

# AMAG17 DAIRY AND FOOD ENGINEERING

## UNIT-1 DAIRY DEVELOPMENT IN INDIA

- 1.1 Engineering, thermal and chemical properties of milk and milk products,
- 1.2 Unit operations of various dairy and food processing systems

## UNIT-2 PROCESS FLOW CHARTS FOR PRODUCT MANUFACTURE

- 2.1 Working principles of equipment for receiving, pasteurization,
- 2.2 Sterilization, homogenization, filling & packaging, butter manufacture

## UNIT-3 DAIRY PLANT DESIGN AND LAYOUT

- 3.1 Composition and proximate analysis of food products.
- 3.2 Deterioration in products and their controls.
- 3.3 Physical, chemical and biological methods of food preservation

## UNIT-4 CHANGES UNDERGONE BY THE FOOD COMPONENTS DURING PROCESSING

- 4.1 Evaporation, drying, freezing and chilling

## UNIT-5 BEHAVIOR OF FOOD PRODUCTS IN EXTRACTION

- 5.1 Leaching, crystallization, filtration, membrane separation, thermal processing.
- 5.2 Plant utilities requirement.

### Reference Books:

1. Lalat Chander. (2005). Text Book of dairy plant layout and Design. ICAR, New Delhi.
2. Mc cabe W.L. and Smith J.C. (1990). Unit Operations of Chemical Engg. McGraw Hill, Tokyo. Japan.
3. Paul Sing. (2004). Food Engineering. Marcel Dekker Pub.