SEMESTER - I			
Allied – I - Dairy Technology			
Code -18UMIA11	Hrs/ Week: 4	Hrs/ Sem: 60	Credits: 3

Vision:

To provide the leadership, voice and programs for a vibrant dairy industry where farm families, dairy businesses and associated organizations can thrive and be profitable.

Mission:

To create a sustainable environmentally and technologically advanced dairy farm.

Course Outcome :

CO.No.	Upon completion of this course, students will be able to	PSO addressed	C L
CO-1	understand the process involved in production of milk and milk products	1,2	Un
CO -2	classify and explain the different types of milk products	2	Un
CO-3	understand purpose and functions of hygiene in dairy industry	2	Un
CO-4	produce flow chart for the production processes of various milk products	1, 2	Ар
CO-5	explain organization and operations involved in milk processing units	2	Со
CO-6	outline precautions when processing milk and dairy products	2	An
CO-7	organize students to processing of milk and its products	2 ,3,4	Sy
CO-8	analyse the importance of quality control in dairy science	2 ,3,4	An

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Unit I

Clean milk production technique- secretion of milk in the udder- sources of micro organization- cleanliness of the animal- Udder- Utensils- Detergents and Sanitizers-Different micro organisms of milk – Differences between goats, buffaloes and cows milk-Colostrums- Importance of colostrums

Unit II

Importance of milk and its composition properties and nutritive value of milk and milk products- Specific gravity of milk- Lactometer reading- Acidity test estimation of fat, SNF,total solids of milk- Factors that alter the quality and quantities of milk – common adulterants of milk, deduction of adulterants- water adulteration- MBRT- Resazurin Test

Unit III

Chilling – Heat processing – Sterilization pasteurization- test for effective pasteurization – phosphates test – Holding the milk – packing – transport- various types of transports – marketing of fluid milks – special milks- Toned milk, standard milk, UHT milk

Unit IV

Starter culture preparation and their biochemical activities- Methods of manufacture and uses of fermented milk products – Butter, butter milk, curd, yoghurt, ghee, cheese.

Unit V

Methods of manufacture and uses of non-fermented milk products- cream, skim milk, koha, ice cream, ice cream mix powder, condensed milk, powder milk, milk powder.

Text book:

1. Sugumar De. 1997. Outlines of dairy technology, Oxford University press

Books For Reference :

- Clarence Henry, Heckles, 1957 Milk and Milk products 4th edition Tata Mc Graw Hill Publishing company Ltd., New Delhi.
- 2. Sugumar D. 1997. Outlines of dairy technology, Oxford University press

3. Ramasamy1996 Hand book of Dairy technologies, International Book distributing and Company, Lucknow.

SEMESTER - I			
Allied Practical– I - Laboratory in Dairy Technology			
Code - 18UMIAR1	Hrs/ Week: 2	Hrs/ Sem: 30	Credit: 1

Vision:

To create the ability to be multi-skilled in the field of dairy microbiology with a good technical knowledge.

Mission:

To educate with the prime intension of providing practical training in the area

of milk processing and preparation of various milk products

Course Outcome:

CO No	Upon completion of this course,	PSO	C L
	students will be able to	addressed	
CO-1	prepare students to scientifically undertake all operations of dairy technology	1, 2	Ар
CO -2	create entrepreneur in dairying and dairy associated activities	2	Sy
CO-3	organize students to processing of milk and its products	2, 3, 4	Sy
CO-4	develop skill, instill confidence by enhancing life skill	1, 2	Ар
CO-5	establish nutritional status of community through dairy farming.	2	Ар
CO-6	establish income of community through dairy farming.	2	Ар
CO-7	develop organizational capabilities among youth in dairy industry.	2,3,4	Ap
CO-8	examine the production in small and large scale production.	2,3,4	An

Practicals:

- 1. Sampling of milk
- 2. Platform test, COB, MBR, acidity test
- 3. Estimation of fat in milk and skim milk
- 4. Estimation of SNF and total solids
- 5. Detection of adulterants and preservatives
- 6. Preparation and judging of cream, yoghurt
- 7. Preparation and judging of butter and ghee
- 8. Preparation and judging of koha
- 9. Preparation and judging of ice cream
- 10. Preparation of flavoured milk
- 11. Visit to important places related to dairy products and dairy federations.

Books for Reference:

- Clarence Henry, Heckles 1957, Milk and Milk products 4th edition Tata Mc Graw Hill Publishing company Ltd., New Delhi.
- 2. Sugumar D. 1997. Outlines of dairy technology, Oxford University press
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