

GUJARAT TECHNOLOGICAL UNIVERSITY

Food Processing & Technology

B. E. SEMESTER: VI

Subject Name: **Milk and Milk Products Technology**

Subject Code: **161405**

Teaching Scheme				Evaluation Scheme		
Theory	Tutorial	Practical	Total	University Exam (Theory) (E)	Mid Sem Exam (Theory) (M)	Practical (I)
4	0	2	6	70	30	50

Sr. No	Course Content	Total Hrs.
1.	Market Milk: Review of Dairy Development in India, National Dairy Development Board and Operation Flood, Market Milk Industry in India and Abroad; Milk Composition; Factors Affecting composition of milk; Physio-chemical Properties of Milk; Judging & Grading of Milk; Flavour Defects in Milk; their Causes and Prevention, Platform test.	10
2.	Special Milks: Sterilized Milk; Homogenized Milk; Flavoured Milks; Standardized Milk; Reconstituted/Re-hydrated Milk; Recombined Milk; Toned Milk.	06
3.	Butter: Yield of cream; Composition; Flow Diagram of Production, Overrun; Yield; Fat Losses in Butter Making; Continuous Butter Making; Judging and Grading of table Butter; Defects in Butter, their Causes and Prevention.	07
4.	Ice Cream: Composition; Flow Diagram of Production; Defects in Ice Cream, their Causes and Prevention; Quality Control.	05
5.	Cheese: Composition; Types of cheese, Flow Diagram Cheddar Cheese, Mozzarella cheese and processed cheese manufacturing; Curing and Storage of cheddar cheese; Defects, their Causes and Prevention; Quality Control.	07

6.	Condensed and Dried Milks: Composition; Types of condensed milk; Flow diagram of condensed milk production; Types of Dried Milk; Flow Diagram of Dried Milk Production; Malted milk food, Yield; Defects, their Causes and Prevention; Quality Control.	07
7.	Traditional Indian Milk Products: Various types of Khoa and Khoa based sweets (Peda, Burfi and Kalakand) Chhana and Chhana based sweets (Rasogolla), Paneer; fermented products: shrikhand.	06
8.	Quality Control in Milk Processing: Tests for evaluation of quality of milk.	04

Reference Books:

1. Outlines of Dairy Technology by Sukumar De. Oxford University Press
2. Indian Dairy Products by Rangappa KS. Asia Publishing House
3. Engineering for Dairy and Food Products by Farrall AW. John Wiley and Sons
4. Cheese and Butter. V. Cheke & A. Sheeprd. Agrobios (India)
5. Technology of Indian Milk Products by R P Aneja, B N Mathur, A Dairy India Publication, Delhi, India
6. Dairy Plant Engineering and Management By Tufail Ahmed, Kitab Mahal.