



University of Sadat City
Faculty of Veterinary Medicine
Dept. of Food Hygiene and Control
(2014-2015)



Hygiene and Control of Dairy Plants (710P)

PhD COURSE SPECIFICATION

A. BASIC INFORMATION

University:	University of Sadat City
Faculty:	Veterinary Medicine
Program on which the course is given:	Ph.D in Veterinary Medical Sciences (Dairy Hygiene and Control)
Department offering the Course:	Food hygiene and control
Course code:	710P
Course title:	Hygiene and Control of Dairy Plants
Lecture (hr/week):	2
Practical (hr/week):	2
Course coordinator:	Dr. Ahmed Moustafa Hammad

B. PROFESSIONAL INFORMATION

1) Overall aims of course

Upon successful completion of the course, the student will be able to recognize the modern concepts about quality assurance of hygiene and control of dairy plant.

2) Intended learning outcomes of course (ILOs)

a) KNOWLEDGE AND UNDERSTANDING

By the end of this course, the graduate should be able to:

- a.1. Understand the hygiene adopted in dairy factories to enhance production of safe and high quality milk products.
- a.2. Recognize the factors that influence production of high quality milk and dairy products
- a.3. Realize the risks of microbial hazards.
- a.4. Categorize effective cleaners and disinfectants.
- a.5. List the different systems of cleaning and sanitation.
- a.6. Explain the cleaning and sanitation of dairy utensils and equipments.

b) INTELLECTUAL SKILLS

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

- b.1. Analyze and evaluate the information about the hygiene and control of dairy plants.
- b.2. Solve the problems associated with cleaning faults.
- b.3. Employ the different sources of knowledge to solve any problems appear during working.

c) PROFESSIONAL AND PRACTICAL SKILLS

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

- c.1. Apply HACCP program in dairy plants.
- c.2. Apply the good manufacturing practices in the dairy industry.
- c.3. Assess dairy plant sanitation.

d) GENERAL AND TRANSFERABLE SKILL

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

- d.1. Utilize the electronic and digital instruments for analysis, monitoring and reporting data in the modern dairy farms and factories.
- d.2. Cooperate with the team work either in the farm, factory or the laboratory.
- d.3. Express clearly and confidently his/her decision when analyze imported and exported milk, dairy products, eggs, fat and oils.
- d.4. Communicate with others in a gentle and polite manner, when working as an official food inspector.
- d.5. Tell the general public about the risk of consumption of raw egg, milk and

dairy products.

3) Topics and contents

Topic	No. of hours		
	Lect.	Pract.	Total
Basic concepts and theories of hygiene and control of dairy plant	4	-	4
HACCP and its application in dairy plants	12	-	12
Good manufacturing practices in the dairy sector	10	-	10
Essential hygienic measures in dairy plants	8	-	8
The risk of microbial hazards	4	-	4
Cleaning and disinfection of dairy plants	10	-	10
Cleaning systems applied in dairy plants) ABW) CIP) Caustic flooding) Additional treatment	16	-	16
Cleaners and disinfectant:) Characters) Types	12	-	12
Cleaning and storage equipments	12	-	12
Evaluation of cleaning and sanitization efficiency of milk utensils and equipment in dairy plants	-	16	16
Evaluation of hygienic measures in dairy plants	-	14	14
Application of HACCP steps	-	14	14
Preparation of Cleaners and disinfectant solutions	-	16	16
Evaluation of the dairy plant environment sanitation	-	14	14
Studying a practical application of HACCP system in a dairy plant	-	14	14
Total	88	88	176

4) Teaching and learning methods

- 4.1. Lectures.
- 4.2. Practical.
- 4.3. Self-learning activities.

