of food microbiology
- Journal of dairy science
- Journal of Food science

Websites:

- cms.nelc.edu.eg
- www.pubmed.com
- www.foodprotection.org
- www.directscience.com
- www.IDF.com

Course Coordinators

Prof. Dr. Arafa meshref

Head of Department

Prof. Dr. Arafa meshref



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Topics		Week	Intended learning outcomes of course (ILOs)			
			K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
1.	Cream and cream based products & examination	1	a1,a3,a4,a5	b1,b2,b3,b6	c1, c2,c3,c5.c6	
2.	Butter and related products & examination	2,3	a1,a3,a4,a5	b1,b2,b3,b6	c1, c2,c3,c5.c6	
3.	Cheese & examination	4	a1,a3,a4,a5	b1,b2,b3,b6	c1, c2,c3,c5.c6	
4.	Fermented milk products & examination	5	a1,a3,a4,a5	b1,b2,b3,b6	c1, c2,c3,c5.c6	
5.	Concentrated milk products & examination	6,7	a1,a3,a4,a5	b1,b2,b3,b6	c1, c2,c3,c5.c6	
6.	Milk powder & examination	8,9	a1,a3,a4,a5	b1,b2,b3,b6	c1, c2,c3,c5.c6	
7.	Ice cream and related products & examination	10,11	a1,a3,a4,a5	b1,b2,b3,b6	c1, c2,c3,c5.c6	
8.	Food preservation	13,12	a6	b4	c4	
9.	Residues	14,15	a2	b5	c7	
10.	Student activities: - Dairy plants visits. - Writing assays - Internet search - Milk products amples collection and preparation		-	-	-	d1-d3



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