

Specification for Milk and their products, oils, fats and eggs hygiene and control course 2019/2020

A- Affiliation

1.	Relevant program	Bachelor of Veterinary Medical Science (BVMSc)
2.	Department offering the course	Food hygiene and control

Date of specification approval: ministerial decree No. 1727 on 26/4/2017
(Approved in this template by the department council on 1/10/2019)

B- Basic information

1.	Course title	Milk and their products, oils, fats and eggs hygiene and control
2.	Course code	312 (B) II
3.	Level	3 rd year
4.	Semester	Second semester
5.	Total hours	4
6.	Lecture hours	2
7.	Practical hours	2

C- Professional Information

1- Course learning objectives

This course prepare the students to be efficient and productive members in the field of the dairy industry and dairy research institutions in Egypt to assure dairy security, quality and safety. This will be achieved through:

- Provide students with basic information about milk products technology, characteristics, standards and microbiology. Edible fats and oils characteristics to differentiate them from milk fats. Besides egg and egg product hygiene as a food of animal origin.
- Enable students to understand the hygiene adopted in dairy factories to enhance production of safe and high quality milk products.
- Enable students to understand the factors that influencing milk products excellence at factory level and ways to control them.
- Enhance the student educational experience about dairy products manufacturing, dairy plant organization, quality control systems, cleaning and sanitation, transportation, and storage of milk products

2- Intended learning outcomes of the course (ILOs):

a- Knowledge and understanding

After successful completion of the course the students should be able to:

- a1- Describe the public health of milk products consumption as food of animal origin and know the diseases that transmitted to human.
a2- List and understand the basic laws, legislatives and ethical codes relevant to milk products hygiene.

b- Intellectual skills

After successful completion of the course the students should be able to:

- b1- Determine efficient production of milk products, characteristics of edible fats and oils, besides hygiene of egg and egg products.
b2- Analyze the sources of contamination at factory level with spoilage and/or pathogenic microorganisms and develop preventive measures through effective control of their sources of contamination.
b3- Decide proper heat treatment method that suits different milk products
b4- Modify and enhance sanitation programs for applying in dairy factories, and during transportation, and storage

c- Professional and practical skills

After successful completion of the course the students should be able to:

- c1- Practice the chemical and physical analysis any milk product sample.
c2- Perform methods to detect the adulterated milk products and determine the foreign material added
c.3- Diagnose any unauthorized preservative added to milk products and their defects.
c4- Manage how to distinguish high quality product from bad quality one
c5- Train how to distinguish different microbial and/or non-microbial defects in milk products
c6- Practice how to isolate any pathogenic microorganisms that may contaminate milk products
c7- Write reports professionally in milk hygiene

d- General and transferable skills

After successful completion of the course the students should have the following skills

- d1- Demonstrate communication, teamwork and problem solving skills.
d2- Use information technology, e.g. PC and internet.
d3- Organize tasks and resources.

3- Course contribution in the program ILOs:

Course ILOS		Program ILOS
A	Knowledge and understanding	a ^{1,3}
B	Intellectual skills	b ¹⁰
C	Professional and practical skills	c ⁶
D	General and transferable skills	d ^{1,3,4,6}

3.1- Course contents:

Topic	Lecture hours	Practical hours
-------	---------------	-----------------

Introduction and overview of milk products	2	-
Probiotics in dairy industry	2	2
Cream	2	2
Butter and related butter products	4	4
Cheese varieties and technology	2	2
Cheese defects and abnormalities	2	2
Fermented milks technology	2	2
Concentrated milk products	2	2
Dried milk and infant milk	2	2
Frozen desserts technology	2	2
Food poisoning and sanitation programs	2	2
Labeling and legalization	2	2
Value-added milk products	2	2
Edible fats and oils	2	2
Egg and egg products	2	2
Total	30	30

The midterm and practical exams are included during the semester

3.2- ILOs matrix:

Topic	A) Knowledge and understanding	B) Intellectual skills	C) Professional and practical skills	D) General and transferable skills
Introduction and overview of milk products	a1	-	-	-
Probiotics in dairy industry	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Cream	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Butter and related butter products	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Cheese varieties and technology	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Cheese defects and abnormalities	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Fermented milks technology	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Concentrated milk products	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Dried milk and infant milk	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Frozen desserts technology	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Food poisoning	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3

and sanitation programs				
Labeling and legalization	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Value-added milk products	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Edible fats and oils	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3
Egg and egg products	a1, a2	b1,2,3,4	c1,2,3,4,5,6,7	d1,2,3

4- Teaching, learning and assessment methods:

ILOs	Teaching and Learning methods							assessment method					
	L	P&M	D	P	Ps	Bs	Fv	semester	midterm	oral	practical	written	
Intellectual and under skills	a1	x	x	0	0		0	0	x	x	x	0	x
	a2	x	x	0	0		x	0	x	x	x	0	x
	b1	x	x	0	0	x	0	0	x	x	x	0	x
	b2	x	x	x	0	x	x	0	x	x	x	0	x
	b3	x	x	0	0	x	x	0	x	x	x	0	x
Professional and practical skills	b4	x	x	0	0	x	x	0	x	0	x	0	x
	c1	0	x	0	x	x	0	x	x	0	x	x	0
	c2	0	x	0	x	x	0	x	x	0	x	x	0
	c3	0	x	0	x	x	0	x	x	0	x	x	0
	c4	0	x	0	x	x	0	x	x	0	x	x	0
	c5	0	x	0	x	x	0	x	x	0	x	x	0
	c6	0	x	0	x	x	0	x	x	0	x	x	0
c7	0	x	0	x	x	0	x	x	0	x	x	0	
General skills	d1	x	x	x	x	x	x	x	x	0	x	0	x
	d2	0	x	0	0	x	0	0	x	0	x	0	0
	d3	x		0	0	x	0	0	x	0	x	0	0

L :Lecture, P&M: Presentations & Movies, D&S: Discussions & Seminars PT: Practical, Ps: Problem solving, Bs: Brain storming, Fv: field visit

5- Assessment timing and grading:

Assessment method	timing	grade
Mid-term exam and semester work	6 th week	15
Practical exam	14 th week	20
oral exam	End of semester	15
Written exam	End of semester	50
total		100

6- List of references

6.1- Course notes:

Department notes on Milk hygiene (Staff members of milk Hygiene

6.2- Essential books (text books)

- Snmahindru, 2009: Milk and Milk Products. Aph Publishing Corporation, Dehi.
- Robert, W., 2006: Microbiology and Technology of Fermented Foods. Blackwell publishing, USA.

6.3- Recommended books

- **Course note.**
- Tamime, AY. 2009: Milk Processing and Quality Management, First Edition, Wiley Blackwell publishing, UK.

6.4- Periodicals, Web sites, . . . etc

- Journal of Dairy Science.
- Journal of Dairy technology.
- Benha veterinary medical journal
- <http://www.foodsci.uoguelph.ca/dairyedu/home.html>
- <http://www.doitwithdairy.com/>
- http://www.milkingredients.ca/DCP/index_e.asp
- www.idf.org
- www.ekb.eg
- www.who.org

7- Facilities required for teaching and learning

- Data show
- White board
- Food control laboratory.
- Educational farm
- Central lab

Course coordinator: Prof Dr. HAMDI ABDELSAMEI

Head of department Prof. Dr. MOHAMED AHMED HASSAN

Signature

Date 1/10/2019