5) Student assessment

- a. METHODS:

1- Written examination	For assessment of knowledge, back calling and Intellectual skills
2- Practical examination	For assessment of practical and professional skill.
3- Oral examination	For assessment of knowledge and Intellectual skills
4- Student activities	For assessment of knowledge and general and transferable skills

b. MATRIX ALIGNMENT OF THE MEASURED ILOs/ ASSESSMENTS METHODS:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U (a)	I.S (b)	P&P.S (c)	G.S (d)
Written exam	1-6	1, 2, 3	-	-
Oral term exam	1-6	1, 2, 3	-	-
Practical exam	-	1, 2	1, 2, 3	-
Student activities (assay, seminar, etc.)	2,4,5	-	-	1-5

c. WEIGHT OF ASSESSMENTS:

Assessment	Allocated Mark	Evidence
Final written exam	50%	Marked and signed written paper
Practical exam	20%	Marked and signed practical exam paper
Oral exam	20%	Signed list of oral exam marks
Student assignments	10%	Representative samples of presented materials

6) List of references

6.1. Essential textbooks

Varnam, A., Sutherland, Jane P. (2001): **Milk and Milk Products: Technology,**

chemistry and microbiology Series: Food Products Series, Vol. 1. Aspen publication, New York.

6.2. Recommended books

-) Forsythe, S.J. (2000): The microbiology of safe food. 1st Ed. Blackwell science Ltd., 25 Jhon street London Wc.N 285.
-) Norman G. Marriott and Robert B. Gravani,(2006) :Principles of Food Sanitation (Fifth Edition)
-) Ceren Zeytinc , Handbook of Hygienic Design in Dairy Industry: Guide for food processing plants, 2014 , AV Akademikerverlag
-)

6.3. Journals, Websites, Periodicals.....etc

-) J. of food science
-) J. of milk and food technology.
-) J. of Food Protection
-) J. of Dairy Science
-) Bulletin of the international Dairy Federation
-) www.dairy science.com

7) Facilities required for teaching and learning

- 7.1 Data-show.
- 7.2 Basic laboratory equipment and devices for sanitization assessment.
- 7.3 Network for technology transfer.
- 7.4 Computer.

	Course coordinators	Head of department
Name	Dr. Ahmed Moustafa Hammad	Prof. Dr. A. M. Elbagory
Signature		

Matrix alignment of course topics and ILOs

Topic Lecture (Chapters/subchapters)	No. of hours /week		Total hours	Hours for Lect.	Hours for Pract.	ILOs			
	Lect.	Pract.				K.U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
Basic concepts and theories of hygiene and control of dairy plant	4	-	4	4	-	1		-	1-5
HACCP and its application in dairy plants	12	-	12	12	-	1, 2	1, 3	-	1-5
Good manufacturing practices in the dairy sector	10	-	10	10	-	1, 2	1	-	1-5
Essential hygienic measures in dairy plants	8	-	8	8	-	1, 2	1, 3	-	1-5
The risk of microbial hazards	4		4	4		3			1-5
Cleaning and disinfection of dairy plants	10	-	10	10	-	4,5	2	-	1-5
Cleaning systems applied in dairy plants) ABW) CIP) Caustic flooding) Additional treatment	16	-	16	16	-	4, 5,6	2	-	1-5
Cleaners and disinfectant:) Characters) Types	12	-	12	12	-	4	2	-	1-5
Cleaning and storage equipments	12	-	12	12	-	6	2	-	1-5

Topic Lecture (Chapters/subchapters)	No. of hours /week		Total hours	Hours for Lect.	Hours for Pract.	ILOs			
	Lect.	Pract.				K.U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
Evaluation of cleaning and sanitization efficiency of milk utensils and equipment in dairy plants		16	16	-	16	-	1	3	1-5
Evaluation of hygienic measures in dairy plants		14	14	-	14	-	1	3	1-5
Application of HACCP steps		14	14	-	14	-	-	1	1-5
Preparation of Cleaners and disinfectant solutions		16	16	-	16	-	-	2,	1-5
Evaluation of the dairy plant environment sanitation		14	14	-	14	-	1	2,	1-5
Studying a practical application of HACCP system in a dairy plant		14	14	-	14	-	1, 2	1, 2, 3,	1-5
Total			176	88	88				